dbSpectra

Antenna Catalog - 2021

Introduction and Overview

dbSpectra provides high quality RF (Radio Frequency) products and valuable services for public safety, utilities, homeland security, military and commercial markets around the world. Our products include transmitter combiners, receiver multicouplers, RF filters, power monitors and antennas. Our organization is staffed with experienced engineering, customer service and manufacturing personnel who are well-versed in RF site products and systems.

Since 2001 dbSpectra has been providing specialized RF equipment to major vendors in the Land Mobile Radio (LMR) market. In 2005, dbSpectra began manufacturing and supporting many sought-after LMR products previously designed by the Decibel Products company. Since then, we have been busy designing and developing many new products to our portfolio including advanced milled window filters and microcomputer-controlled equipment.

dbSpectra obtained ISO 9001-2000 certification in July 2006 from the National Quality Assurance registrar. We currently hold ISO 9001:2015 and ISO 14001:2015 certification and work toward periodic recertification.

Our ISO registration covers the quality system involved in the design, manufacture and repair of integrated systems solutions and components, including antennas, filter systems, digital and RF active components, subsystems, cables and accessories. We maintain ISO certification to ensure excellent quality, service, and technology to our customers and company relationships.

dbSpectra's dedication to quality is evident in our ongoing program of continual improvement as implemented through our Quality Management System. We believe our customers deserve the very best. Our mission is to ensure they always receive outstanding products, services and value.

A major service offered by dbSpectra is that of custom RF distribution systems design and fabrication. You will save time and money with a customized solution. Advise us on your frequencies and any limitations. In a few days, our systems engineers will design an optimum system and provide you with a detailed proposal. When purchased, our team of factory engineers and technicians will custom fabricate, cable, tune and ship your system. Put it in place, cable up your radios and antennas and you are on-the-air. One site or a hundred, we can do it for you.

Thanks for your interest in dbSpectra's products. Please contact us with any questions.

Visit www.dbspectra.com for all your RF and site equipment requirements.

www.dbspectra.com
A great way to quote, research and purchase the equipment you need.

sales@dbspectra.com
Our salespeople are ready to assist in making sure you receive the best possible equipment and support.

tech@dbspectra.com
Your contact for technical questions, requests for system designs and RF compatibility studies.

customerservice@dbspectra.com
The source for quote requests, placing orders, equipment repair requests, etc.

dbSpectra, Inc.
1590 East Highway 121
Building A, Suite 100
Lewisville, Texas 75056
Phone: (469)322-0080
Fax: (469)322-0079

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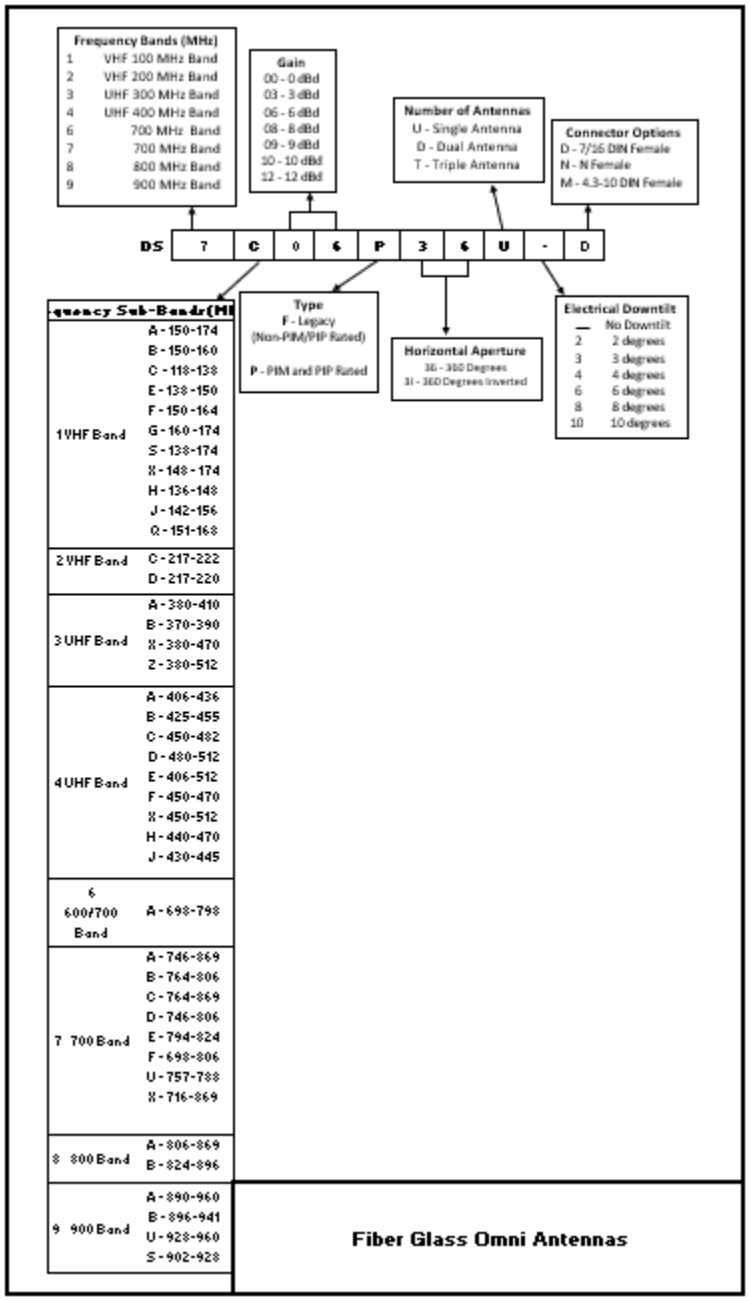
OMNI Antennas



VHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, Unity gain

Model - DS1E00P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	138-150 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	12 MHz
Gain (average over BW)	Unity (0 dBd)
Configuration	Single antenna (1-port)
Beam Tilt (electrical downtilt)	(x) = - (0 degree)
Vertical Beamwidth (E-Plane), typ.	60°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS1E00P36U(x)D DS1E00P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Total Length	8.4 ft.
Equivalent Flat-Plate Area	1.4 sq. ft.
Lateral Windload Thrust @100mph	58 lbf.
Rated Wind Speed	225 mph (without ice) 191 mph (with ½" radial ice)
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH2V3R
Radome diameter	3.0 inches
Mast diameter	2.5 inches
Radome color	Horizon Blue
Weight, antenna and hardware	30 lbs.
Shipping Weight	40 lbs.
Invertibility	0° electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS1E00P36U(x)D – 7/16 DIN Connector DS1E00P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0° down-tilt

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

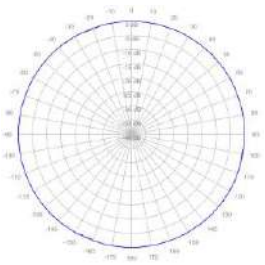
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

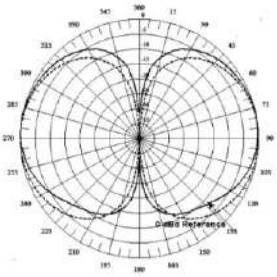
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



VHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 2.7 dBd

Model - DS1E03P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	138-150 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	12 MHz
Gain (average over BW)	2.7 dBd
Configuration	Single antenna (1-port)
Beam Tilt (electrical downtilt)	(x) = - (0 degree)
Vertical Beamwidth (E-Plane), typ.	40°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS1E03P36U(x)D DS1E03P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Total Length	13.4 feet
Equivalent Flat-Plate Area	2.2 sq. ft.
Lateral Windload Thrust @100mph	93 lbf.
Rated Wind Speed	190 mph (without ice) 161 mph (with ½" radial ice)
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N
Radome diameter	3.0 inches
Mast diameter	2.5 inches
Radome color	Horizon Blue
Weight, antenna and hardware	58 lbs.
Shipping Weight	73 lbs.
Invertibility	0° electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS1E03P36U(x)D – 7/16 DIN Connector DS1E03P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0° down-tilt

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

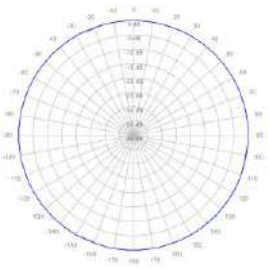
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

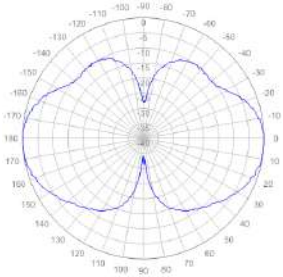
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



VHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 5.5 dBd

Model - DS1E06P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	138-150 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	12 MHz
Gain (average over BW)	5.5 dBd
Configuration	Single antenna (1-port)
Beam Tilt (electrical downtilt)	(x) = - (0 degree)
Vertical Beamwidth (E-Plane), typ.	16°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS1E06P36U(x)D DS1E06P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Total Length	22.9 ft.
Equivalent Flat-Plate Area	3.8 sq. ft.
Lateral Windload Thrust @100mph	159 lbf.
Rated Wind Speed	150 mph (without ice) 127 mph (with ½" radial ice)
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Radome diameter	3.0 inches
Mast diameter	2.5 inches
Radome color	Horizon Blue
Weight, antenna, and hardware	75 lbs.
Shipping Weight	95 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS1E06P36U(x)D – 7/16 DIN Connector DS1E06P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

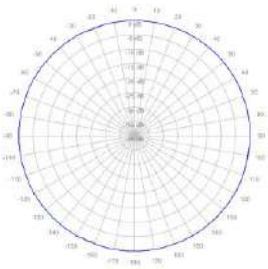
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

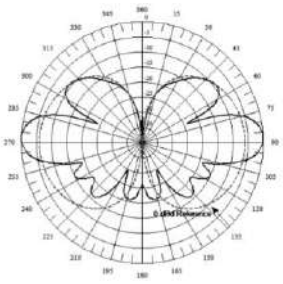
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



VHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, Unity Gain

Model - DS1F00P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	150-164 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	14 MHz
Gain (average over BW)	Unity (0 dBd)
Configuration	Single antenna (1-port)
Beam Tilt (electrical downtilt)	(x) = - (0 degree)
Vertical Beamwidth (E-Plane), typ.	60°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS1F00P36U(x)D DS1F00P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Total Length	8.2 feet
Equivalent Flat-Plate Area	1.6 square feet
Lateral Windload Thrust @100mph	60 lbf.
Rated Wind Speed	225 mph (without ice) 191 mph (with ½" radial ice)
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH2V3R
Radome diameter	3.0 inches
Mast diameter	2.5 inches
Radome color	Horizon Blue
Weight, antenna and hardware	30 lbs.
Shipping Weight	40 lbs.
Invertibility	0° electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS1F00P36U(x)D – 7/16 DIN Connector DS1F00P36U(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt options 2. "-" in the beam-tilt options represents 0° down-tilt

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

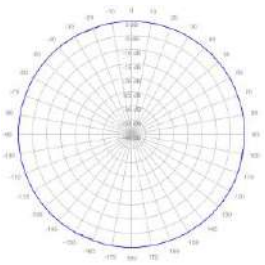
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

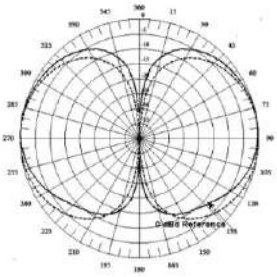
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



VHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 2.9 dBd

Model - DS1F03P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	150-164 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	14 MHz
Gain (average over BW)	2.9 dBd
Configuration	Single antenna (1-port)
Beam Tilt (electrical downtilt)	(x) = - (0 degree)
Vertical Beamwidth (E-Plane), typ.	30°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS1F03P36U(x)D DS1F03P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.1 sq. ft.
Lateral Windload Thrust @100mph	87 lbf.
Rated Wind Speed	190 mph (without ice) 161 mph (with ½" radial ice)
Total Length	12.5 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH2V3R
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna and hardware	44 lbs.
Shipping Weight	59 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS1F03P36U(x)D – 7/16 DIN Connector DS1F03P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

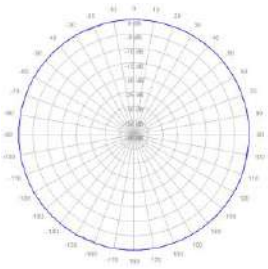
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

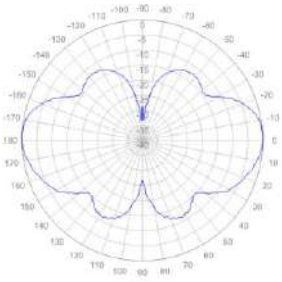
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



VHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 5.5 dBd

Model - DS1F06P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	150-164 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	14 MHz
Gain (average over BW)	5.5 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - or 3 degrees
Vertical Beamwidth (E-Plane) typ.	16°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS1F06P36U(x)D DS1F06P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	3.7 sq. ft.
Lateral Windload Thrust @100mph	153 lbf.
Rated Wind Speed	150 mph (without ice) 127 mph (with ½" radial ice)
Total Length	22 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	90 lbs.
Shipping Weight	110 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering information DS1F06P36U(x)D – 7/16 DIN Connector DS1F06P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems!

PIM-rated Design – 3rd-Order performance better than -150 dBc.

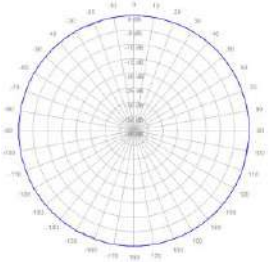
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

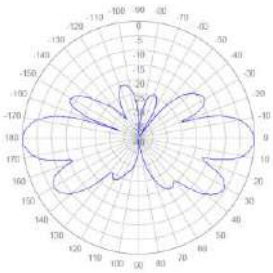
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



VHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, Unity gain

Model – DS1G00P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	160-174 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	14 MHz
Gain (average over BW)	Unity (0 dBd)
Configuration	Single antenna (1-port)
Beam Tilt (electrical downtilt)	(x) = - (0 degree)
Vertical Beamwidth (E-Plane) typ.	60°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS1G00P36U(x)D DS1G00P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Total Length	9.3 feet
Equivalent Flat-Plate Area	1.6 square feet
Lateral Wind-load Thrust @100mph	65 lbf.
Rated Wind Speed	225 mph (without ice) 191 mph (with ½" radial ice)
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH2V3R
Radome diameter	3.0 inches
Mast diameter	2.5 inches
Radome color	Horizon Blue
Weight, antenna, and hardware	28 lbs.
Shipping Weight	38 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS1G00P36U(x)D – 7/16 DIN Connector DS1G00P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

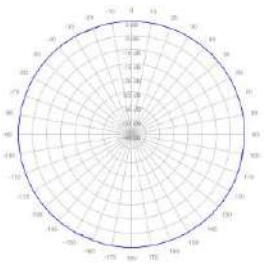
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

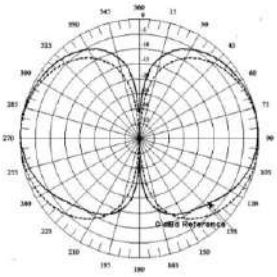
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



VHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 2.9 dBd

Model - DS1G03P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	160-174 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	14 MHz
Gain (average over BW)	2.9 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degree)
Vertical Beamwidth (E-Plane) typ.	30°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS1G03P36U(x)D DS1G03P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.0 sq. ft.
Lateral Windload Thrust @100mph	82 lbf.
Rated Wind Speed	190 mph (without ice) 161 mph (with ½" radial ice)
Total Length	11.8 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH2V3R
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna and hardware	44 lbs.
Shipping Weight	59 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS1G03P36U(x)D – 7/16 DIN Connector DS1G03P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc!

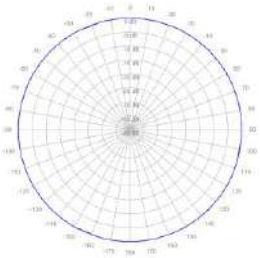
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

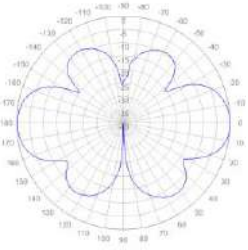
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



VHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 5.5 dBd

Model - DS1G06P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed,
Frequency Range	160-174 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	14 MHz
Gain (average over BW)	5.5 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degree)
Vertical Beamwidth (E-Plane) typ.	16°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS1G06P36U(x)D DS1G06P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	4.4 sq. ft.
Lateral Windload Thrust @100mph	164 lbf.
Rated Wind Speed	125 mph (without ice) 106 mph (with ½" radial ice)
Total Length	22 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	87 lbs.
Shipping Weight	110 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS1G06P36U(x)D – 7/16 DIN Connector DS1G06P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems!

PIM-rated Design – 3rd-Order performance better than -150 dBc.

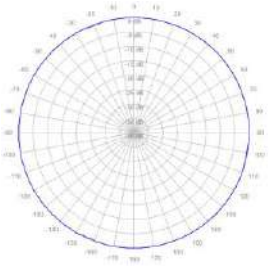
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

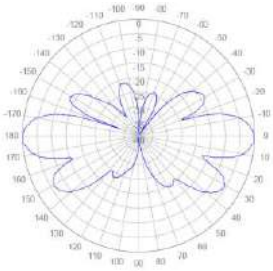
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



VHF Antenna – Omnidirectional, Low-PIM/Hi-PIP, Unity Gain

Model - DS2C00P36U-Series Antennas

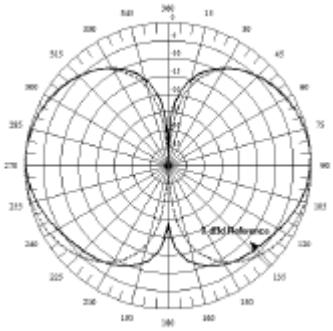
Specifications	
Design Type	True Corporate Feed
Frequency Range	216-222 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	6 MHz
Gain (average over BW)	0 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degree)
Vertical Beamwidth (E-Plane)	60°
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS2C00P36U(x)D DS2C00P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.1 sq. ft.
Lateral Windload Thrust @100mph	46 lbf.
Wind Speed rating	250 mph (without ice) 213 mph (with ½" radial ice)
Total Length	6.6 feet
Mounting Mast Length	21 inches
Mounting Hardware	DSH3V3R
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	17 lbs. (approx.)
Shipping Weight	37 lbs. (approx.)
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS2C00P36U(x)D – 7/16 DIN Connector DS2C00P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Antennas from dbSpectra provide long term, trouble-free service in severe environments.
Design is tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
PIM Rated Design – better than -150 dBc.
Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Pattern

Vertical (No-Tilt)



VHF Antenna – Omnidirectional, Low-PIM/Hi-PIP, 2.9 dBd

Model - DS2C03P36U-Series Antennas

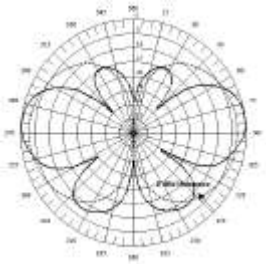
Specifications	
Design Type	True Corporate Feed
Frequency Range	216-222 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	6 MHz
Gain (average over BW)	2.9 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degree)
Vertical Beamwidth (E-Plane)	30°
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS2C03P36U(x)D DS2C03P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.7 sq. ft.
Lateral Windload Thrust @100mph	70 lbf.
Wind Speed rating	225 mph (without ice) 191 mph (with ½" radial ice)
Total Length	10 feet
Mounting Mast Length	35 inches
Mounting Hardware	DSH3V3R
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	34 lbs. (approx.)
Shipping Weight	50 lbs. (approx.)
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS2C03P36U(x)D – 7/16 DIN Connector DS2C03P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Antennas from dbSpectra provide long term, trouble-free service in severe environments.
Design is tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
PIM Rated Design – better than -150 dBc.
Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Pattern

Vertical (No-Tilt)



UHF Antenna – Omnidirectional, Low-PIM, 2.9 dBd *"DAS Rated"*

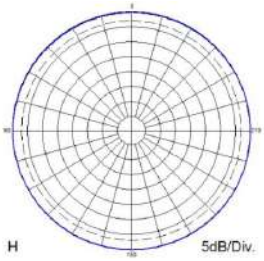
Model - DS3A03L36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	380-410 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	30 MHz
Gain (average over BW)	2.9 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degree)
Vertical Beamwidth (E-Plane)	30°
Null fill and upper sidelobe supp.	No
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	250 W
Peak Instantaneous Power	Not rated
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS3A03L36U(x)D DS3A03L36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Flat Plate Area	0.57 sq. ft.
Wind Load @ 100 mph	24 lbf.
Wind Speed rating	125 mph (without ice) 106 mph (with ½" radial ice)
Total Length	5.2 feet
Mounting Mast Length	9 inches
Mounting Hardware (included)	DSH1V3R
Mounting Mast O.D.	2.5 inches
Radome O.D.	2.0 inches
Radome color	Horizon Blue
Weight (approx.)	12 lbs.
Shipping Weight (approx.)	19 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS3A03L36U(x)D – 7/16 DIN Connector DS3A03L36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

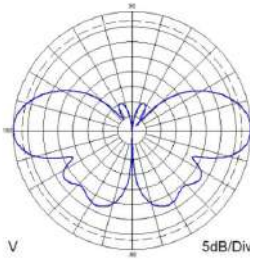
Features and Benefits

Broad operational bandwidth – assures maximum performance and flexibility over the entire 380-470 MHz band.
PIM Rated Design – better than -150 dBc.
Excellent for DAS and other low-to-medium power applications requiring consistent low-PIM performance.
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
Sturdy Construction – Fiberglass radome assures consistent performance and long life.
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns



Horizontal



Vertical (0˚ Tilt)

UHF Antenna – Omnidirectional, Low-PIM/Hi-PIP, 3.0 dBd

Model - DS3A03P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	380-410 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc
Bandwidth	30 MHz
Gain (average over BW)	3.0 dBd
Configuration	Single antenna
Beam Tilt	(x) = - or 6 degrees
Vertical Beamwidth (E-Plane)	29°
Null fill and upper sidelobe supp.	Yes
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS3A03P36U(x)D DS3A03P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.57 sq. ft.
Lateral Windload Thrust @100mph	66 lbf.
Rated Wind Speed	225 mph (without ice) 191 mph (with ½" radial ice)
Total Length	9.5 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH2V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight (approx.)	40 lbs.
Shipping Weight (approx.)	60 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS3A03P36U(x)D – 7/16 DIN Connector DS3A03P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM Rated Design – better than -150 dBc.

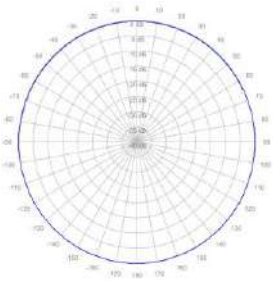
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

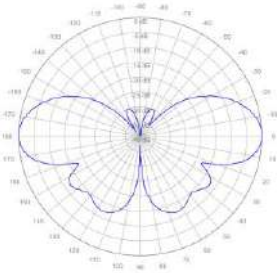
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal (All)



Vertical (No tilt)



UHF Antenna – Omnidirectional, Low-PIM/Hi-PIP, 5.5 dBd

Model - DS3A06P36U-Series Antennas; DS3A06P3IU-Inverted Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	380-410 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	30 MHz
Gain (average over BW)	5.5 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - or 3 degrees
Vertical Beamwidth (E-Plane)	15°
Null fill and upper sidelobe supp.	Yes
Impedance	50 ohm
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS3A06P36U(x)D DS3A06P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.2 sq. ft.
Lateral Windload Thrust @100mph	91 lbf.
Rated Wind Speed	190 mph (without ice) 161 mph (with ½" radial ice)
Total Length	13 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	58 lbs. (approx.)
Shipping Weight	80 lbs. (approx.)
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS3A06P36U(x)D – 7/16 DIN Connector DS3A06P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

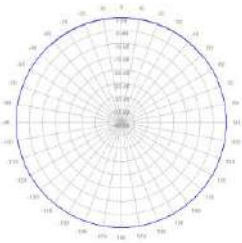
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

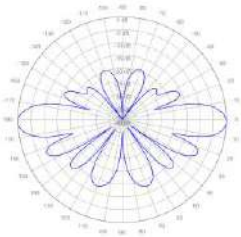
Excellent Lightning Protection – heavy internal conductor DC ground

Radiation Patterns:

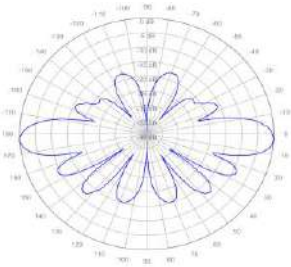
Horizontal (All)



Vertical (No tilt)



Vertical (3 deg Tilt)



UHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 7.8 dBd

Model - DS3A08P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	380-410 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	30 MHz
Gain (average over BW)	7.8 dBd
Configuration	Single antenna
Beam Tilt (electrical down-tilt)	(x) = - or 3 degrees
Vertical Beamwidth (E-Plane), typ.	7.5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS3A08P36U(x)D DS3A08P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	3.4 sq. ft.
Lateral Wind-load Thrust @100mph	143 lbf.
Rated Wind Speed	150 mph (without ice) 127 mph (with ½" radial ice)
Total Length	20.5 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N Low torsion
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	70 lbs.
Shipping Weight	95 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS3A08P36U(x)D – 7/16 DIN Connector DS3A08P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

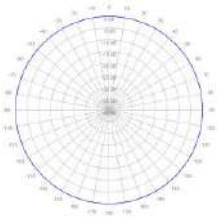
True Corporate Feed Array – provides for excellent gain and pattern consistency across the specified frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

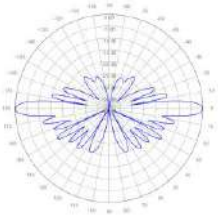
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

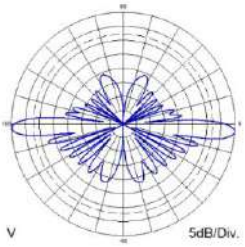
Horizontal



Vertical (0 Deg. DT)



Vertical (3 Deg. DT)



UHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 8.6 dBd

Model - DS3A09P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	380-410 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	30 MHz
Gain (average over BW)	8.6 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - or 3 degrees
Vertical Beamwidth (E-Plane) typ.	6.5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS3A09P36U(x)D DS3A09P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	3.5 sq. ft.
Lateral Windload Thrust @100mph	147 lbf.
Rated Wind Speed	150 mph (without ice) 127 mph (with ½" radial ice)
Total Length	21.1 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N Low torsion
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna, and hardware	70 lbs.
Shipping Weight	95 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS3A09P36U(x)D – 7/16 DIN Connector DS3A09P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

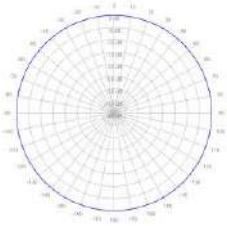
True Corporate Feed Array – provides for excellent gain and pattern consistency across the specified frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

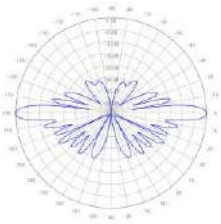
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

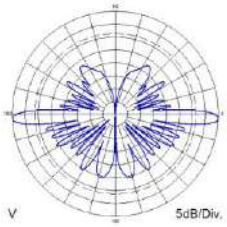
Horizontal



Vertical (no downtilt version)



Vertical (3 Deg DT)



UHF Antenna – Omnidirectional, Low-PIM, Unity Gain, "*DAS Rated*"

Model - DS3X00L36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	380-470 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	90 MHz
Gain (average over BW)	0 dBd
Configuration	Single antenna
Beam Tilt	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane)	60°
Null fill and upper sidelobe supp.	No
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	250 W
Peak Instantaneous Power	Not rated
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS3X00L36U(x)D DS3X00L36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	0.32 sq. ft.
Lateral Windload Thrust @100mph	14 lbf.
Wind Speed rating	175 mph (without ice) 148 mph (with ½" radial ice)
Total Length	2.9 feet
Mounting Mast Length	9 inches
Mounting Hardware (included)	DSH1V3R
Mounting Mast O.D.	2.5 inches
Radome O.D.	2.0 inches
Radome color	Horizon Blue
Weight (approx.)	9 lbs.
Shipping Weight (approx.)	17 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS3X00L36U(x)D – 7/16 DIN Connector DS3X00L36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Broad operational bandwidth – assures maximum performance and flexibility over the entire 380-470 MHz band.

PIM Rated Design – better than -150 dBc.

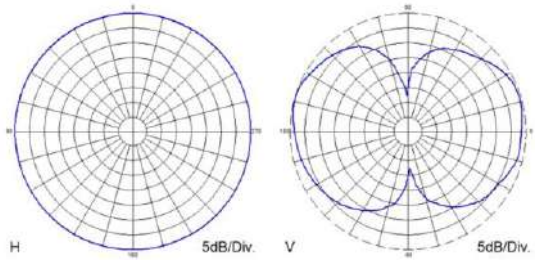
Excellent for DAS and other low-to-medium power applications requiring consistent low-PIM performance.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Fiberglass radome assures consistent performance and long life.

Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Pattern



UHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, Unity Gain

Model - DS3X00P36U-Series Antennas

"Heavy-Duty"

Specifications	
Design Type	True Corporate Feed
Frequency Range	380-470 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	90 MHz
Gain (average over BW)	0 dBd
Configuration	Single antenna, H.D.
Beam Tilt	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane)	60°
Null fill and upper sidelobe supp.	No
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS3X00P36U(x)D DS3X00P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	0.50 sq. ft.
Lateral Windload Thrust @100mph	21 lbf.
Wind Speed rating	325 mph (without ice) 276 mph (with ½" radial ice)
Total Length	3.0 feet
Mounting Mast Length	9 inches
Mounting Hardware (included)	DSH1V3R
Mounting Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight (approx.)	12 lbs.
Shipping Weight (approx.)	20 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS3X00P36U(x)D – 7/16 DIN Connector DS3X00P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM Rated Design – better than -150 dBc.

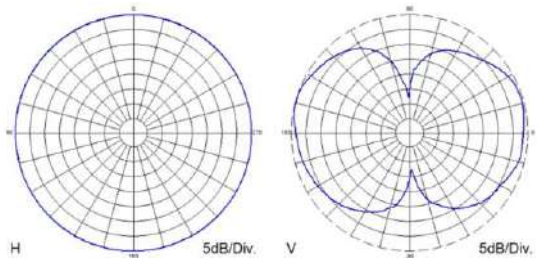
Broad operational bandwidth – assures maximum performance and flexibility over the entire 380-470 MHz band.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome for the most demanding environments

Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Pattern



UHF Antenna – Omnidirectional, Low-PIM/Hi-PIP, Unity Gain

Model - DS4A00P36U-Series Antennas

"Heavy Duty"

Specifications	
Design Type	True Corporate Feed
Frequency Range	406-436 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	30 MHz
Gain (average over BW)	0 dBd
Configuration	Single antenna, H.D.
Beam Tilt	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane)	60°
Null fill and upper sidelobe supp.	No
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4A00P36U(x)D DS4A00P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	0.50 sq. ft.
Lateral Windload Thrust @100mph	21 lbf.
Wind Speed rating	325 mph (without ice) 276 mph (with ½" radial ice)
Total Length	3.0 feet
Mounting Mast Length	9 inches
Mounting Hardware (included)	DSH1V3R
Mounting Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight (approx.)	12 lbs.
Shipping Weight (approx.)	20 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4A00P36U(x)D DS4A00P36U(x)M	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM Rated Design – better than -150 dBc.

Broad operational bandwidth – assures maximum performance and flexibility over the entire 380-470 MHz band.

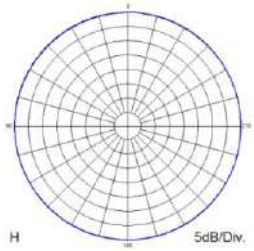
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome for the most demanding environments

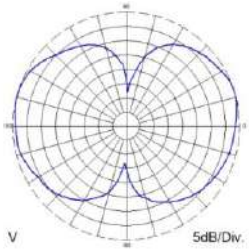
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns

Horizontal



Vertical (No-Tilt)



UHF Antenna – Omnidirectional, Low-PIM/Hi-PIP, 3.0 dBd

Model - DS4A03P36U-Series Antennas; DS4A03P3IU-Inverted Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	406-436 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc
Bandwidth	30 MHz
Gain (average over BW)	3.0 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - or 6 degrees
Vertical Beamwidth (E-Plane)	29°
Null fill and upper sidelobe supp.	Yes
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4A03P36U(x)D DS4A03P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.54 sq. ft.
Lateral Windload Thrust @100mph	65 lbf.
Rated Wind Speed	225 mph (without ice) 191 mph (with ½" radial ice)
Total Length	9.3 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH2V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight (approx.)	38 lbs.
Shipping Weight (approx.)	58 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4A03P36U(x)D – 7/16 DIN Connector DS4A03P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

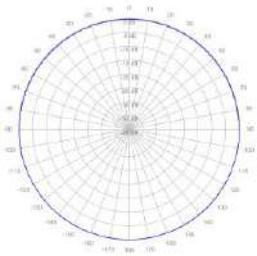
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

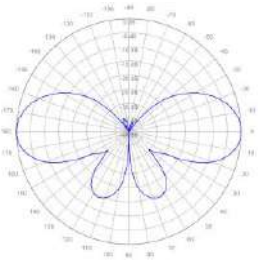
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



UHF Antenna – Omnidirectional, Low-PIM/Hi-PIP, 5.9 dBd

Model - DS4A06P36U-Series Antennas; DS4A06P3IU-Inverted Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	406-436 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	30 MHz
Gain (average over BW)	5.9 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2, 4, or 6 degrees
Vertical Beamwidth (E-Plane)	15°
Null fill and upper sidelobe supp.	Yes
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4A06P36U(x)D DS4A06P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.15 sq. ft.
Lateral Windload Thrust @100mph	90 lbf.
Rated Wind Speed	190 mph (without ice) 161 mph (with ½" radial ice)
Total Length	13 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	49 lbs. (approx.)
Shipping Weight	65 lbs. (approx.)
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4A06P36U(x)D – 7/16 DIN Connector DS4A06P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

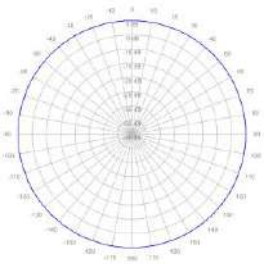
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

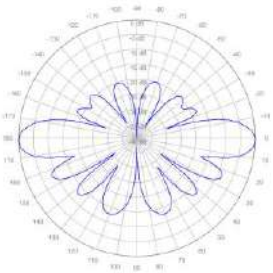
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



UHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 8.8 dBd

Model - DS4A09P36U-Series Antennas; DS4A09P3IU-Inverted Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	406-436 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc
Bandwidth	30 MHz
Gain (average over BW)	8.8 dBd
Configuration	Single antenna
Beam Tilt (electrical down-tilt)	(x) = - (0 degree)
Vertical Beamwidth (E-Plane)	7.5°
Null fill and upper sidelobe supp.	Yes
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4A09P36U(x)D DS4A09P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	3.31 sq. ft.
Lateral Windload Thrust @100mph	139 lbf.
Survival Wind Speed Rating	160 mph (without ice) 136 mph (with ½" radial ice)
Total Length	20 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight (approx.)	70 lbs.
Shipping Weight (approx.)	95 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4A09P36U(x)D – 7/16 DIN Connector DS4A09P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Antennas from dbSpectra provide long term, trouble-free service in severe environments!

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

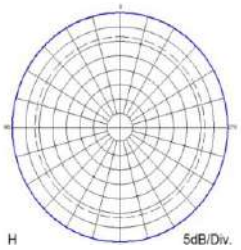
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

PIM Rated Design – better than -150 dBc.

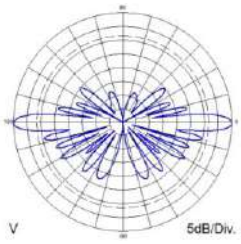
Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns



Horizontal



Vertical (No Downtilt)

UHF Antenna – Omnidirectional, Low-PIM/Hi-PIP, 5.9 dBd

Model - DS4B06P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	425-455 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	30 MHz
Gain (average over BW)	5.9 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane)	15°
Null fill and upper sidelobe supp.	Yes
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4B06P36U(x)D DS4B06P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.1 sq. ft.
Lateral Windload Thrust @100mph	88 lbf.
Rated Wind Speed	190 mph (without ice) 161 mph (with ½" radial ice)
Total Length	12.6 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3R
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	43 lbs. (approx.)
Shipping Weight	65 lbs. (approx.)
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4B06P36U(x)D – 7/16 DIN Connector DS4B06P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

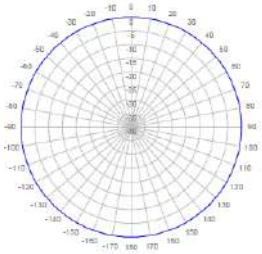
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

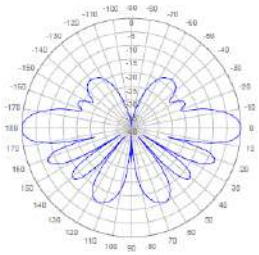
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



UHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 3.0 dBd

Model - DS4D03P36U-Series Antennas; DS4D03P3IU-Inverted Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	480-512 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc
Bandwidth	20 MHz
Gain (average over BW)	3.0 dBd
Configuration	Single antenna
Beam Tilt	(x) = - or 6 degrees
Vertical Beamwidth (E-Plane)	29°
Null fill and upper sidelobe supp.	Yes
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4D03P36U(x)D DS4D03P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.1 sq. ft.
Lateral Windload Thrust @100mph	45 lbf.
Rated Wind Speed	250 mph (without ice) 212 mph (with ½" radial ice)
Total Length	7.0 feet
Mounting Mast Length	21 inches
Mounting Hardware (included)	DSH2V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight (approx.)	37 lbs.
Shipping Weight (approx.)	57 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4D03P36U(x)D – 7/16 DIN Connector DS4D03P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

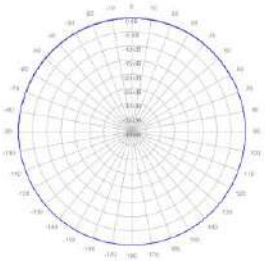
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

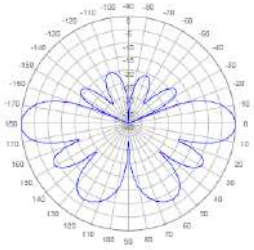
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



UHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 6 dBd

Model - DS4D06P36U-Series Antennas; DS4D06P3IU-Inverted Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	480-512 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	32 MHz
Gain (average over BW)	6.0 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - or 6 degrees
Vertical Beamwidth (E-Plane)	15°
Null fill and upper sidelobe supp.	Yes
Impedance	50 Ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4D06P36U(x)D DS4D06P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.95 sq. ft.
Lateral Windload Thrust @100mph	82 lbf.
Rated Wind Speed	190 mph (without ice) 161 mph (with ½" radial ice)
Total Length	11.8 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3R
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna and hardware	43 lbs. (approx.)
Shipping Weight	57 lbs. (approx.)
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbSpectra.com*
Ordering Information DS4D06P36U(x)D – 7/16 DIN Connector DS4D06P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

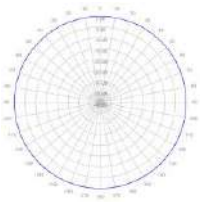
Downtilt option includes a strong lower sidelobe for enhanced close-in coverage!

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

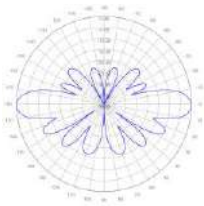
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

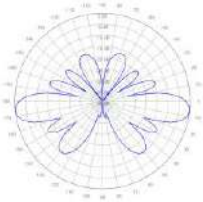
Horizontal



Vertical (0.5° Tilt)



Vertical (6° Tilt)



UHF Antenna – Omnidirectional, Low-PIM/Hi-PIP, 8 dBd

Model - DS4D08P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	480-512 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	32 MHz
Gain (average over BW)	8 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane)	10°
Null fill and upper sidelobe supp.	Yes
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4D08P36U(x)D DS4D08P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	3.1 sq. ft.
Lateral Wind load Thrust @100mph	130 lbf.
Rated Wind Speed	160 mph (without ice) 136 mph (with ½" radial ice)
Total Length	18.7 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3R
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	49 lbs. (approx.)
Shipping Weight	79 lbs. (approx.)
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4D08P36U(x)D – 7/16 DIN Connector DS4D08P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

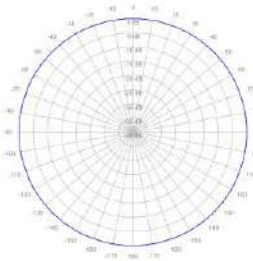
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

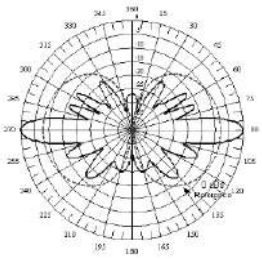
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



UHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 8.6 dBd

Model - DS4D09P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	480-512 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	20 MHz
Gain (average over BW)	8.6 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane), typ.	7.5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4D09P36U(x)D DS4D09P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	3.23 sq. ft.
Lateral Windload Thrust @100mph	136 lbf.
Rated Wind Speed	160 mph (without ice) 136 mph (with ½" radial ice)
Total Length	19.5 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N Low-torsion
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	60 lbs.
Shipping Weight	82 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4D09P36U(x)D – 7/16 DIN Connector DS4D09P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc!

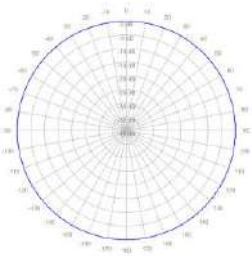
True Corporate Feed Array – provides for excellent gain and pattern consistency across the specified frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

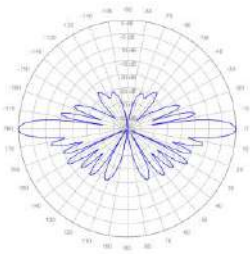
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



UHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 3.0 dBd

Model - DS4F03P36U-Series Antennas; DS4F03P3IU-Inverted Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	450-470 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc
Bandwidth	20 MHz
Gain (average over BW)	3.0 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - or 6 degrees
Vertical Beamwidth (E-Plane)	29°
Null fill and upper sidelobe supp.	Yes
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4F03P36U(x)D DS4F03P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.4 sq. ft.
Lateral Windload Thrust @100mph	59 lbf.
Rated Wind Speed	225 mph (without ice) 191 mph (with ½" radial ice)
Total Length	8.5 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH2V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight (approx.)	37 lbs.
Shipping Weight (approx.)	57 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4F03P36U(x)D – 7/16 DIN Connector DS4F03P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

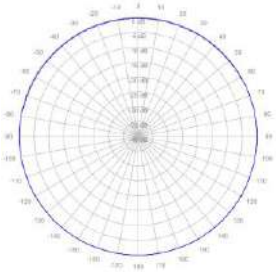
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

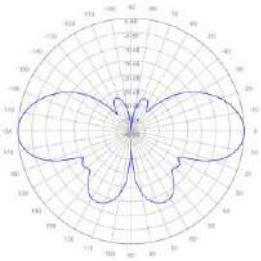
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



UHF Antenna – Omnidirectional, Low-PIM/Hi-PIP, 5.9 dBd

Model - DS4F06P36U-Series Antennas; DS4F06P3IU-Inverted Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	450-470 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	20 MHz
Gain (average over BW)	5.9 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = -, 3, or 6 degrees
Vertical Beamwidth (E-Plane)	15°
Null fill and upper sidelobe supp.	Yes
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4F06P36U(x)D DS4F06P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.0 sq. ft.
Lateral Windload Thrust @100mph	85 lbf.
Rated Wind Speed	190 mph (without ice) 161 mph (with ½" radial ice)
Total Length	12.3 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	40 lbs. (approx.)
Shipping Weight	60 lbs. (approx.)
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4F06P36U(x)D – 7/16 DIN Connector DS4F06P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

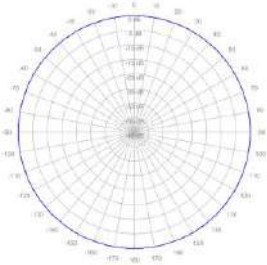
Downtilt option includes a strong lower sidelobe for enhanced close-in coverage!

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

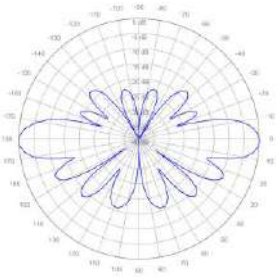
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

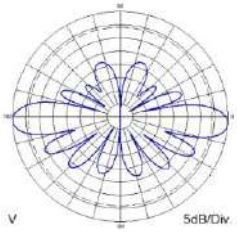
Horizontal



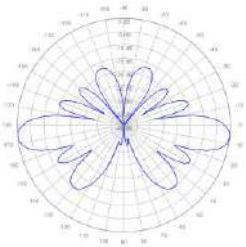
Vertical (No Tilt)



Vertical (3 deg Tilt)



Vertical (6 deg Tilt)



UHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 8.4 dBd

Model - DS4F08P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	450-470 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	20 MHz
Gain (average over BW)	8.4 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane), typ.	7.5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4F08P36U(x)D DS4F08P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	3.2 sq. ft.
Lateral Windload Thrust @100mph	136 lbf.
Wind Speed rating	160 mph (without ice) 136 mph (with ½" radial ice)
Total Length	19.5 feet
Mounting Mast Length	35 inches
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mounting Hardware (included)	DSH3V3N Low-torsion
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	60 lbs.
Shipping Weight	82 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4F08P36U(x)D – 7/16 DIN Connector DS4F08P36U(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt options 2. "-" in the beam-tilt options represents 0° down-tilt

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc!

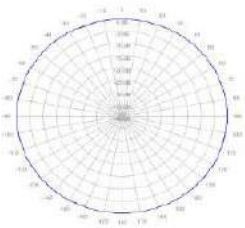
True Corporate Feed Array – provides for excellent gain and pattern consistency across the specified frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

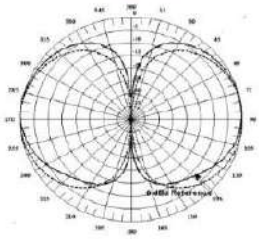
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



UHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 8.6 dBd

Model - DS4F09P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	450-470 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	20 MHz
Gain (average over BW)	8.6 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2, 4 or 6 degrees
Vertical Beamwidth (E-Plane) typ.	7.5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4F09P36U(x)D DS4F09P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	3.23 sq. ft.
Lateral Windload Thrust @100mph	136 lbf.
Rated Wind Speed	160 mph (without ice) 136 mph (with ½" radial ice)
Total Length	19.5 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N Low-torsion
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	60 lbs.
Shipping Weight	82 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4F09P36U(x)D – 7/16 DIN Connector DS4F09P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

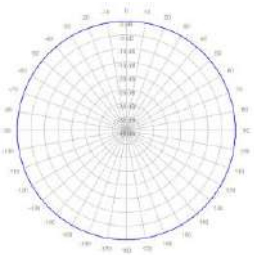
True Corporate Feed Array – provides for excellent gain and pattern consistency across the specified frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

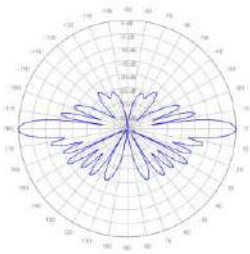
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



UHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 10 dBd

Model - DS4F10P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	450-470 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	20 MHz
Gain (average over BW)	10 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane) typ.	5.6°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4F10P36U(x)D DS4F10P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	4.6 sq. ft.
Lateral Wind-load Thrust @100mph	175 lbf.
Rated Wind Speed	150 mph (without ice) 128 mph (with ½" radial ice)
Total Length	23.2 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N Low-torsion
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	88 lbs., approx..
Shipping Weight	112 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4F10P36U(x)D – 7/16 DIN Connector DS4F10P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Optimized for the highest-gain omnidirectional applications in the 450-470 MHz band.

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

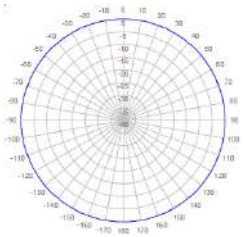
True Corporate Feed Array – provides for excellent gain and pattern consistency across the specified frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

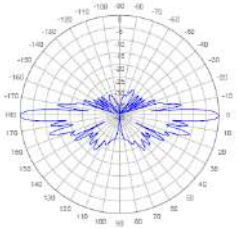
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



UHF Antenna – Omnidirectional, Low-PIM, Unity Gain, "*DAS Rated*"

Model - DS4X00L36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	450-512 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	62 MHz
Gain (average over BW)	0 dBd
Configuration	Single antenna
Beam Tilt	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane)	60°
Null fill and upper sidelobe supp.	No
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	250 W
Peak Instantaneous Power	Not rated
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4X00L36U(x)D DS4X00L36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	0.32 sq. ft.
Lateral Windload Thrust @100mph	14 lbf.
Wind Speed rating	175 mph (without ice) 149 mph (with ½" radial ice)
Total Length	2.9 feet
Mounting Mast Length	9 inches
Mounting Hardware (included)	DSH1V3R
Mounting Mast O.D.	2.5 inches
Radome O.D.	2.0 inches
Radome color	Horizon Blue
Weight (approx.)	9 lbs.
Shipping Weight (approx.)	17 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4X00L36U(x)D – 7/16 DIN Connector DS4X00L36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Broad operational bandwidth – assures maximum performance and flexibility over the entire 380-470 MHz band.

PIM Rated Design – better than -150 dBc.

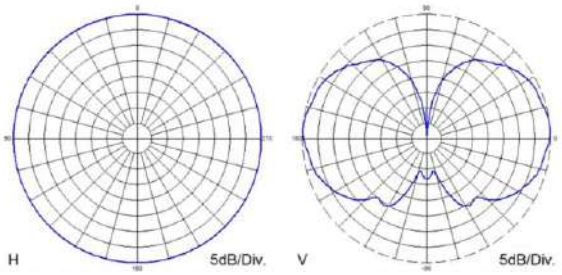
Excellent for DAS and other low-to-medium power applications requiring consistent low-PIM performance.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Fiberglass radome assures consistent performance and long life.

Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns



UHF Antenna – Omnidirectional, Low-PIM/Hi-PIP, Unity gain

Model - DS4X00P36U-Series Antennas

"Heavy Duty"

Specifications	
Design Type	True Corporate Feed
Frequency Range	450-512 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	62 MHz
Gain (average over BW)	0 dBd
Configuration	Single antenna, H.D.
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane)	60°
Null fill and upper sidelobe supp.	No
Impedance	50
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4X00P36U(x)D DS4X00P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	0.50 sq. ft.
Lateral Windload Thrust @100mph	21 lbf.
Wind Speed rating	325 mph (without ice) 276 mph (with ½" radial ice)
Total Length	3.0 feet
Mounting Mast Length	9 inches
Mounting Hardware (included)	DSH1V3R
Mounting Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight (approx.)	12 lbs.
Shipping Weight (approx.)	20 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4X00P36U(x)D – 7/16 DIN Connector DS4X00P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM Rated Design – better than -150 dBc.

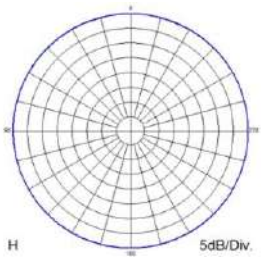
Broad operational bandwidth – assures maximum performance and flexibility over the entire 380-470 MHz band.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

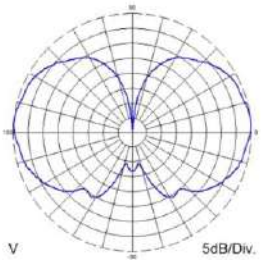
Sturdy Construction – Heavy-wall fiberglass radome for the most demanding environments

Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns



Horizontal Pattern



Vertical Pattern

698-798 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 10 dBd
Model DS6A10P36U-D

Specifications	
Design Type	True Corporate Feed
Frequency Range	698-798 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-153 dBc, 3rd Order
Bandwidth	100 MHz
Gain - dBd (average over BW)	10 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	None (0°)
Vertical Beamwidth (E-Plane) typ.	5°
Impedance – Ohms	50
VSWR / Return Loss -- dB	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN female
Equivalent Flat-Plate Area	2.9 sq. ft.
Lateral Windload Thrust @100mph	120 lbf.
Rated Wind Speed	175 mph (without ice)
Total Length	17.5 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	H.D. No-torsion mount
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Weight, antenna and hardware	75 lbs.
Shipping Weight	95 lbs.
Invertibility	The antenna is physically invertible but the pattern is optimized for upright mounting.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's 12-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

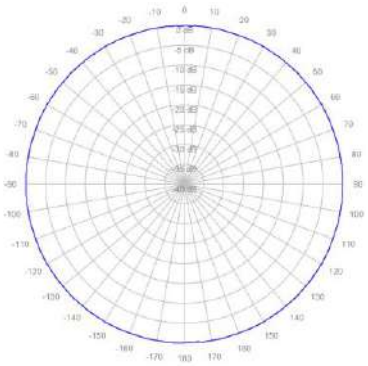
PIM-rated Design – 3rd-Order performance better than -153 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



700/800 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 2.9 dBd

Model - DS7C03P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain (average over BW)	2.9 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane) typ.	30°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7C03P36U(x)D DS7C03P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.04 sq. ft.
Lateral Windload Thrust @100mph	44 lbf.
Rated Wind Speed	250 mph (without ice) 213 mph (with ½" radial ice)
Total Length	6.3 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH2V3R
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	20 lbs.
Shipping Weight	27 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7C03P36U(x)D – 7/16 DIN Connector DS7C03P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc!

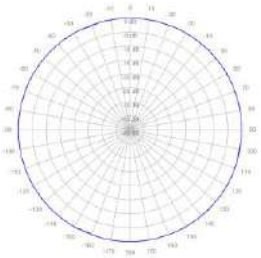
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

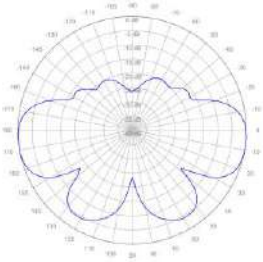
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



700/800 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 5.9 dBd

Models DS7C06P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain (average over BW)	5.9 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2 , 4 or 6 (degrees)
Vertical Beamwidth (E-Plane)	15°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7C06P36U(x)D DS7C06P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.4 sq. ft.
Lateral Windload Thrust @100mph	58 lbf.
Rated Wind Speed	225 mph (without ice) 191 mph (with ½" radial ice)
Total Length	8.4 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH2V3R
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	29 lbs.
Shipping Weight	38 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7C06P36U(x)D – 7/16 DIN Connector DS7C06P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Antennas from dbSpectra provide long term, trouble-free service in severe environments!

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

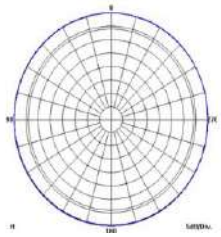
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

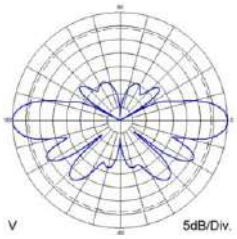
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns

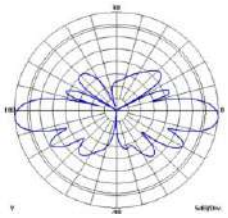
Horizontal



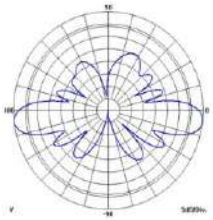
0 deg DT



4 deg DT



6 deg DT



700/800 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 8.0 dBd

Model - DS7C08P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain (average over BW)	8.0 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2, 4, or 6 (degrees)
Vertical Beamwidth (E-Plane) typ.	7.5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7C08P36U(x)D DS7C08P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.07 sq. ft.
Lateral Windload Thrust @100mph	87 lbf.
Rated Wind Speed	190 mph (without ice) 162 mph (with ½" radial ice)
Total Length	12.5 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3R
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna and hardware	74 lbs.
Shipping Weight	80 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7C08P36U(x)D – 7/16 DIN Connector DS7C08P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

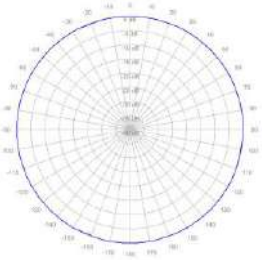
PIM-rated Design – 3rd-Order performance better than -150 dBc!

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

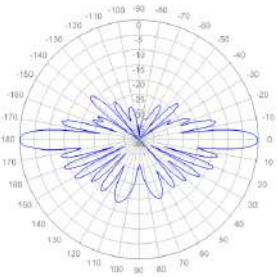
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal (All)



Vertical (No Tilt)



700/800 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 8.8 dBd

Models DS7C09P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain (average over BW)	8.8 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2, 3, 4, or 6 degrees
Vertical Beamwidth (E-Plane) typ.	6.2°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7C09P36U(x)D DS7C09P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.35 sq. ft.
Lateral Windload Thrust @100mph	99 lbf.
Rated Wind Speed	175 mph (without ice) 149 mph (with ½" radial ice)
Total Length	14.2 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	68 lbs.
Shipping Weight	84 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7C09P36U(x)D – 7/16 DIN Connector DS7C09P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

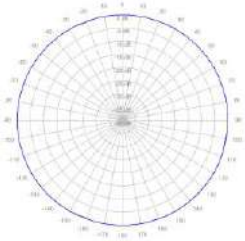
PIM-rated Design – 3rd-Order performance better than -150 dBc!

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

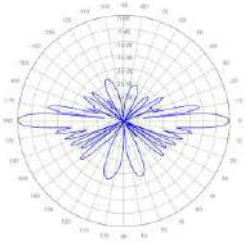
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

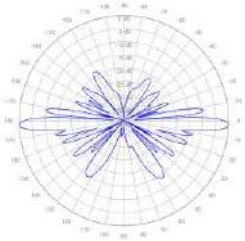
Horizontal (All)



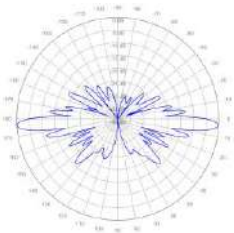
Vertical (No Tilt)



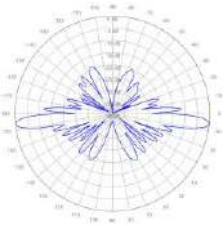
Vertical (2 deg Tilt)



Vertical (4 deg Tilt)



Vertical (6 deg Tilt)



700/800 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 9.8 dBd

Model - DS7C10P36U-Series Antennas; DS7C10P3IU-Inverted Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain (average over BW)	9.8 dBd (0° to 6°) 9.6 dBd (8° to 10° [XD mod.])
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2 , 3 , 4 , 6 , 8 , X (10) degrees
Vertical Beamwidth (E-Plane) typ.	5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7C10P36U(x)D DS7C10P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.7 sq. ft.
Lateral Windload Thrust @100mph	113 lbf.
Rated Wind Speed	175 mph (without ice) 149 mph (with ½" radial ice)
Total Length	16.3 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	73 lbs.
Shipping Weight	90 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7C10P36U(x)D – 7/16 DIN Connector DS7C10P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

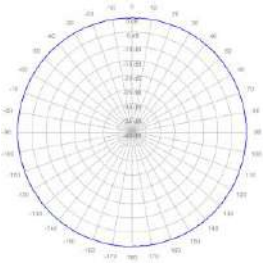
PIM-rated Design – 3rd-Order performance better than -150 dBc!

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

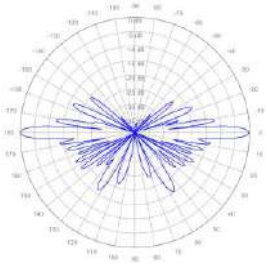
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

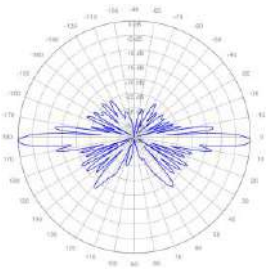
Horizontal (All)



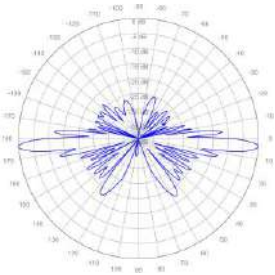
Vertical (No Tilt)



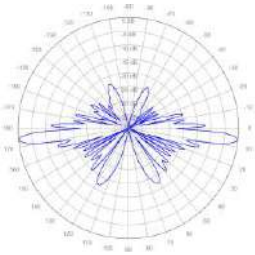
Vertical (2 deg Tilt)



Vertical (4 deg Tilt)



Vertical (6 deg Tilt)



700/800 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 11.5 dBd

Model - DS7C12P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain (average over BW)	11.5 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2, or 4 degrees
Vertical Beamwidth (E-Plane) typ.	3.5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7C12P36U(x)D DS7C12P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	3.39 sq. ft.
Lateral Windload Thrust @100mph	143 lbf.
Rated Wind Speed	150 mph (without ice) 128 mph (with ½" radial ice)
Total Length	20.5 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N Low-torsion
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	82 lbs.
Shipping Weight	107 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7C12P36U(x)D – 7/16 DIN Connector DS7C12P36U(x)M – 4.3-10 Commector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

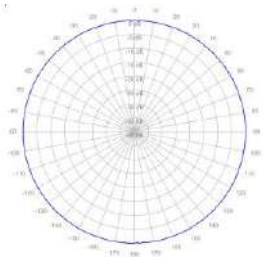
PIM-rated Design – 3rd-Order performance better than -150 dBc.

Excellent Lightning Protection – heavy internal conductor DC ground.

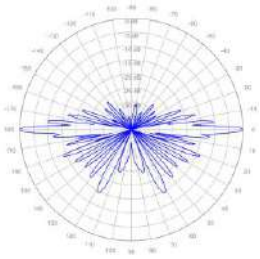
Sturdy Construction: Heavy-wall fiberglass radome minimizes tip deflection.

Radiation Patterns:

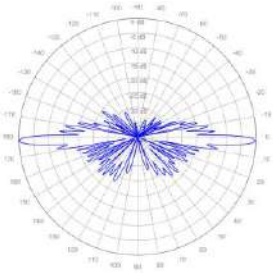
Horizontal (All)



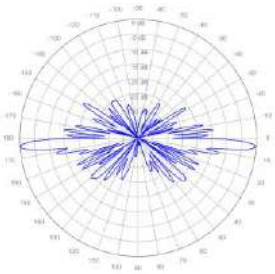
Vertical (No Tilt)



Vertical (2 deg Tilt)



Vertical (4 deg Tilt)



750 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 8 dBd

Model - DS7U08P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	757-788 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	31 MHz
Gain (average over BW)	8 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 4 , or 6 degrees
Vertical Beamwidth (E-Plane) typ.	7.5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7U08P36U(x)D DS7U08P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.1 sq. ft.
Lateral Windload Thrust @100mph	87 lbf.
Rated Wind Speed	175 mph (without ice) 149 mph (with ½" radial ice)
Total Length	12.6 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	74 lbs.
Shipping Weight	80 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7U08P36U(x)D – 7/16 DIN Connector DS7U08P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Optimized high-performance Omni Antenna for the 750 MHz Utility-band – assures dependable service in demanding environments.

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

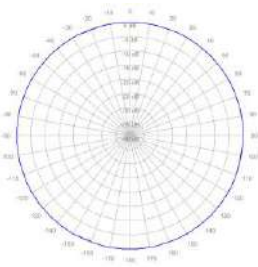
PIM-rated Design – 3rd-Order performance better than -150 dBc.

Sturdy Construction – Heavy-wall, field-proven fiberglass radome minimizes tip deflection.

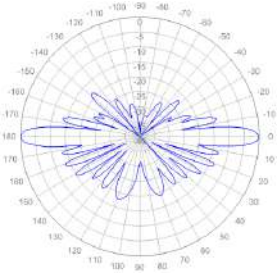
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal (All)



Vertical (No Tilt)



800 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 10 dBd

Model - DS8A10P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	806-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	63 MHz
Gain (average over BW)	10 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2, 4 , or 6 degrees
Vertical Beamwidth (E-Plane) typ.	5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS8A10P36U(x)D DS8A10P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.7 sq. ft.
Lateral Windload Thrust @100mph	113 lbf.
Rated Wind Speed	175 mph (without ice) 149 mph (with ½" radial ice)
Total Length	16.3 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	73 lbs.
Shipping Weight	90 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS8A10P36U(x)D – 7/16 DIN Connector DS8A10P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

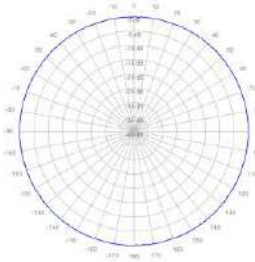
PIM-rated Design – 3rd-Order performance better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

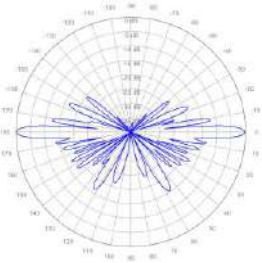
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

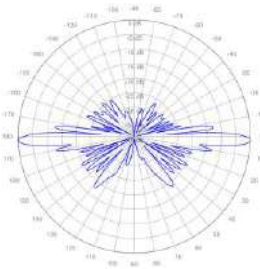
Horizontal (All)



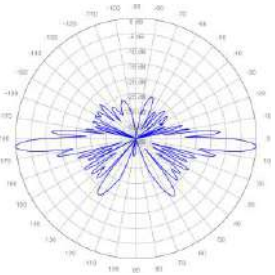
Vertical (No Tilt)



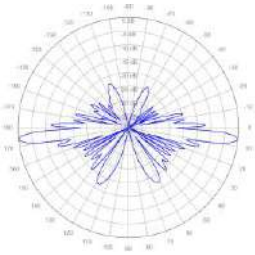
Vertical (2 deg Tilt)



Vertical (4 deg Tilt)



Vertical (6 deg Tilt)



900 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 2.5 dBd

Model - DS9A03P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	70 MHz
Gain (average over BW)	2.5 dBd
Configuration	Single antenna
Beam Tilt	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane)	39°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS9A03P36U(x)D DS9A03P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	0.78 sq. ft.
Lateral Windload Thrust @100mph	33 lbf.
Rated Wind Speed	325 mph (without ice) 276 mph (with ½" radial ice)
Total Length	4.7 inches
Mounting Mast Length	21.0 inches
Mounting Hardware (included)	DSH2V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	70 lbs.
Shipping Weight	82 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9A03P36U(x)D – 7/16 DIN Connector DS9A03P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

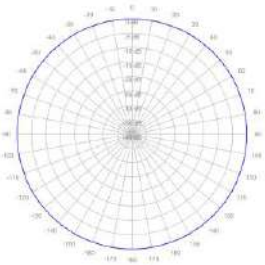
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

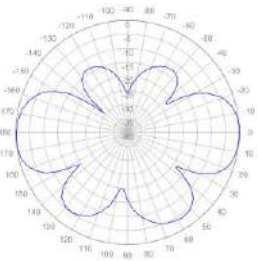
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



900 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 5.8 dBd

Model - DS9A06P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	70 MHz
Gain (average over BW)	5.8 dBd
Configuration	Single antenna
Beam Tilt	(x) = - , 3 , 6 or 10 (X) degrees
Vertical Beamwidth (E-Plane)	15°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS9A06P36U(x)D DS9A06P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.27 sq. ft.
Lateral Windload Thrust @100mph	53 lbf.
Rated Wind Speed	250 mph (without ice) 213 mph (with ½" radial ice)
Total Length	7.67 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH2V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	39 lbs.
Shipping Weight	47 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9A06P36U(x)D – 7/16 DIN Connector DS9A06P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

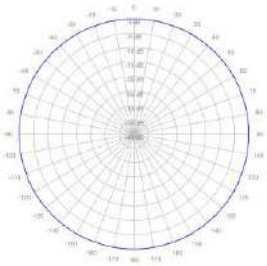
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

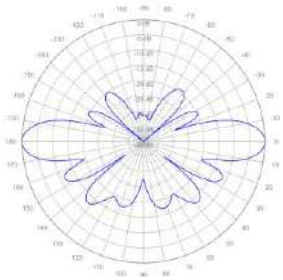
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

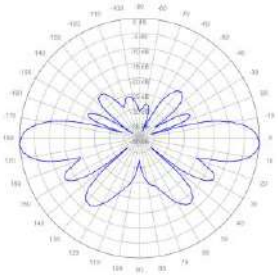
Horizontal



Vertical (No Tilt)



Vertical (3 deg Tilt)



900 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 9 dBd

Model - DS9A09P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc
Bandwidth	70 MHz
Gain (average over BW)	9 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2, 4, or 6 degrees
Vertical Beamwidth (E-Plane)	6°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS9A09P36U(x)D DS9A09P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.1 sq. ft.
Lateral Windload Thrust @100mph	88 lbf.
Rated Wind Speed	190 mph (without ice) 162 mph (with ½" radial ice)
Total Length	12.6 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna, and hardware	45 lbs.
Shipping Weight	60 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9A09P36U(x)D – 7/16 DIN Connector DS9A09P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

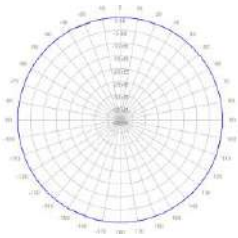
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

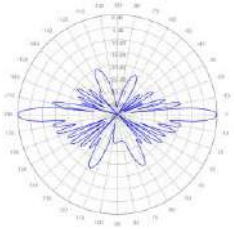
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

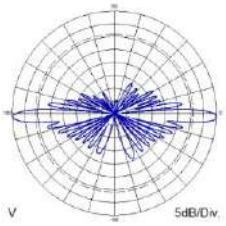
Horizontal



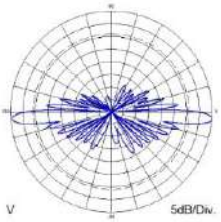
Vertical (No Tilt)



Vertical (2 deg. Tilt)



Vertical (4 deg. Tilt)



900 MHz Antenna – Omnidirectional, Low-PIM/Hi-PIP, 10 dBd

Model - DS9A10P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W)	-150 dBc, 3rd Order
Bandwidth	70 MHz
Gain (average over BW)	10 dBd
Configuration	Single Antenna
Beam Tilt (electrical downtilt)	(x) = - , 3, or 6 degrees
Vertical Beamwidth (E-Plane) typ.	5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS9A10P36U(x)D DS9A10P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.43 sq. ft.
Lateral Windload Thrust @100mph	102 lbf.
Rated Wind Speed	175 mph (without ice) 149 mph (with ½" radial ice)
Total Length	14.7 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N (No Torsion)
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, Antenna and Hardware	68 lbs.
Shipping Weight (approx.)	85 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9A10P36U(x)D – 7/16 DIN Connector DS9A10P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

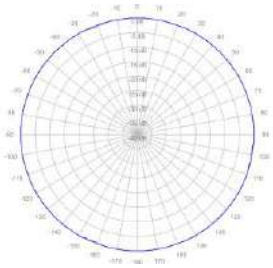
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

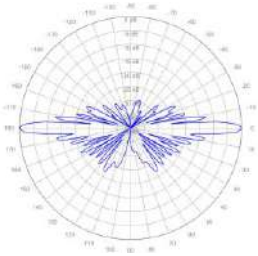
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



900 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 11.5 dBd

Model - DS9A12P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	70 MHz
Gain (average over BW)	11.5 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2 , or 4 degrees
Vertical Beamwidth (E-Plane) typ.	3.7°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS9A12P36U(x)D DS9A12P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	3.03 sq. ft.
Lateral Windload Thrust @100mph	127 lbf.
Rated Wind Speed	160 mph (without ice) 136 mph (with ½" radial ice)
Total Length	18.3 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N Low torsion
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	75 lbs.
Shipping Weight	99 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9A12P36U(x)D – 7/16 DIN Connector DS9A12P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc!

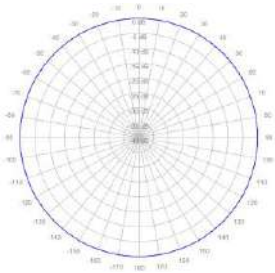
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

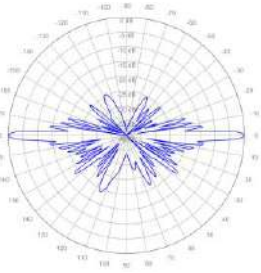
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



900 MHz Antenna - Omnidirectional, H-POL, Low and Mid Gain

Model - DS9S04H36U-Series Antennas; DS9S07H36U-Series Antennas

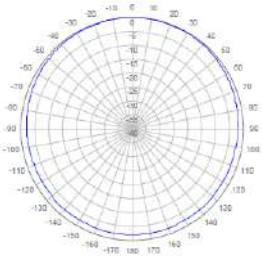
Specifications	
Design Type	Horizontal-polarized Omni
Frequency Range	902-928 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order (if 4.3-10 connector equipped)
Bandwidth	26 MHz
Gain Model DS9S04H36U(x)N Model DS9S07H36U(x)N	 6.1 dBi/4 dBd +/-1.2 dB 8.6 dBi/6.5 dBd +/- 1.2 dB
Configuration	Single H-pol antenna
Beam Tilt (electrical down tilt)	(x) = - (0 degrees)
Elevation Beam width Model DS9S04H36U(x)N Model DS9S07H36U(x)N	 34° 17°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	200 W
Polarization	Horizontal
Connector DS9S04H36U(x)N DS9S07H36U(x)N	 N (F) N (F) (4.3-10 Female available)
Equivalent Flat-Plate Area	0.41 / 0.80 sq. ft.
Lateral Windload Thrust @100mph	17 /34 lbf.
Wind Speed rating	325 mph (without ice) 276 mph (with ½" radial ice)
Total Length Model DS9S04H36U(x)N Model DS9S07H36U(x)N	 30 inches 58 inches
Mounting Mast Length	5 inches/9 inches
Mounting Hardware (included)	DSH1V3R/DSH2V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	9 lbs. / 14 lbs. (approx.)
Shipping Weight	15 lbs. /19 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9S04H36U(x)N – N Connector DS9S07H36U(x)N – N Connector DS9S04H36U(x)M – 4.3-10 Connector DS9S07H36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits:

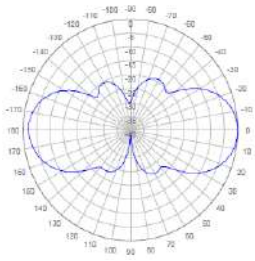
Horizontally polarized for specialized 900 MHz/ISM-band applications seeking isolation from vertically polarized interference sources.
Professional-grade antennas and VSWR/pattern control ratings ensure optimal performance.
PIM Rated Design – better than -150 dBc.
Professional-grade VSWR rating ensures optimal performance.
Sturdy Construction – Heavy-wall fiberglass radome practically eliminates tip deflection.
Antennas from dbSpectra provide long term, trouble-free service in severe environments, mission critical environments.

Radiation Pattern:

Horizontal



Vertical



UHF Antenna – Omnidirectional, Low-PIM/Hi-PIP, 5.9 dBd

Model – SP4G06P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	450-488 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	38 MHz
Gain (average over BW)	5.9 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane)	15°
Null fill and upper sidelobe supp.	Yes
Impedance	50 ohms
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector SP4G06P36U(x)D SP4G06P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.9 sq. ft.
Lateral Windload Thrust @100mph	80 lbf.
Rated Wind Speed	190 mph (without ice) 162 mph (with ½" radial ice)
Total Length	11.5 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3R
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	40 lbs. (approx.)
Shipping Weight	60 lbs. (approx.)
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information SP4G06P36U(x)D SP4G06P36U(x)M	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

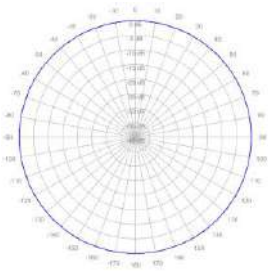
Downtilt option includes a strong lower sidelobe for enhanced close-in coverage!

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

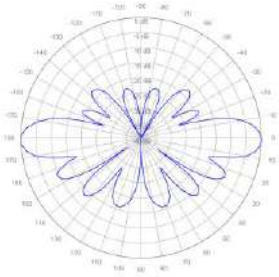
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



UHF Antenna - Omnidirectional, Low-PIM/Hi-PIP, 8.2 dBd

Model - SP4T08P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	470-512 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	42 MHz
Gain (average over BW)	8.2 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2 , 4 or 6 degrees
Vertical Beamwidth (E-Plane) typ.	7.5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector SP4T08P36U(x)D SP4T08P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	3.1 sq. ft.
Lateral Windload Thrust @100mph	129 lbf.
Rated Wind Speed	160 mph (without ice) 136 mph (with ½" radial ice)
Total Length	18.5 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N Low-torsion
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	58 lbs.
Shipping Weight	80 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information SP4T08P36U(x)D – 7/16 DIN Connector SP4T08P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

The dbSpectra PIM/PIP-series antennas are tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

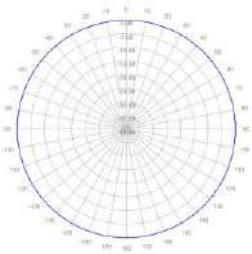
True Corporate Feed Array – provides for excellent gain and pattern consistency across the specified frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

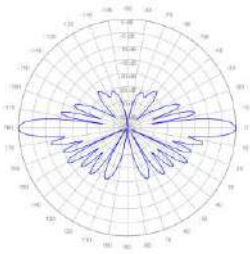
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



700/800 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 12 dBd

Model - SP7C12P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed High Gain – full 12dBd
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain (average over BW)	806-869 MHz: 12 dBd 764-806 MHz: 11.7dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane) typ.	2.9°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector SP7C12P36U(x)D SP7C12P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	3.97 sq. ft.
Lateral Windload Thrust @100mph	167 lbf.
Rated Wind Speed	150 mph (without ice) 128 mph (with ½" radial ice)
Total Length	24 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N Low-torsion
Top Sway Brace (Recommended if side mounting antennas)	DSH2H3S (order separately)
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	90 lbs.
Shipping Weight	115 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information SP7C12P36U(x)D – 7/16 DIN Connector SP7C12P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc!

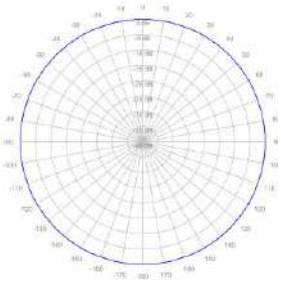
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

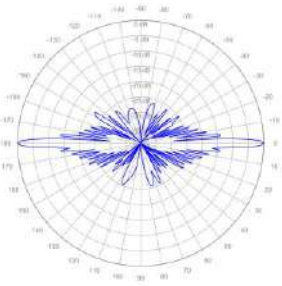
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



700 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 6 dBd

Model - SP7Z06P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	703-803 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	100 MHz
Gain (average over BW)	6 dBd / 8.1 dBi
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2 , 4 or 6 degrees
Vertical Beamwidth (E-Plane)	15° typ.
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector SP7Z06P36U(x)D SP7Z06P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.5 sq. ft.
Lateral Windload Thrust @100mph	62 lbf.
Rated Wind Speed	225 mph (without ice) 191 mph (with ½" radial ice)
Total Length	8.9 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH2V3R
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	30 lbs.
Shipping Weight, est.	42 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information SP7Z06P36U(x)D – 7/16 DIN Connector SP7Z06P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Antennas from dbSpectra provide long term, trouble-free service in severe environments!

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

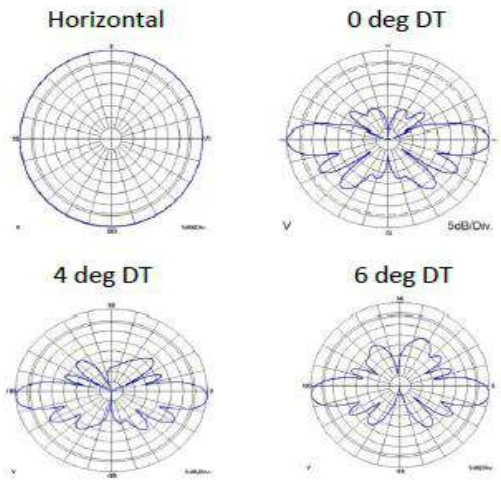
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns



700 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 9 dBd

Model - SP7Z09P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	703-803 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	100 MHz
Gain (average over BW)	9 dBd/11.1 dBi
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2, 3, 4, or 6 degrees
Vertical Beamwidth (E-Plane) typ.	6.2°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector SP7Z09P36U(x)D SP7Z09P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.5 sq. ft.
Lateral Windload Thrust @100mph	105 lbf.
Rated Wind Speed	175 mph (without ice) 149 mph (with ½" radial ice)
Total Length	14.9 feet
Mounting Hardware (included)	DSH3V3N
Mounting Mast Length	35 inches
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight, antenna, and hardware	69 lbs.
Shipping Weight	89 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information SP7Z09P36U(x)D – 7/16 DIN Connector SP7Z09P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

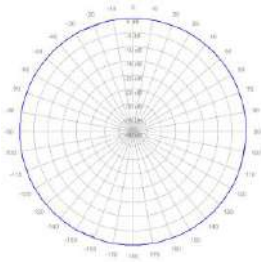
PIM-rated Design – 3rd-Order performance better than -150 dBc!

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

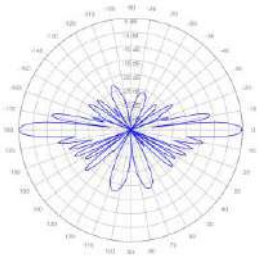
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

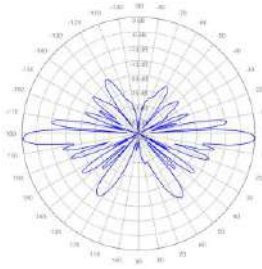
Horizontal (All)



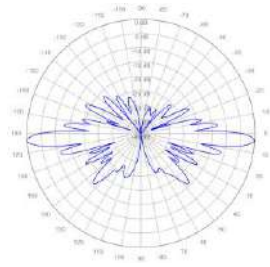
Vertical (No Tilt)



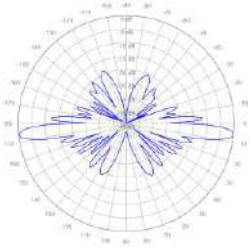
Vertical (2 deg Tilt)



Vertical (4 deg Tilt)



Vertical (6 deg Tilt)



900 MHz Quad Antenna – Omnidirectional, 3 dBd Gain

Model - SP9A03F36Q-Series Antennas (Extreme-Duty Series)

Specifications	
Design Type	True Corporate Feed/Quad
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 10W, 5th-Order)	-150 dBc
Bandwidth	70 MHz
Gain, typ. (each port)	3 dBd / 5.1 dBi
Isolation, typ.	35 dB
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane), typ.	30°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB or better
Average Power Rating	350 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground w/ solid spike and internal ground
Connectors SP9A03F36Q(x)N SP9A03F36Q(x)M	 N (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.5 sq. ft.
Lateral Windload Thrust @100mph	63 lbf.
Rated Wind Speed	225 mph (without ice) 191 mph (with ½" radial ice)
Total Length	9.1 feet
Mounting Mast Length	21 inches
Mounting Hardware (included)	(2) Heavy-duty clamps
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight (approx.)	20 lbs.
Shipping Weight (approx.)	29 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information SP9A03F36Q(x)N – N-Type Connector SP9A03F36Q(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits:

QUAD-antenna configuration – allows four "true-omni" antennas in one tower slot without compromising RF performance or mechanical integrity.

Strong RF isolation between the independent antennas provides greater system performance and interference protection.

Proven 3"-diameter thick-wall fiberglass radome provides mechanical strength and extreme survivability in harsh environmental conditions.

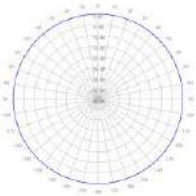
Design is tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's P25 PIP test bed. High PIP level is demanded by some digital systems, while guaranteeing performance in lower-power systems or RX applications.

Heavy internal conductor with external lightning spike assures robust grounding.

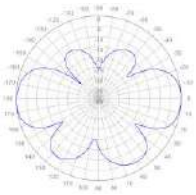
Heavy-duty 2-point galvanized clamp sets included to mount the antenna to vertical members.

Radiation Patterns:

Horizontal



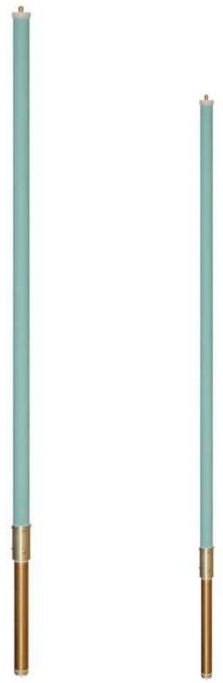
Vertical



900 MHz Antenna - Omnidirectional, Optimized/9 dBd-class

Models – SP9B09F36U-D and SP9B09L36U-D

Specifications	
Design Type	True Corporate Feed
Frequency Range	896-941 MHz
Bandwidth	45 MHz
Gain	9 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	0 degrees
Vertical Beamwidth (E-Plane), typ.	6°
Impedance	50 ohms
VSWR / Return Loss SP9B09F36U-D SP9B09L36U-D	 1.4:1 or better 1.5:1 or better
Average Power Rating	500 W
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area SP9B09F36U-D SP9B09L36U-D	 1.9 sq. ft. 1.2 sq. ft.
Lateral Windload Thrust @100mph SP9B09F36U-D SP9B09L36U-D	 79 lbf. 47 lbf.
Rated Wind Speed SP9B09F36U-D SP9B09L36U-D	 190 mph (without ice) 150 mph (without ice)
Total Length SP9B09F36U-D SP9B09L36U-D	 11.4 feet 10.2 feet
Mounting Mast Length SP9B09F36U-D SP9B09L36U-D	 35 inches 21 inches
Mounting Hardware (included)	DSH2V3R
Mast O.D.	2.5 inches
Radome O.D. SP9B09F36U-D SP9B09L36U-D	 3.0 inches 2.0 inches
Radome color	Horizon Blue
Weight, antenna, and hardware SP9B09F36U-D SP9B09L36U-D	 45 lbs. 34 lbs.
Invertibility	The Antennas are physically invertible but pattern is optimized for upright mounting. For invertible options contact dbSpectra at *tech@dbspectra.com*



Features and Benefits

Antennas from dbSpectra provide long term, trouble free service in severe environments.

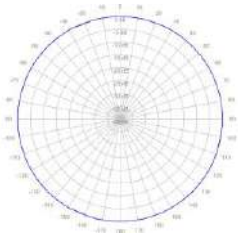
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Extra-heavy-wall fiberglass radome minimizes tip deflection in the 3” model, and guarantees robustness.

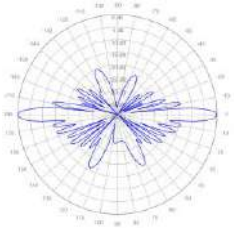
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



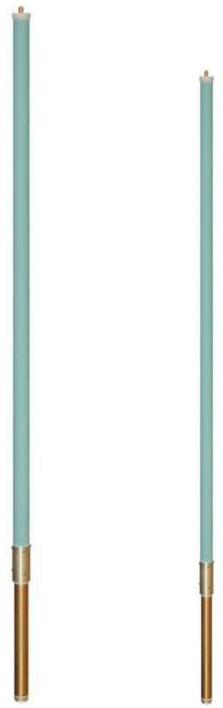
Vertical (No Tilt)



900 MHz Antenna - Omnidirectional, Optimized/10 dBd-class

Models – SP9B10F36U-D and SP9B10L36U-D

Specifications	
Design Type	True Corporate Feed
Frequency Range	896-941 MHz
Bandwidth	45 MHz
Gain	10 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	0 degrees
Vertical Beamwidth (E-Plane), typ.	4.2°
Impedance	50 ohms
VSWR / Return Loss SP9B10F36U-D SP9B10L36U-D	 1.4:1 or better 1.5:1 or better
Average Power Rating	500 W
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area SP9B10F36U-D SP9B10L36U-D	 2.7 sq. ft. 1.7 sq. ft.
Lateral Windload Thrust @100mph SP9B10F36U-D SP9B10L36U-D	 113 lbf. 70 lbf.
Rated Wind Speed SP9B10F36U-D SP9B10L36U-D	 175 mph (without ice) 135 mph (without ice)
Total Length SP9B10F36U-D SP9B10L36U-D	 16.3 feet 15.1 feet
Mounting Mast Length SP9B10F36U-D SP9B10L36U-D	 35 inches 21 inches
Mounting Hardware (included) SP9B10F36U-D SP9B10L36U-D	 H.D., no-torsion bar mount Galvanized clamp set
Mast O.D.	2.5 inches
Radome O.D. SP9B10F36U-D SP9B10L36U-D	 3.0 inches 2.0 inches
Radome color	Horizon Blue
Weight, antenna, and hardware SP9B10F36U-D SP9B10L36U-D	 68 lbs. 43 lbs.
Invertibility	The Antennas are physically invertible but pattern is optimized for upright mounting. For invertible options contact dbSpectra at *tech@dbspectra.com*



Features and Benefits

Antennas from dbSpectra provide long term, trouble free service in severe environments.

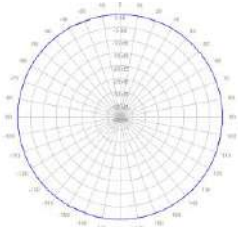
True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

Sturdy Construction – Extra-heavy-wall fiberglass radome minimizes tip deflection in the 3” model, and guarantees robustness.

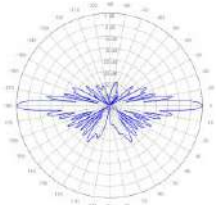
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



900 MHz Quad Antenna – Omnidirectional, 3 dBd Gain

Model - SP9S03F36Q-Series Antennas (Extreme-Duty Series)

Specifications	
Design Type	Dipole-type design and construction, Quad-port
Frequency Range	902-928 MHz
Passive Intermodulation – PIM (2 x 10W, 5th-Order)	-150 dBc
Bandwidth	26 MHz
Gain, typ. (each port)	3 dBd / 5.1 dBi
Isolation, port-port (typical)	30 dB
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane) typ.	30°
Impedance	50 Ohms
VSWR / Return Loss	1.4:1 or better
Average Power Rating	350 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground w/ solid spike and internal ground
Connectors SP9S03F36Q(x)N SP9S03F36Q(x)M	 N (F) 4.3-10 (F)
Equivalent Flat-Plate Area	1.4 sq. ft.
Lateral Wind-load Thrust @100mph	58 lbf.
Rated Wind Speed	225 mph (without ice) 191 mph (with ½" radial ice)
Total Length	8.3 feet
Mounting Mast Length	21 inches
Mounting Hardware (included)	(2) Heavy-duty clamps
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Radome O.D.	3.0 inches
Weight (approx.)	15 lbs.
Shipping Weight (approx.)	22 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information SP9S03F36Q(x)N – N-Type Connector SP9S03F36Q(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits:

QUAD-antenna configuration optimized for the 902-928 MHz ISM-band, allows four "true-omni" antennas in one tower slot without compromising RF performance or mechanical integrity.

Strong RF isolation between the independent antennas provides greater system performance and interference protection.

Proven 3"-diameter thick-wall fiberglass radome provides mechanical strength and extreme survivability in harsh environmental conditions.

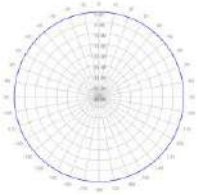
Design is tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's P25 PIP test bed. High PIP level is demanded by some digital systems, while guaranteeing performance in lower-power systems or RX applications.

Heavy internal conductor with external lightning spike assures robust grounding.

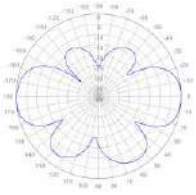
Heavy-duty 2-point galvanized clamp sets included to mount the antenna to vertical members.

Radiation Patterns:

Horizontal



Vertical, typical



PANEL Antennas

Frequency Bands (MHz)

3	UHF 300 MHz Band
4	UHF 400 MHz Band
6	600 MHz Band
7	700 MHz Band
8	800 MHz Band
9	900 MHz Band

Gain Class

08 - 8 dBd
10 - 10 dBd
11 - 11 dBd
12 - 12 dBd
13 - 13 dBd
14 - 14 dBd
15 - 15 dBd
17 - 17 dBd

Horizontal Aperture

A - Adjustible Directional
T - 120 Degree Directional
V - Bi - Directional
Y - Directional
5 - 105 degrees
6 - 60 degrees

Electrical Downtilt

-	No Downtilt
2	2 degrees
3	3 degrees
4	4 degrees
6	6 degrees
8	8 degrees

DS	7	C	1	1	P	P	Y	U	-	D

Frequency Sub-Bands(MHz)

3 UHF Band	A - 380-410 B - 370-390 X - 380-470 Z - 380-512
4 UHF Band	K - 450-512 A - 406-420 X - 470-490 F - 450-470 G - 406-512
6 Log Periodic Band	X - 690-960 & 1700-2700
7 700 Band	C - 764-869 U - 757-788 X - 716-869
8 800 Band	A - 806-869
9 900 Band	A - 890-960 B - 896-941 U - 928-960 S - 902-928

PIM and PIP Rated Panel

Number of Antennas

U - Single Antenna
D - Dual Antenna
T - Triple Antenna
S - Special*
X - Cross-pol (X-pol)
*marginal change based on customer requirement

Connector Options

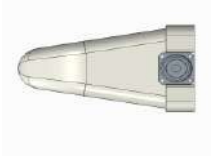
D - 7/16 DIN Female
N - N Female
M - 4.3-10 DIN Female

Panel Antennas/Slim-panel

UHF Antenna – Directional Panel, Low-PIM/Hi-PIP, 10 dBd

Bidirectional Horizontal Patterns: Model – DS4F10PPVU-Series Antennas

Specifications	
Design Type	Slim-line Panel, 16-foot class
Frequency Range	450-470 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	20 MHz
Gain (average over BW)	10.3 dBd
Front to Back Ratio, no tilt/typ.	10 dB
Horizontal Beamwidth, (H-Plane), typ.	180°
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane), typ.	8°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 Kw
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4F10PPVU(x)D DS4F10PPVU(x)M	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	188 in. x 3.3 in. x 8 in.
Equivalent Flat-Plate Area, max. (side)	8 sq. ft.
Lateral Wind-load Thrust @100mph	396 lbf. (max.)
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Downtilt kit (optional)	Available, DSH3VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	40 lbs. (approx.)
Shipping Weight	55 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4F10PPVU(x)D – 7/16 DIN Connector DS4F10PPVU(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt Options. 2. "-" in the beam-tilt options represents 0° down-tilt.



Bottom View

Features and Benefits:

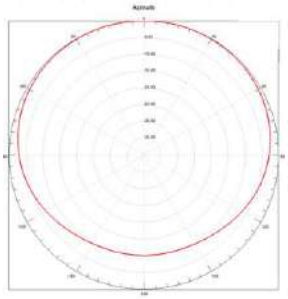
Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

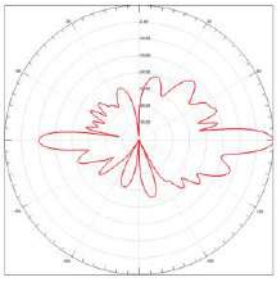
Specific pattern options for maximum versatility and performance in severe environments.

Radiation Patterns:

Horizontal



Vertical



UHF Antenna – Directional Panel, Low-PIM/Hi-PIP, 5.8 dBd

Model - DS4K06PP18U-Series Antennas

Specifications	
Design Type	Panel Antenna, PIM/PIP
Frequency Range	450-512 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	62 MHz
Gain (average over BW)	5.8 dBd
Front to Back Ratio, no tilt/typ.	12 dB
Horizontal Beamwidth, typ.	175°
Beam Tilt (electrical down-tilt)	0°
Vertical Beamwidth (E-Plane), typ.	35°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4K06PP18UD DS4K06PP18UM	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	42 in. x 6.5 in. x 9.25 in.
Equivalent Flat-Plate Area – max. (side)	2.7 sq. ft.
Lateral Wind-load Thrust @100mph	98 lbf. (max.)
Wind Speed rating	150 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Down-tilt kit (optional)	Available, DSH2VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	12 lbs. (approx.)
Shipping Weight	18 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information With 7/16 DIN Female Connector With 4.3-10 Female Connector	 DS4K06PP18UD DS4K06PP18UM

Features and Benefits:

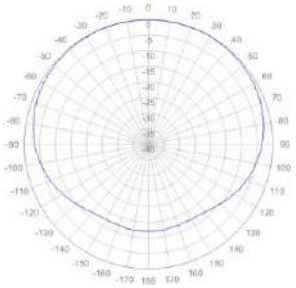
dbSpectra antennas are tested to stringent Peak Instantaneous Power (PIP) levels of up to 25 KW using dbSpectra's multi-channel P25 PIP test beds. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

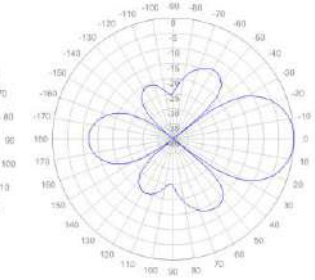
Specific pattern options for maximum versatility and performance in severe environments.

Radiation Patterns:

Horizontal



Vertical



UHF Antenna – Directional Panel, Low-PIM/Hi-PIP, 9.7 dBd

Model - DS4K10PP65U-Series Antennas

Specifications	
Design Type	Panel Antenna, PIM/PIP
Frequency Range	450-512 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	62 MHz
Gain (average over BW)	9.7 dBd
Front to Back Ratio, no tilt/typ.	35 dB
Horizontal Beamwidth, typ.	65°
Beam Tilt (electrical down-tilt)	0°
Vertical Beamwidth (E-Plane), typ.	30°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS4K10PP65UD DS4K10PP65UM	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	42 in. x 22 in. x 9.25 in.
Equivalent Flat-Plate Area – max. (side)	5.1 sq. ft.
Lateral Windload Thrust @100mph	214 lbf. (max.)
Wind Speed rating	150 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 - 4" diameter vertical members
Mechanical Downtilt kit (optional)	DSH2VDT4P
Radome material and color	ABS, light gray
Weight, antenna, and hardware	15 lbs. (approx.)
Shipping Weight	20 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information With 7/16 DIN Female Connector With 4.3-10 Female Connector	 DS4K10PP65UD DS4K10PP65UM

Features and Benefits:

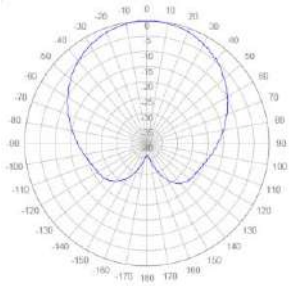
dbSpectra antennas are tested to stringent Peak Instantaneous Power (PIP) levels of up to 25 KW using dbSpectra's multi-channel P25 PIP test beds. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

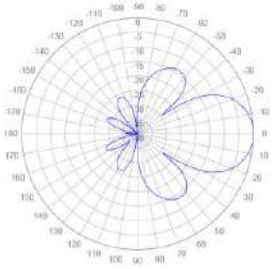
Specific pattern options for maximum versatility and performance in severe environments.

Radiation Patterns:

Horizontal



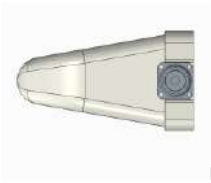
Vertical



700/800 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 8/7.5 dBd

Offset Horizontal Patterns: Model - DS7C08PPYU-Series Antennas; DS7C08PPYI-Inverted Series Antennas
Bidirectional Horizontal Patterns: Model - DS7C08PPVU-Series Antennas

Specifications	
Design Type	Slim-line Panel, 4-foot class
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain (average over BW)	Offset: 8.0 dBd max. Bi-directional: 7.5 dBd max.
Front to Back Ratio, no tilt/typ.	Offset Models: 15 dB Bi-directional Models: 10 dB
Horizontal Beamwidth (H-Plane), typ.	Offset Models: 175˚ Bi-directional Models: 220˚
Beam Tilt (electrical down-tilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	15°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector (Offset/Bi-directional) DS7C08PPYU(x)D / DS7C08PPVU(x)D DS7C08PPYU(x)M / DS7C08PPVU(x)M	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	55 in. x 3 in. x 8 in.
Equivalent Flat-Plate Area – max. (side)	3.0 sq. ft.
Lateral Wind-load Thrust @100mph	110 lbf. (max.)
Wind Speed rating	175 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Spacing between clamp locations	32 inches (vertical)
Mechanical Down-tilt kit (optional)	Available, DSH2VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	16 lbs. (approx.)
Shipping Weight	20 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information (Offset/Bi-directional) With 7/16 DIN Connector: DS7C08PPYU(x)D / DS7C08PPVU(x)D With 4.3-10 Connector: DS7C08PPYU(x)M / DS7C08PPVU(x)M	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt



Bottom View

Features and Benefits:

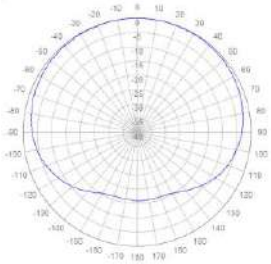
Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

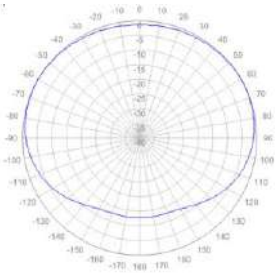
Specific pattern options for maximum versatility and performance in severe environments.

Radiation Patterns:

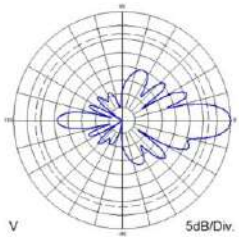
Horizontal: *Offset Models*



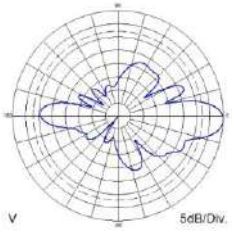
Bi-directional Model



Vertical: *Offset Model*



Bi-directional Model



700/800 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 10/10.5 dBd

Offset Horizontal Patterns: Model - DS7C11PPYU-Series Antennas

Bidirectional Horizontal Patterns: Model - DS7C10PPVU-Series Antennas

Specifications	
Design Type	Slim-line Panel, 8-foot class
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain (average over BW)	Offset: 10.5 dBd max. Bi-directional: 10 dBd max.
Front to Back Ratio, no tilt/typ.	Offset Models: 14 dB Bi-directional Models: 10 dB
Horizontal Beamwidth (H-Plane), typ.	Offset Models: 175˚ Bi-directional Models: 220˚
Beam Tilt (electrical down-tilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	7.5°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector (Offset/Bi-directional) DS7C11PPYU(x)D / DS7C10PPVU(x)D DS7C11PPYU(x)M / DS7C10PPVU(x)M	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	107 in. x 3.3 in. x 8 in.
Equivalent Flat-Plate Area – max. (side)	6.0 sq. ft.
Lateral Windload Thrust @100mph	240 lbf. (max.)
Wind Speed rating	160 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 - 4" diameter vertical members
Spacing between clamp locations	42 inches x 2 (vertical)
Mechanical Downtilt kit (optional)	Available, DSH2VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	25 lbs. (approx.)
Shipping Weight	35 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information (Offset/Bi-directional) With 7/16 DIN Connector: DS7C11PPYU(x)D / DS7C10PPVU(x)D With 4.3-10 Connector: DS7C11PPYU(x)M / DS7C10PPVU(x)M	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Bottom View

Features and Benefits:

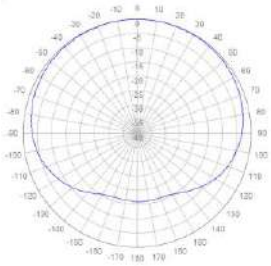
Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

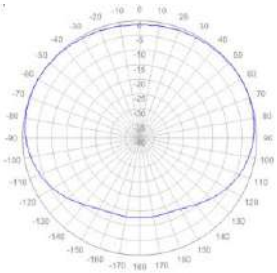
Specific pattern options for maximum versatility and performance in severe environments.

Radiation Patterns:

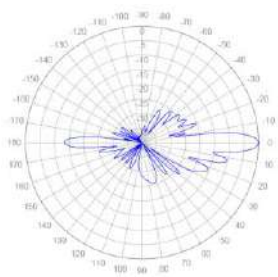
Horizontal: ***Offset Models***



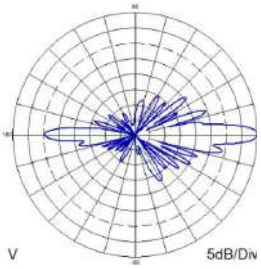
Bi-directional Models



Vertical: Offset Model



Bi-directional Models



700/800 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 10.8 dBd

Model - DS7C11PPTU-Series Antennas

Specifications	
Design Type	Directional Panel – 4-foot-class Antenna
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	153 MHz
Gain (average over BW)	10.8 dBd
Front to Back Ratio, no tilt/typ.	16 dB
Horizontal Beamwidth, nom.	120°
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane), typ.	16°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7C11PPTU(x)D DS7C11PPTU(x)M	 7/16 DIN (F) 4.3-10 (F)
Height x Width x Depth, not including clamps	48 in. x 6.5 in. x 6 in.
Wind Speed rating	150 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Downtilt kit (optional)	DSH2VDT4P
Radome material and color	ABS, light gray
Weight, antenna, and hardware	20 lbs.
Shipping Weight	30 lbs.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7C11PPTU(x)D – 7/16 DIN Connector DS7C11PPTU(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt Options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits:

High-performance directional Panel antenna for medium-gain applications requiring strong pattern control in a 120-degree Horizontal-aperture package.

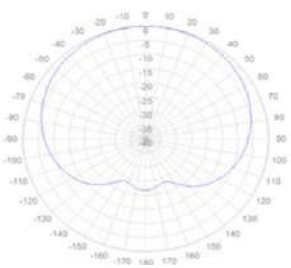
Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order PIM performance better than -150 dBc.

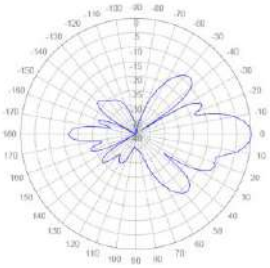
Robust design incorporates proven mechanical performance with modern PIM- and PIP-rated features.

Radiation Patterns:

Horizontal



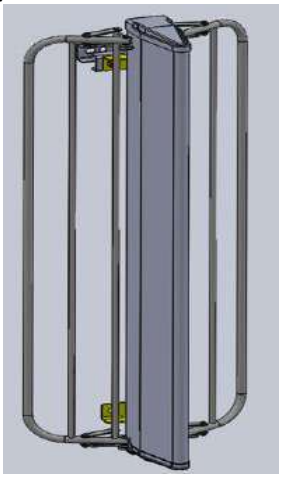
Vertical



700/800 MHz Antenna – Adjustable Directional Panel, Low-PIM/Hi-PIP

Offset Horizontal Patterns: Model - DS7C12PPAU-Series Antennas (12 dBd max.)

Specifications	
Design Type	Slim-Line Panel w/adjustable backscreen
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain - average over BW, nom. at 60-deg HBW setting at 90-deg HBW setting at 105-deg HBW setting at 130-deg HBW setting at 160-deg HBW setting	 12 dBd 11 dBd 10.5 dBd 8.8 dBd 8.2 dBd
Front to Back Ratio, no tilt/typ. All other HBW settings 160-deg HBW setting	 20 dB 28 dB
Horizontal Beamwidth	Adjustable from 60° to 160°
Beam Tilt (electrical down-tilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	16°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7C12PPAU(x)D DS7C12PPAU(x)M	 7/16 DIN (F) 4.3-10 (F)
Height x Width x Depth, not including clamps	55 in. x 22 in. x 12 in. (max)
Equivalent Flat-Plate Area – max. (side)	4.7 sq. ft.
Lateral Windload Thrust @100mph	170 lbf. (max.)
Wind Speed rating	150 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Downtilt kit (optional)	Available, DSH2VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	24 lbs. (approx.)
Shipping Weight	30 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbSpectra.com*
Ordering Information DS7C12PPAU(x)D – 7/16 DIN Connector DS7C12PPAU(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.



Features and Benefits:

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed.

High PIP level is demanded by today's digital systems.

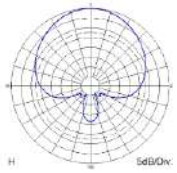
PIM-rated Design – 3rd-Order performance better than -150 dBc.

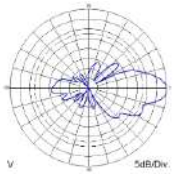
Adjustable backscreen optimizes horizontal radiation patterns for maximum versatility.

Radiation Patterns:

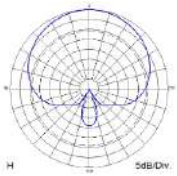
Horizontal Vertical

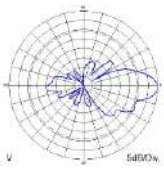
At 60-deg HBW Setting –



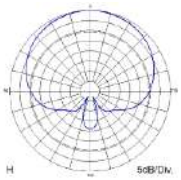


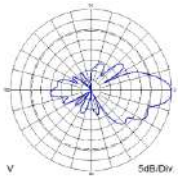
At 90-deg HBW Setting –



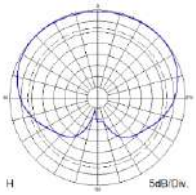


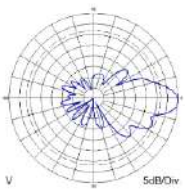
At 105-deg HBW Setting –





At 160-deg HBW Setting -



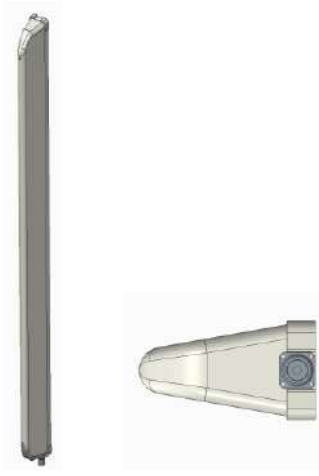


700/800 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 12/12.5 dBd

Offset Horizontal Patterns: Model - DS7C13PPYU-Series Antennas

Bidirectional Horizontal Patterns: Model - DS7C12PPVU-Series Antennas

Specifications	
Design Type	Slim-line Panel, 18-foot class
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain (average over BW)	Offset: 12.5 dBd max. Bi-directional: 12 dBd max.
Front to Back Ratio, no tilt/typ.	Offset Models: 15 dB Bi-directional Models: 12 dB
Horizontal Beamwidth (H-Plane), typ.	Offset Models: 175° Bi-directional Models: 220°
Beam Tilt (electrical down-tilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	4°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 KW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector (Offset/Bi-directional) DS7C13PPYU(x)D / DS7C12PPVU(x)D DS7C13PPYU(x)M / DS7C12PPVU(x)M	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	212 in. x 3.3 in. x 8 in.
Equivalent Flat-Plate Area – max. (side)	11.8 sq. ft.
Lateral Windload Thrust @100mph	436 lbf. (max.)
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Downtilt kit (optional)	Available, DSH3VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	50 lbs. (approx.)
Shipping Weight	65 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information (Offset/Bi-directional) With 7/16 DIN Connector: DS7C13PPYU(x)D / DS7C12PPVU(x)D With 4.3-10 Connector: DS7C13PPYU(x)M / DS7C12PPVU(x)M	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0° down-tilt.



Bottom View

Features and Benefits:

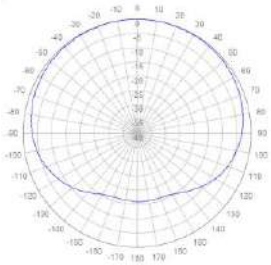
Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

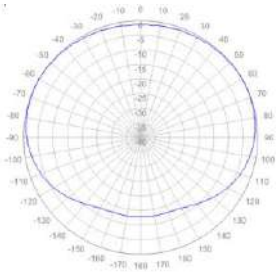
Specific pattern options for maximum versatility and performance in severe environments.

Radiation Patterns:

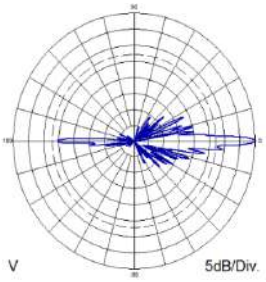
Horizontal: ***Offset Models***



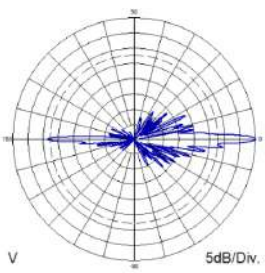
Bi-directional Models



Vertical: Offset Models



Bi-directional models



700/800 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 13.5 dBd

Model - DS7C14PPTU-Series Antennas

Specifications	
Design Type	Directional Panel, 8-foot class
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain (average over BW)	13.5 dBd
Front to Back Ratio, no-tilt/typ.	18 dB
Horizontal Beamwidth (H-Plane), nom.	120°
Beam Tilt (electrical down-tilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	9°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7C14PPTU(x)D DS7C14PPTU(x)M	 7/16 DIN (F) 4.3-10 (F)
Height x Width x Depth, not including clamps	96 in. x 6.5 in. x 6 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Downtilt kit (optional)	DSH2VDT4P
Radome material and color	ABS, light gray
Weight, antenna and inc. hardware	40 lbs.
Shipping Weight	50 lbs.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7C14PPTU(x)D – 7/16 DIN Connector DS7C14PPTU(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam-Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits:

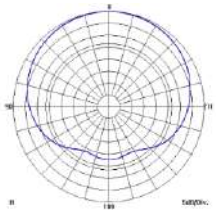
High-performance directional Panel antenna for high-gain applications requiring strong pattern control in a 120-degree Horizontal-aperture package.

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

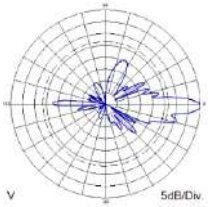
PIM-rated Design – 3rd-Order performance better than -150 dBc.

Radiation Patterns:

Horizontal



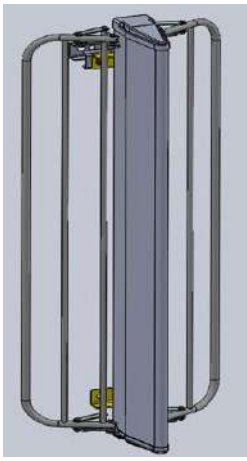
Vertical



700/800 MHz Antenna – Adjustable Directional Panel, Low-PIM/Hi-PIP

Offset Horizontal Patterns: Model - DS7C15PPAU-Series Antennas (15 dBd max.)

Specifications	
Design Type	Slim-Line Panel w/ adjustable backscreen
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain - average over BW, nom. at 60-deg HBW setting at 90-deg HBW setting at 105-deg HBW setting at 130-deg HBW setting at 160-deg HBW setting	 15 dBd 14 dBd 13.5 dBd 11.8 dBd 11.2 dBd
Front to Back Ration, no tilt/typ. All other HBW settings 160-deg HBW setting	 20 dB 25 dB
Horizontal Beamwidth (H-Plane), nom.	Adjustable from 60° to 160°
Beam Tilt (electrical down-tilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	7.5°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7C15PPAU(x)D DS7C15PPAU(x)M	 7/16 DIN (F) 4.3-10 (F)
Height x Width x Depth, not including clamps	106 in. x 22 in. x 12 in. (max)
Equivalent Flat-Plate Area – max. (side)	8 sq. ft.
Lateral Wind-load Thrust @100mph	300 lbf. (max.)
Wind Speed rating	150 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Down-tilt kit (optional)	Available, DSH2VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	40 lbs. (approx.)
Shipping Weight	55 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7C15PPAU(x)D – 7/16 DIN Connector DS7C15PPAU(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt



Features and Benefits:

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed.

High PIP level is demanded by today's digital systems.

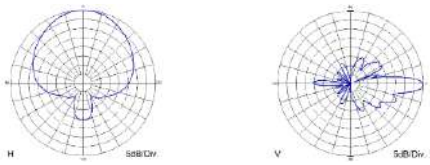
PIM-rated Design – 3rd-Order performance better than -150 dBc.

Adjustable backscreen optimizes horizontal radiation patterns for maximum versatility.

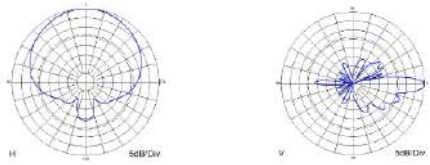
Radiation Patterns:

Horizontal Vertical

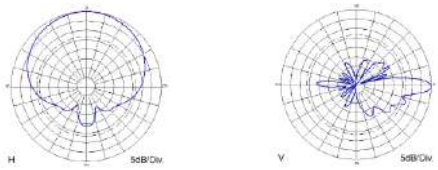
At 60-deg HBW Setting –



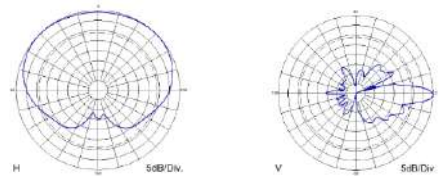
At 90-deg HBW Setting –



At 105-deg HBW Setting –



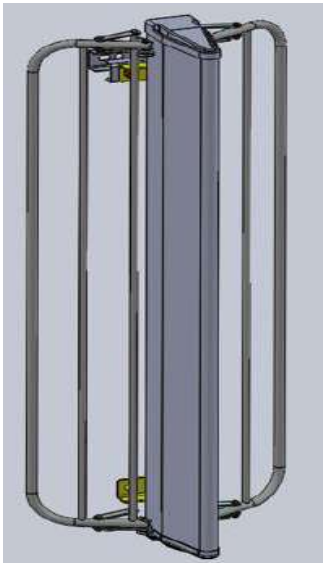
At 160-deg HBW Setting –



700/800 MHz Antenna – Adjustable Directional Panel, Low-PIM/Hi-PIP

Offset Horizontal Pattern: Model - DS7C17PPAU-Series Antennas (17.3 dBd max.)

Specifications	
Design Type	Slim-Line Panel w/adjustable backscreen
Frequency Range	764-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	105 MHz
Gain - average over BW, nom. at 60-deg HBW setting at 90-deg HBW setting at 105-deg HBW setting at 130-deg HBW setting at 160-deg HBW setting	 17.4 dBd 16.0 dBd 15.2 dBd 14.6 dBd 13.8 dBd
Front to Back Ratio, no tilt/typ. All other HBW settings 160-deg HBW setting	 20 dB 25 dB
Horizontal Beamwidth (H-Plane), nom.	Adjustable from 60° to 160°
Beam Tilt (electrical down-tilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	4°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7C17PPAU(x)D DS7C17PPAU(x)M	 7/16 DIN (F) 4.3-10 (F)
Height x Width x Depth, not including clamps	212 in. x 26 in. x 12 in. (max.)
Equivalent Flat-Plate Area – max. (side)	9.75 sq. ft.
Lateral Windload Thrust @100mph	425 lbf. (max.)
Wind Speed rating (side mounted)	100 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Downtilt kit (optional)	Available, DSH3VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	80 lbs. (approx.)
Shipping Weight	100 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7C17PPAU(x)D – 7/16 DIN Connector DS7C17PPAU(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.



Features and Benefits:

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

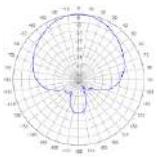
PIM-rated Design – 3rd-Order performance better than -150 dBc.

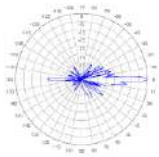
Adjustable backscreen optimizes horizontal radiation patterns for maximum versatility.

Radiation Patterns:

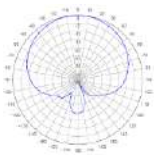
Horizontal Vertical

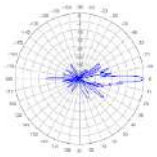
At 60-deg HBW Setting -



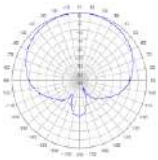


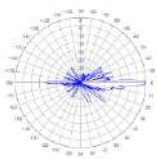
At 90-deg HBW Setting-



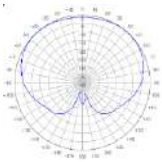


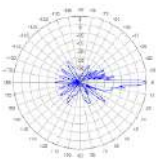
At 105-deg HBW Setting-





At 160-deg HBW Setting-





750 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 7.7 dBd

Model - DS7U08H60U-Series Antennas

Articulated Mount Model - DS7U08H60UA-Series Antennas

Specifications	
Design Type	Directional Panel – Patch design, High Performance
Frequency Range	757-788 MHz
Passive Intermodulation – PIM certified, (2 x 20W sources)	-150 dBc 3rd Order, when equipped with 4.3-10 DIN
Bandwidth	31 MHz
Gain, typ.	7.7 dBd
Front to Back Ratio, no tilt/typ.	20 dB
Horizontal Beamwidth (H-Plane), typical	60°
Beam Tilt (electrical downtilt)	0°
Impedance	50 Ohms
VSWR	1.4:1 or better
Average Power Rating	150 W
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7U08H60U-N / DS7U08H60UAN DS7U08H60U-M / DS7U08H60UAM	 N (F) 4.3-10 (F)
Height x Width x Depth, nom., not including clamps	12 in. x 12 in. x 1.7 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware DS7U08H60U-N/DS7U08H60U-M DS7U08H60UAN/DS7U08H60UAM	 (4) PEM studs on antenna included (bracket not included) Includes 2-axis/articulating mount for Azimuth and Elevation adjustment
Radome material and color	ABS, light gray
Weight, antenna and hardware, est.	2.5 lbs.
Shipping Weight, est.	4.5 lbs.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information With N-type Connector With 4.3-10 Connector	 DS7U08H60U-N / DS7U08H60UAN DS7U08H60U-M / DS7U08H60UAM

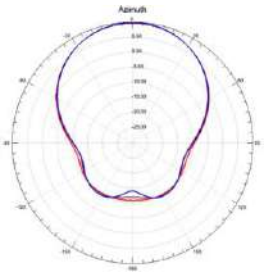
Features and Benefits:

Premium directional Panel antenna for lower-gain applications requiring good pattern control in a 60-degree Horizontal-aperture package.

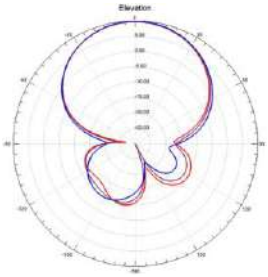
Panel design is optimized for the 757-788 MHz band, packaged in a compact and light weight platform.

Radiation Patterns:

Horizontal



Vertical



700/800 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 10.8 dBd

Model - DS7X11PPTU-Series Antennas

Specifications	
Design Type	Directional Panel – 4-foot-class Antenna
Frequency Range	716-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	153 MHz
Gain (average over BW)	10.8 dBd
Front to Back Ratio, no tilt/typ.	16 dB
Horizontal Beamwidth (H-Plane), nom.	120˚
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane), typ.	16°
Impedance	50 Ohms
Null fill	Included
VSWR, better than:	1.4:1 @ 716-806 MHz 1.5:1 @ 806-869 MHz
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7X11PTU(x)D DS7X11PTU(x)M	 7/16 DIN (F) 4.3-10 (F)
Height x Width x Depth, nom., not including clamps	48 in. x 6.5 in. x 6 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Down-tilt kit	DSH2VDT4P
Radome material and color	ABS, light gray
Weight, antenna, and hardware	22 lbs.
Shipping Weight	30 lbs.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7X11PTU(x)D – 7/16 DIN Connector DS7X11PTU(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt

Features and Benefits:

High-performance directional Panel antenna for medium-gain applications requiring strong pattern control in a 120-degree Horizontal-aperture package.

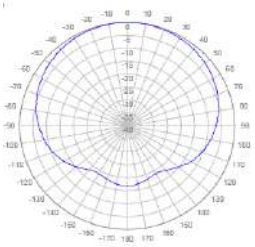
Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

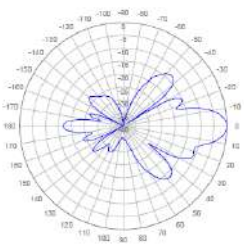
Robust design incorporates proven mechanical performance with modern PIM and PIP – rated features.

Radiation Patterns:

Horizontal



Vertical



700/800 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 13.5 dBd

Model – DS7X14PP12S-Series Antennas

Specifications	
Design Type	Directional Panel – 8-Foot Class Antenna
Frequency Range	716-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-153 dBc or better
Bandwidth	153 MHz
Gain (average over BW)	13.5 dBd
Front to Back Ratio, no tilt/typ.	18 dB
Horizontal Beamwidth (H-Plane), nom.	120°
Beam Tilt (electrical down-tilt)	0°
Vertical Beamwidth (E-Plane), typ.	9°
Impedance	50 Ohms
Null Fill, typ.	-12 dB
Upper Sidelobe Suppression, typ.	-17 dB
VSWR, better than:	1.35:1 @ 716-806 MHz 1.5:1 @ 806-869 MHz
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7X14PP12SD DS7X14PP12SM	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	96 in. x 6.5 in. x 6.0 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 - 4" diameter vertical members
Mechanical Downtilt kit (optional)	DSH2VDT4P
Radome material and color	UV-Rated ABS, Light Gray
Weight, antenna, and hardware	40 lbs. (approx.)
Shipping Weight	50 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information With 7/16 DIN Female Connector With 4.3-10 Female Connector	 DS7X14PP12SD DS7X14PP12SM

Features and Benefits:

High-performance directional panel antenna for high-gain applications requiring strong pattern control in a 120-degree Horizontal-Aperture package.

Tested to stringent Peak Instantaneous Power (PIP) levels of up to 25 KW using dbSpectra's multi-channel P25 PIP test beds. High PIP level is demanded by today's digital systems.

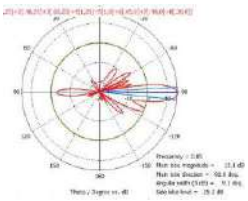
PIM-rated Design – 3rd-Order performance better than -150 dBc.

Optimized for 750MHz LMR frequencies popular with Utilities including Cellular/LTE frequencies with tight pattern control.

Radiation Patterns:

Horizontal

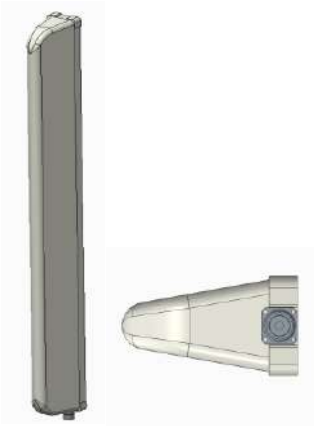
Vertical



900 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 8.3/7.8 dBd

Offset Horizontal Patterns: Model - DS9A08PPYU-Series Antennas
Bidirectional Horizontal Patterns: Model - DS9A08PPVU-Series Antennas

Specifications	
Design Type	Slim-line Panel, 4-foot class
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	70 MHz
Gain (average over BW)	Offset: 8.3 dBd max. Bidirectional: 7.8 dBd max.
Front to Back Ratio, no tilt/typ.	Offset Models: 15 dB Bidirectional Models: 10 dB
Horizontal Beamwidth (H-Plane), typ.	Offset Models: 195˚ Bidirectional Models: 220˚
Beam Tilt (electrical downtilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	13°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector (Offset/Bidirectional) DS9A08PPYU(x)D / DS9A08PPVU(x)D DS9A08PPYU(x)M / DS9A08PPVU(x)M	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	55 in. x 3 in. x 8 in.
Equivalent Flat-Plate Area – max. (side)	3.0 sq. ft.
Lateral Windload Thrust @100mph	110 lbf. (max.)
Wind Speed rating	175 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Spacing between clamp locations	32 inches (vertical)
Mechanical Downtilt kit (optional)	Available, DSH2VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	16 lbs.
Shipping Weight	20 lbs.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information (Offset/Bidirectional) With 7/16 DIN Connector: DS9A08PPYU(x)D / DS9A08PPVU(x)D With 4.3-10 Connector: DS9A08PPYU(x)M / DS9A08PPVU(x)M	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt



Bottom View

Features and Benefits:

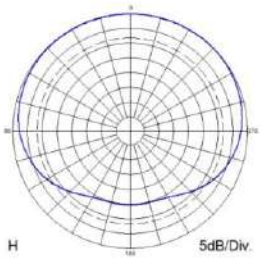
Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

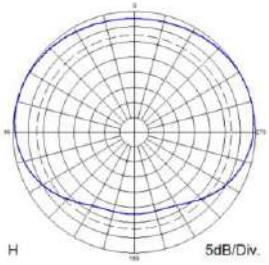
Specific pattern options for maximum versatility and performance in severe environments.

Radiation Patterns:

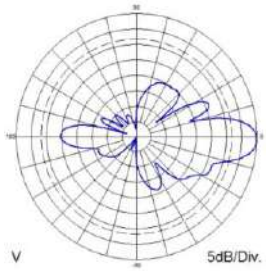
Horizontal: ***Offset Models***



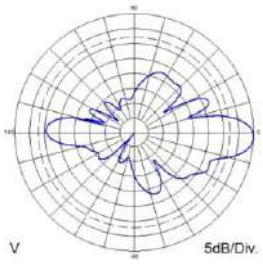
Bi-directional Model



Vertical: ***Offset Models***



Bi-directional Models



900 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 10.8/10.3 dBd

Offset Horizontal Patterns: Model - DS9A11PPYU-Series Antennas

Bidirectional Horizontal Patterns: Model - DS9A10PPVU-Series Antennas

Specifications	
Design Type	Slim-line Panel, 8-foot class
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	70 MHz
Gain (average over BW)	Offset: 10.8 dBd max. Bidirectional: 10.3 dBd max.
Front to Back Ratio, no tilt/typ.	Offset: 15 dB Bidirectional: 10 dB
Horizontal Beamwidth (H-Plane), typ.	Offset Models: 195˚ Bidirectional Models: 220˚
Beam Tilt (electrical down-tilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	6.5°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector (Offset / Bidirectional) DS9A11PPYU(x)D / DS9A10PPVU(x)D DS9A11PPYU(x)M / DS9A10PPVU(x)M	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	107 in. x 3.3 in. x 8 in.
Equivalent Flat-Plate Area – max. (side)	6.0 sq. ft.
Lateral Windload Thrust @100mph	240 lbf. (max.)
Wind Speed rating	160 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Spacing between clamp locations	42 inches x 2 (vertical)
Mechanical Downtilt kit (optional)	Available, DSH2VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	25 lbs. (approx.)
Shipping Weight	35 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information (Offset / Bidirectional) With 7/16 DIN Connector: DS9A11PPYU(x)D / DS9A10PPVU(x)D With 4.3-10 Connector: DS9A11PPYU(x)M / DS9A10PPVU(x)M	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt

Bottom View

Features and Benefits:

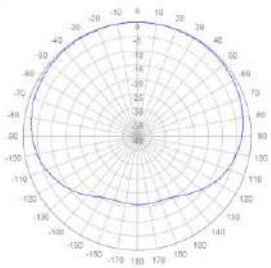
Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

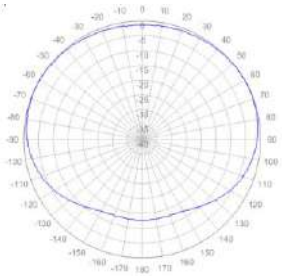
Specific pattern options for maximum versatility and performance in severe environments.

Radiation Patterns:

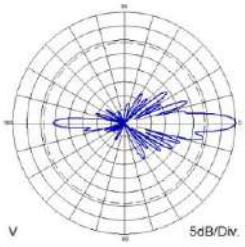
Horizontal: ***Offset Models***



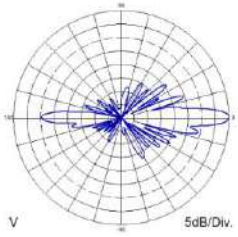
Bi-directional Models



Vertical: Offset Models



Bi-directional Models



900 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 11.7 dBd

Model - DS9A12PP12S-Series Antennas

Specifications	
Design Type	Directional Panel, 6-foot class
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	70 MHz
Gain (average over BW)	11.7 dBd
Front to Back Ratio, no tilt/typ.	22 dB
Horizontal Beamwidth (H-Plane), typ.	120°
Beam Tilt (electrical down-tilt)	0°
Vertical Beamwidth (E-Plane), typ.	10°
Impedance	50 Ohms
Null fill	-12 dB
Upper Sidelobe Suppression, typ.	-15 dB
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS9A12PP12SD DS9A12PP12SM	 7/16 DIN (F) 4.3-10 (F)
Height x Width x Depth, not including clamps	72 in. x 6 in. x 6 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Down-tilt kit	DSH2VDT4P
Radome material and color	PVC, Gray
Weight, antenna, and hardware	35 lbs.
Shipping Weight	45 lbs.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information With 7/16 DIN Female Connector With 4.3-10 Female Connector	 DS9A12PP12SD DS9A12PP12SM

Features and Benefits:

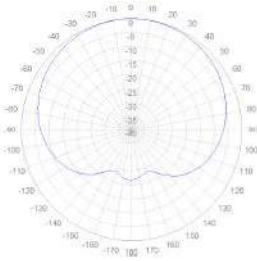
High-performance directional Panel antenna for higher-gain applications requiring strong pattern control in a 120-degree Horizontal-aperture package.

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

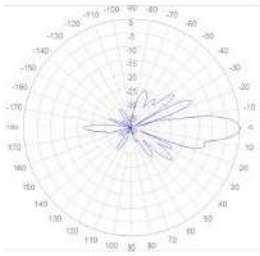
PIM-rated Design – 3rd-Order performance better than -150 dBc.

Radiation Patterns:

Horizontal



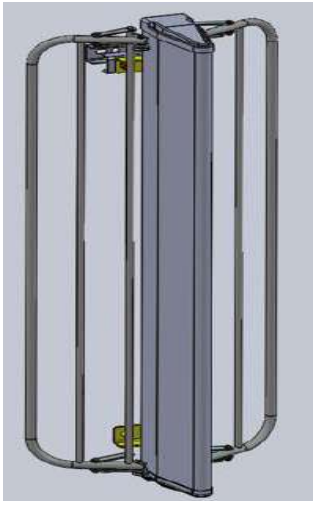
Vertical



900 MHz Antenna – Adjustable Directional Panel, Low-PIM/Hi-PIP

Offset Horizontal Patterns: Model - DS9A12PPAU–Series Antennas (12.3 dBd max.)

Specifications	
Design Type	Slim-Line Panel w/adjustable backscreen
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	70 MHz
Gain - average over BW, nom. at 60-deg HBW setting at 90-deg HBW setting at 105-deg HBW setting at 130-deg HBW setting at 160-deg HBW setting	 12.3 dBd 11.3 dBd 10.8 dBd 9.1 dBd 8.5 dBd
Front to Back Ratio, no tilt/typ. All other HBW settings 160-deg HBW setting	 20 dB 28 dB
Horizontal Beamwidth (H-Plane), typ.	Adjustable from 60° to 180°
Beam Tilt (electrical down-tilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	15°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS9A12PPAU(x)D DS9A12PPAU(x)M	 7/16 DIN (F) 4.3-10 (F)
Height x Width x Depth, not including clamps	55 in. x 26 in. x 12 in. (max)
Equivalent Flat-Plate Area – max. (side)	4.7 sq. ft.
Lateral Windload Thrust @100mph	170 lbf. (max.)
Wind Speed rating (side mounted)	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Downtilt kit (optional)	Available, DSH2VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	28 lbs. (approx.)
Shipping Weight	34 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9A12PPAU(x)D – 7/16 DIN Connector DS9A12PPAU(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam tilt options represents 0˚ down-tilt



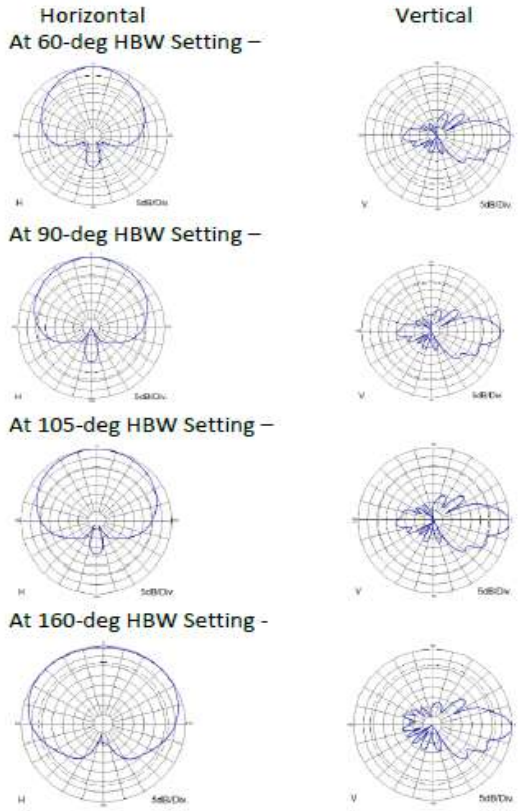
Features and Benefits:

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

Adjustable backscreen optimizes horizontal radiation patterns for maximum versatility.

Radiation Patterns:



900 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 11.7 dBd

Model - DS9A12PPTU-Series Antennas

Specifications	
Design Type	Directional Panel, 6-foot class
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	70 MHz
Gain (average over BW)	11.7 dBd
Front to Back Ratio, no-tilt, typ.	22 dB
Horizontal Beamwidth (H-Plane), typ.	120˚
Beam Tilt (electrical down-tilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	10°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS9A12PPTU(x)D DS9A12PPTU(x)M	 7/16 DIN (F) 4.3-10 (F)
Height x Width x Depth, not including clamps	72 in. x 6 in. x 6 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Down-tilt kit	DSH2VDT4P
Radome material and color	ABS, light gray
Weight, antenna, and hardware	35 lbs.
Shipping Weight	45 lbs.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9A12PPTU(x)D – 7/16 DIN Connector DS9A12PPTU(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam-Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt

Features and Benefits:

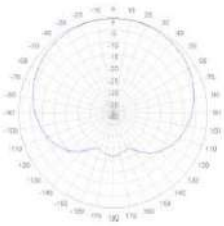
High-performance directional Panel antenna for higher-gain applications requiring strong pattern control in a 120-degree Horizontal-aperture package.

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

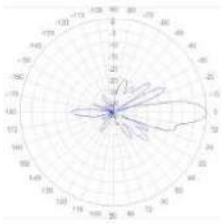
PIM-rated Design – 3rd-Order performance better than -150 dBc.

Radiation Patterns:

Horizontal



Vertical



900 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 12.3/12.8 dBd

Offset Horizontal Patterns: Model - DS9A13PPYU-Series Antennas

Bidirectional Horizontal Patterns: Model - DS9A12PPVU-Series Antennas

Specifications	
Design Type	Slim-line Panel, 18-foot class
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	70 MHz
Gain (average over BW)	Offset: 12.8 dBd max. Bi-directional: 12.3 dBd max.
Front to Back Ratio, no tilt/typ.	Offset Models: 15 dB Bi-directional Models: 12 dB
Horizontal Beamwidth (H-Plane), typ.	Offset Models: 195˚ Bi-directional Models: 220˚
Beam Tilt (electrical downtilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	4°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 Kw
Polarization	Vertical
Lightning Protection	Direct Ground
Connector (Offset / Bidirectional) DS9A13PPYU(x)D / DS9A12PPVU(x)D DS9A13PPYU(x)M / DS9A12PPVU(x)M	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Dept, not including clamps	204 in. x 3.3in. x 8in.
Equivalent Flat-Plate Area – max. (side)	11.6 sq. ft.
Lateral Windload Thrust @100mph	430 lbf. (max.)
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Downtilt kit (optional)	Available, DSH3VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	50 lbs. (approx.)
Shipping Weight	65 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at tech@dbspectra.com
Ordering Information (Offset / Bidirectional) With 7/16 DIN Connector: DS9A13PPYU(x)D / DS9A12PPVU(x)D With 4.3-10 Connector: DS9A13PPYU(x)M / DS9A12PPVU(x)M	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Bottom View

Features and Benefits:

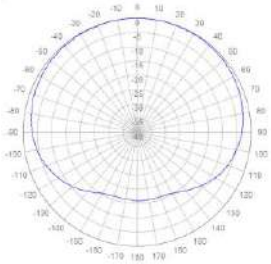
Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

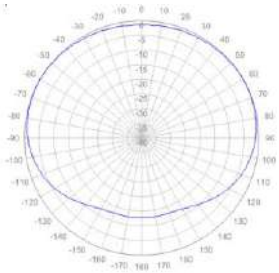
Specific pattern options for maximum versatility and performance in severe environments.

Radiation Patterns:

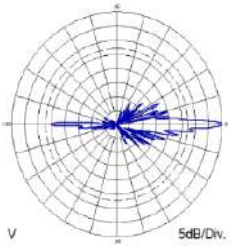
Horizontal: ***Offset Models***



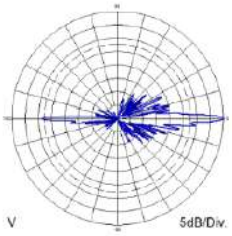
Bi-directional Models



Vertical: Offset Models



Bi-directional Models



900 MHz Antenna – Directional Panel, X-pol, Low-PIM/Hi-PIP, 14.3 dBd

Model - DS9B14PP6X-Series Antennas

Specifications	
Design Type	Directional Panel Antenna, X-pol, 6-foot class
Frequency Range	896-941 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	45 MHz
Gain (average over BW)	14.3 dBd
Front to Back Ratio, no-tilt, typ.	23 dB
Horizontal Beamwidth (H-Plane), typ.	60°
Beam Tilt (electrical down-tilt)	(x) = - or 4 degrees
Vertical Beamwidth (E-Plane), typ.	9°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	X-pol, +/- 45 degrees
Lightning Protection	Direct Ground
Connector DS9B14PP6X(x)D DS9B14PP6X(x)M	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, nominal, not including clamps	72 in. x 11 in. x 5 in.
Equivalent Flat-Plate Area – max. (side)	5.9 sq. ft.
Lateral Wind-load Thrust @100mph	180 lbf. (max.)
Wind Speed rating	150 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2-4" diameter vertical members
Mechanical Down-tilt kit	DSH2VDT4P (Optional; order separate)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	22 lbs. (approx.)
Shipping Weight	30 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9B14PP6X(x)D – 7/16 DIN Connector DS9B14PP6X(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam-Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt

Features and Benefits:

Performance-optimized 900 MHz cross-polarized Antenna for LTE and specialized applications where high-gain and tight pattern control are required.

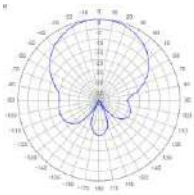
dbSpectra antennas are tested to stringent Peak Instantaneous Power (PIP) levels of up to 25 KW using dbSpectra's multi-channel P25 PIP test beds.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

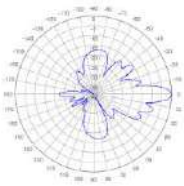
Robust and field-proven package guarantees long service life.

Radiation Patterns:

Horizontal



Vertical



900 MHz Antenna – Directional Panel, Low-PIM/Optimized, 6 dBd

Model DS9S06H90U-Series Antennas

Specifications	
Design Type	Directional Panel - Patch design
Frequency Range	902-928 MHz, ISM band
Passive Intermodulation - PIM (2 x 20W sources)	-150 dBc, 3rd Order when equipped with 7/16 DIN or 4.3-10 connector
Bandwidth	26 MHz
Gain, typ.	6 dBd
Front to Back Ratio, no tilt/typ.	16 dB
Azimuth-plane Beamwidth (Horizontal), typ. When V-pol mounted: When H-pol mounted:	 90° 60°
Elevation-plane Beamwidth (Vertical), typ. When V-pol mounted: When H-pol mounted:	 60° 90°
Beam Tilt (electrical downtilt)	0°
Impedance	50 Ohms
VSWR	1.4:1 or better
Average Power Rating	150 W
Polarization	Vertical or Horizontal (User can mount in either polarization) **
Lightning Protection	Direct Ground
Connector options	N (F), 7/16 DIN (F), or 4.3-10 (F)
Height x Width x Depth, nom. not including mounting clamps	10 in. x 7 in. x 1.7 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware options	*Standard pipe mount with stainless band clamps, allows Azimuth adjustment (1-axis) *2-axis/articulating mount for both Azimuth and Elevation adjustment
Mechanical Downtilt kit	Included
Radome material and color	ABS, light gray
Weight, antenna and hardware, est.	2 lbs.
Shipping Weight, est.	4.5 lbs.
**Installation note	Always make sure the open drain hole is facing downward after install
Ordering Information For standard mounting bracket With N-Type Female Connector With 7/16 DIN Female Connector With 4.3-10 Female Connector For 2-axis Articulating mounting bracket With N-Type Female Connector With 7/16 DIN Female Connector With 4.3-10 Female Connector	 DS9S06H90U-N DS9S06H90U-D DS9S06H90U-M DS9S06H90UAN DS9S06H90UAD DS9S06H90UAM

Features and Benefits:

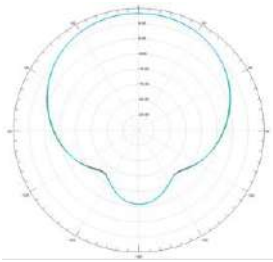
Premium directional Panel antenna for medium-gain applications requiring good pattern control in a 90-degree Horizontal-aperture package (V-pol) or 60-degree Horizontal-aperture package (H-pol).

Panel design is optimized for the 902-928 MHz "ISM" band, packaged in a compact and light weight platform.

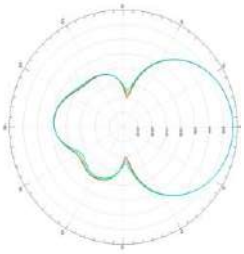
Allows field choice of Vertical or Horizontal polarization.

Radiation Patterns:

Horizontal



Vertical



900 MHz Antenna – Directional Panel, Low-PIM/Optimized, 7.8 dBd

Model - DS9S08H60U-Series Antennas

Articulated Mount Model - DS9S08H60UB-Series Antennas

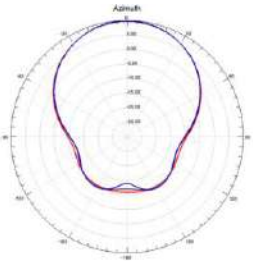
Specifications	
Design Type	Directional Panel – Patch design
Frequency Range	902-928 MHz
Passive Intermodulation - PIM (2 x 20W sources)	-150 dBc 3rd Order When equipped with 4.3-10 DIN
Bandwidth	26 MHz
Gain, typ.	7.8 dBd
Front to Back Ratio, no tilt/typ.	20 dB
Horizontal Beamwidth (H-Plane), typ.	60˚
Beam Tilt (electrical downtilt)	0°
Impedance	50 Ohms
VSWR	1.4:1 or better
Average Power Rating	150 W
Polarization	Vertical (contact dbSpectra for H-pol information)
Lightning Protection	Direct Ground
Connector DS9S08H60U-N DS9S08H60UBN DS9S08H60UBM	 N (F) N (F) 4.3-10 (F)
Height x Width x Depth, nom., not including clamps	10 in. x 10 in. x 1.7 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware DS9S08H60U-N DS9S08H60UBN DS9S08H60UBM	 • (4) ¼" PEM studs included. • Pipe-mount bracket included. • Pipe-mount bracket included.
Mechanical Downtilt kit	Optional (contact dbSpectra)
Radome material and color	ABS, light gray
Weight, antenna and hardware, est.	2 lbs.
Shipping Weight, est.	4 lbs.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information With N-Type Female Connector With N-Type Female Connector With 4.3-10 Female Connector	 DS9S08H60U-N DS9S08H60UBN DS9S08H60UBM

Features and Benefits:

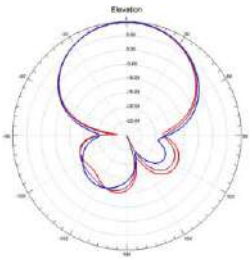
Premium directional Panel antenna for lower-gain applications requiring good pattern control in a 60-degree Horizontal-aperture package.

Panel design is optimized for the 902-928 MHz ISM band, packaged in a compact and light-weight platform.

Radiation Patterns:



Horizontal



Vertical

900 MHz Antenna – Directional Panel, Low PIM/Narrow-Beam, 16 dBi

Model - DS9U14H30U-Series Antennas

Specifications	
Design Type	Directional Panel – Hi Gain/Narrow Beam Type
Frequency Range	928-960 MHz, MAS band
Passive Intermodulation - PIM (2 x 20W sources)	-150 dBc 3rd Order, When equipped with 7/16 DIN or 4.3-10 connector
Bandwidth	32 MHz
Gain, typ.	13.9 dBd / 16 dBi
Front to Back Ratio, no tilt/typ.	28 dB
Horizontal Beamwidth (H-Plane), typ.	30˚
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Impedance	50 Ohms
VSWR	1.5:1 or better
Average Power Rating	300 W
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS9U14H30U(x)D DS9U14H30U(x)M DS9U14H30U(x)N	 7/16 DIN (F) 4.3-10 (F) N (F)
Height x Width x Depth, nom., not including down-tilt bracket	25 in. x 25 in. x 4 in.
Wind Speed rating	125 mph (without ice)
Flat plate equivalent	4.3 sq. feet
Wind load @100 MPH wind	178 lbf
Mounting Hardware	Included
Mechanical Downtilt kit	Included
Radome material and color	ABS, light gray
Weight, antenna and hardware, est.	8 lbs.
Shipping Weight, est.	10 lbs.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9U14H30U(x)D – 7/16 DIN Connector DS9U14H30U(x)M – 4.3-10 Connector DS9U14H30U(x)N – N-Type Connector	1. Replace (x) in the model number with Beam-Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt

actual antenna similar to image

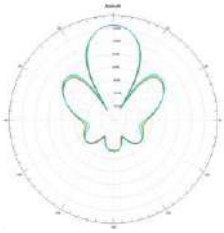
Features and Benefits:

Premium directional Panel antenna for high-gain applications requiring good pattern control in a 30-degree Horizontal-aperture package.

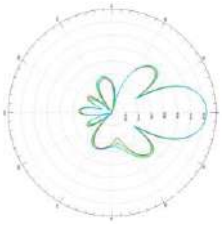
Panel design is optimized for the 928-960 MHz "MAS" band, packaged in a compact and robust platform.

Radiation Patterns:

Horizontal

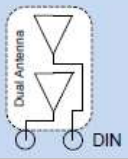


Vertical



3300-3800 MHz Antenna – Slant Cross Pole Panel, Low-PIM/Hi-PIP, 18 dBd

Model – DSCB20X33D-Series Antennas

Specifications	
Design Type	Slant Cross-Pole Directional Panel
Frequency Range	3300-3800 MHz
Passive Intermodulation – PIM (2 × 20W)	-150 dBc, 3rd Order
Bandwidth	500 MHz
Gain, typ.	18.35 dBd
Front to Back Ratio, no tilt/typ., ±30˚	>37 dB
Cross-Polar Discrimination	>16 dB
Isolation, typ.	>25 dB
Beam Tilt (Electrical down-tilt)	(x) = - (0 degrees)
Horizontal Beamwidth (H-Plane), typ.	33˚
Vertical Beamwidth (E-Plane), typ.	6.5˚
Upper Side Lobe Suppression, Peak to 20˚	>17 dB
Impedance	50 Ohms
VSWR/Return Loss	<1.5:1 / >14 dB (min.)
Average Power Rating, per port	100 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	±45˚ Slant Linear
Lightning Protection	Direct Ground
Connector DSCB20X33D(x)M DSCB20X33D(x)D	 4.3-10 (F) 7/16 DIN (F)
Lateral Wind-load Thrust @100mph	Frontal: 50 lbf. ; Lateral: 18 lbf.
Rated Wind Speed	125 mph (without ice)
Dimensions, (L × W × H)	32 in. × 10 in. × 3.5 in.
Radome Material/Color	UV-Stabilized ABS/Grey
Weight (approx.), Antenna	13.2 lbs.
Shipping Weight (approx..)	16.2 lbs.
Operating Temperature	-40˚F to 158˚F
Configuration: Dual, "Two antennas in one"	
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DSCB20X33D(x)M – 4.3-10 Connector DSCB20X33D(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam-Tilt options 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits:

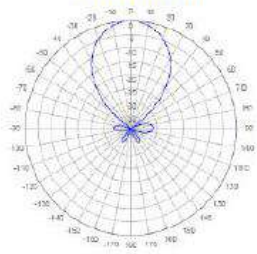
Tested to stringent Peak Instantaneous Power (PIP) Levels of 25 kW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-Rated Design – 3rd Order Performance Better than -150 dBc.

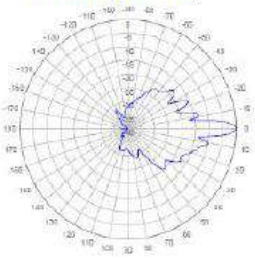
Specific pattern options for maximum versatility and performance in severe environments.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



UHF Antenna – Directional Panel, Low-PIM/Hi-PIP, 9.2 dBd

Model – SP4A10PPTU-Series Antennas

Specifications	
Design Type	Panel Antenna, PIM/PIP
Frequency Range	406-420 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	14 MHz
Gain (average over BW)	9.2 dBd
Front to Back Ratio, no tilt/typ.	18 dB
Horizontal Beamwidth, typ.	120°
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane), typ.	18°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector SP4A10PPTU(x)D SP4A10PPTU(x)M	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	72 in. x 16 in. (backscreen) x 8 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 - 4" diameter vertical members
Mechanical Downtilt kit (optional)	DSH2VDT4P
Radome material and color	ABS, light gray
Weight, antenna, and hardware	18 lbs. (approx.)
Shipping Weight	23 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information SP4A10PPTU(x)D - 7/16 DIN Connector SP4A10PPTU(x)M - 4.3-10 Connector	1. Replace (x) in the model number with Beam-Tilt Options. 2. "-" in the model number represents 0˚ down-tilt.

Features and Benefits:

dbSpectra antennas are tested to stringent Peak Instantaneous Power (PIP) levels of up to 25 KW using dbSpectra's multi-channel P25 PIP test beds. High PIP level is demanded by today's digital systems.

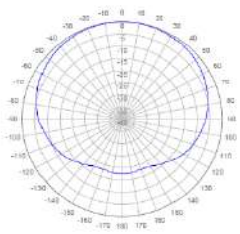
PIM-rated Design – 3rd-Order performance better than -150 dBc.

Specific pattern options for maximum versatility and performance in severe environments.

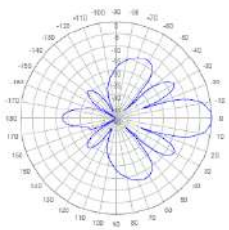
Lower-profile for minimal wind-load. Panel antenna with backscreen operates in the UHF frequency band with tight pattern control.

Radiation Patterns:

Horizontal



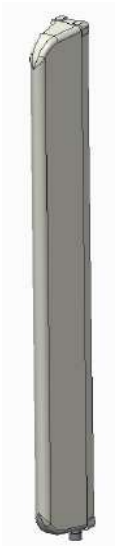
Vertical



UHF Antenna – Directional Panel w/ Screen, Low-PIM/Hi-PIP, 7.4 dBd

Model - SP4X07PPVS-Series Antennas

Specifications	
Design Type	Slim-line Panel with metal backscreen, 8-foot class
Frequency Range	470-490 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	20 MHz
Gain (average over BW)	7.4 dBd
Horizontal Beamwidth (H-Plane), typ.	180˚ (Null Rear)
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane), typ.	15°
Impedance	50 Ohms
Front-to-back ratio, no tilt/typ.	27-29 dB
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector SP4X07PPVS(x)D SP4X07PPVS(x)M	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	Radome: 96 in. x 3.5 in. x 8 in. Plus, 2x metal 24" backscreens
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Downtilt kit (optional)	Available, DSH2VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	45 lbs. (approx.)
Shipping Weight	55 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information SP4X07PPVS(x)D – 7/16 DIN Connector SP4X07PPVS(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt Options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.



Back-screens not shown

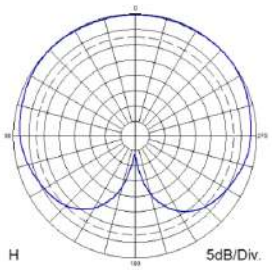
Features and Benefits:

Specific pattern design for maximum F/B, where interference is being avoided from the -180-degree direction from boresight.

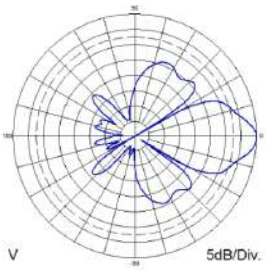
Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

Radiation Patterns



Horizontal



Vertical

800 MHz Antenna – Directional Log Panel, Low-PIM/Hi-PIP, 13 dBd

Model - SP8A13LP90U-Series Antennas

Specifications	
Design Type	Log Panel Antenna, PIM/PIP
Frequency Range	806-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	63 MHz
Gain (average over BW)	13.0 dBd
Horizontal Beamwidth (H-Plane), typ.	95˚
Beam Tilt (electrical down-tilt)	0°
Vertical Beamwidth (E-Plane), typ.	11°
Front to Back Ratio, typ.	38 dB
Upper Side Lobe Suppression	18 dB
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector SP8A13LP90UD SP8A13LP90UM	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	72 in. × 6 in. × 10 in.
Equivalent Flat-Plate Area – max. (side)	Frontal: 3.2 sq. ft. Lateral: 4.5 sq. ft.
Lateral Wind-load Thrust @100mph	Frontal: 130 lbf. Lateral: 170 lbf.
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	DB380 mounting clamp kit, 3.5" O.D. max.
Material: Radiators Back Panel Radome Mounting Hardware	 PCB Aluminum ABS, Light Grey Galvanized Steel
Weight, antenna, and hardware, est.	14 lbs.
Shipping Weight, est.	34 lbs.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information With 7/16 DIN Connector With 4.3-10 Connector	 SP8A13LP90UD SP8A13LP90UM

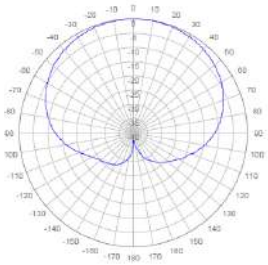
Features and Benefits:

dbSpectra antennas are tested to stringent Peak Instantaneous Power (PIP) levels of up to 25 KW using dbSpectra's multi-channel P25 PIP test beds. High PIP level is demanded by today's digital systems.

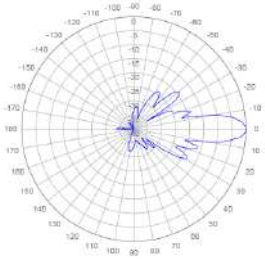
PIM-rated Design – 3rd-Order performance better than -150 dBc.

Specific pattern options for maximum versatility and performance in severe environments.

Radiation Patterns:

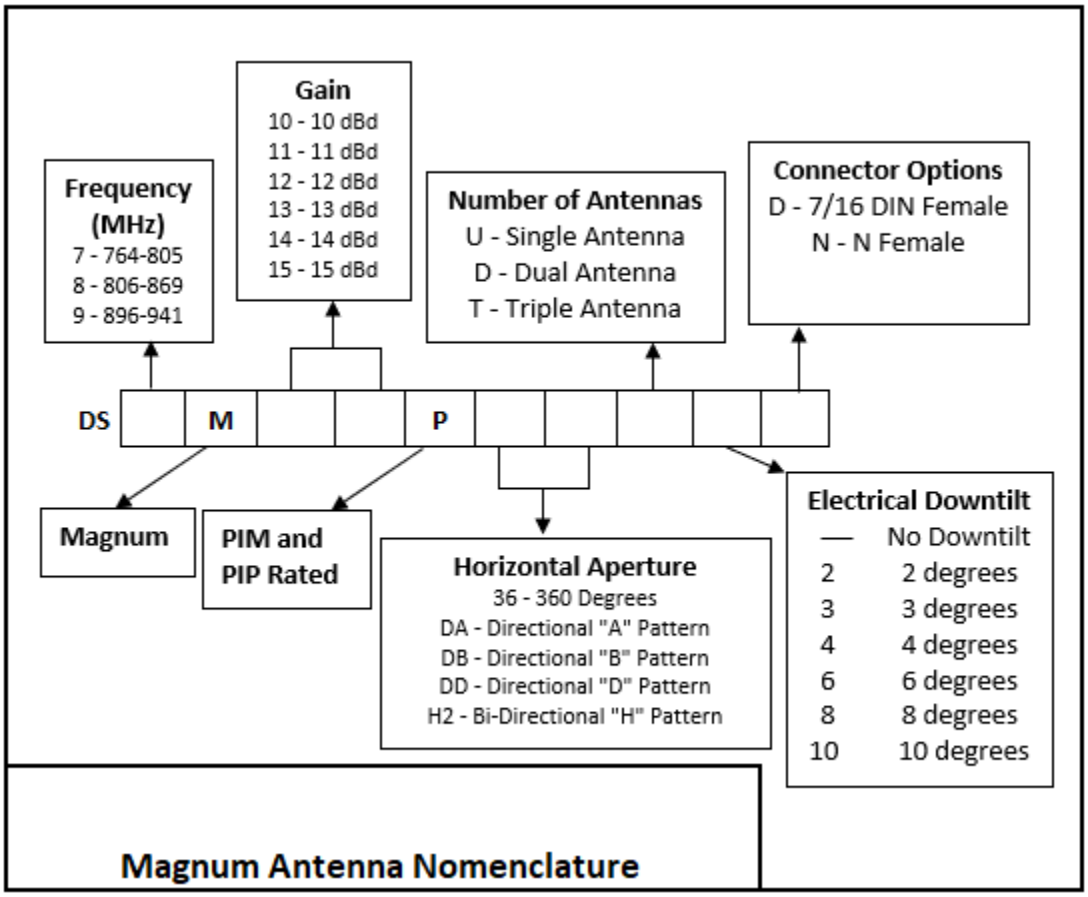


Horizontal



Vertical

MAGNUM Antennas



794-824 MHz Antenna - Magnum A-pattern Low-PIM/Hi-PIP 12.5 dBd Gain

Model – DS7LM13PAU-Series Antennas

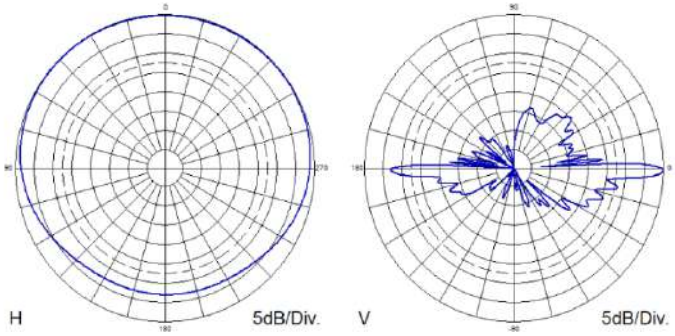
Specifications	
Design Type	True Corporate Feed "A-pattern"/Offset
Frequency Range	794 - 824 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	30 MHz
Gain	14.6 dBi / 12.5 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	220°
Vertical Beamwidth (E-Plane), typ.	4.0°
Impedance	50 Ohms
Null fill pattern features	Included
VSWR / Return Loss	<1.4:1 / 15.6 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	6.13 sq. ft.
Lateral Wind load Thrust @100mph	257 lbf.
Rated Wind Speed	125 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	18.5 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	98 lbs. 152 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS7LM13PAU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

Features and Benefits:

- "A-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

Radiation Pattern

Horizontal (H-Plane) Vertical (E-Plane, -0.75°)



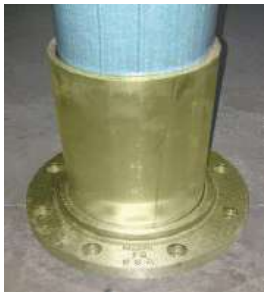
794-824 MHz Antenna - Magnum H-pattern Low-PIM/Hi-PIP 13.5 dBd Gain

Model – DS7LM14PHU-Series Antennas

Specifications	
Design Type	True Corporate Feed "H-pattern" model
Frequency Range	794 - 824 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	30 MHz
Gain	15.6 dBi / 13.5 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	75° Bi-directional
Vertical Beamwidth (E-Plane), typ.	3.5°
Impedance	50 Ohms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	7.0 sq. ft.
Lateral Wind load Thrust @100mph	295 lbf.
Rated Wind Speed	125 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	19 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	85 lbs. 139 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS7LM14PHU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

Features and Benefits

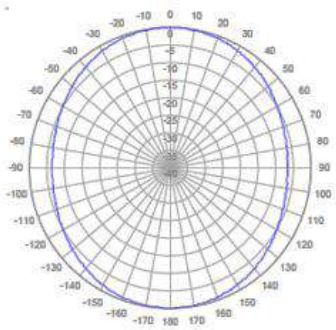
- "H-pattern" Bi-directional coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.



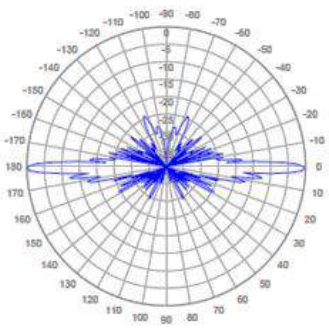
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



700 MHz Band Antenna - Magnum True Omni Low-PIM/Hi-PIP 9.8 dBd Gain

Model – DS7M10P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed "True Omni" model
Frequency Range	764-805 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	41 MHz
Gain	11.9 dBi / 9.8 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	Omnidirectional
Vertical Beamwidth (E-Plane), typ.	5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	5.1 sq. ft.
Lateral Wind load Thrust @100mph	216 lbf.
Rated Wind Speed	150 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	15.5 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	75 lbs. 129 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS7M10P36U(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

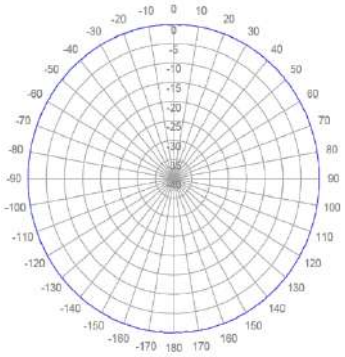
Features and Benefits

- Omnidirectional coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

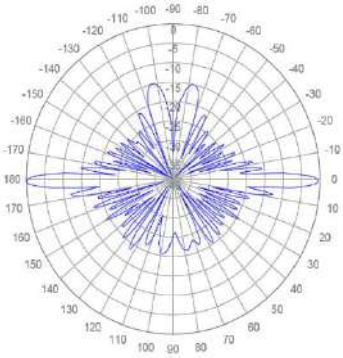
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



700 MHz Band Antenna - Magnum A-pattern Low-PIM/Hi-PIP 10.7 dBd Gain

Model – DS7M11PDAU-Series Antennas

Specifications	
Design Type	True Corporate Feed "A-pattern"/Offset
Frequency Range	764-805 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	41 MHz
Gain	12.8 dBi / 10.7 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	215°
Vertical Beamwidth (E-Plane), typ.	5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	4.9 sq. ft.
Lateral Wind load Thrust @100mph	205 lbf.
Rated Wind Speed	175 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	14 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	88 lbs. 142 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS7M11PDAU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

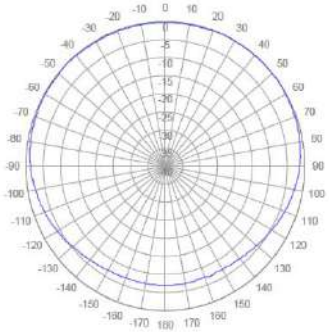
Features and Benefits

- "A-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

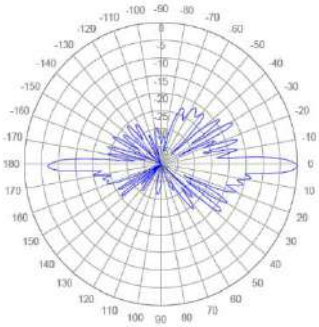
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



700 MHz Band Antenna - Magnum True Omni Low-PIM/Hi-PIP 11.5 dBd Gain

Model – DS7M12P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed "True Omni" model
Frequency Range	764-805 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	41 MHz
Gain	13.6 dBi / 11.5 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	Omnidirectional
Vertical Beamwidth (E-Plane), typ.	3.5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	6.9 sq. ft.
Lateral Wind load Thrust @100mph	247 lbf.
Rated Wind Speed	125mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	19 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	90 lbs. 144 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS7M12P36U(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

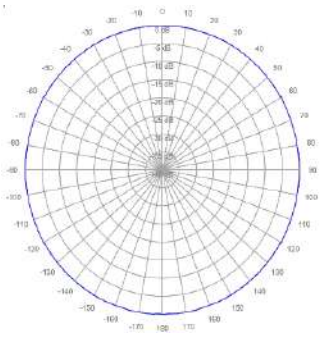
Features and Benefits

- Omnidirectional coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

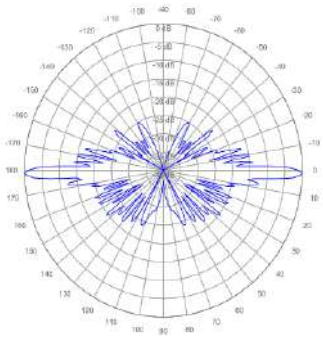
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



700 MHz Band Antenna - Magnum H-pattern Low-PIM/Hi-PIP 11.8 dBd Gain

Model – DS7M12PH2U-Series Antennas

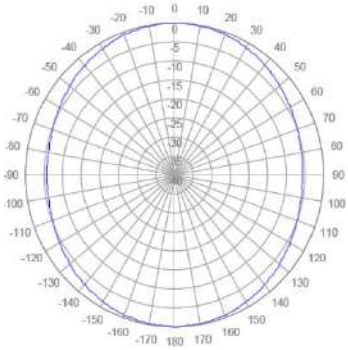
Specifications	
Design Type	True Corporate Feed "H-pattern" model
Frequency Range	764-805 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	41 MHz
Gain	13.9 dBi / 11.8 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	90° Bi-directional
Vertical Beamwidth (E-Plane), typ.	5°
Impedance	50 Ohms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	4.7 sq. ft.
Lateral Wind load Thrust @100mph	200 lbf.
Rated Wind Speed	150 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	14.5 feet
Radome O.D.	6.0 inches
Mast O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	79 lbs. 135 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS7M12PH2U(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

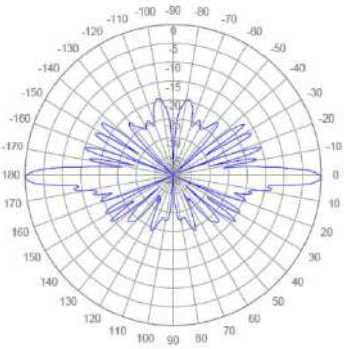
Features and Benefits

- "H-pattern" Bi-directional coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

Radiation Pattern **Plots 5 dB/Div**

Horizontal (H-Plane) Vertical (E-Plane, -0.75°)





700 MHz Band Antenna - Magnum A-pattern Low-PIM/Hi-PIP 12.3 dBd Gain

Model – DS7M13PDAU-Series Antennas

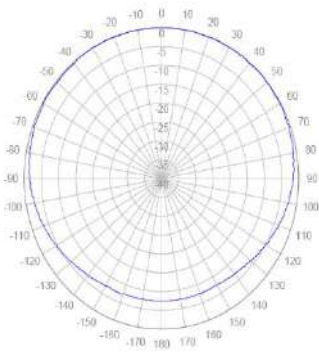
Specifications	
Design Type	True Corporate Feed "A-pattern/Offset"
Frequency Range	764-805 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	41 MHz
Gain	14.4 dBi / 12.3 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	215°
Vertical Beamwidth (E-Plane), typ.	3.6°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	6.5 sq. ft.
Lateral Wind load Thrust @100mph	277 lbf.
Rated Wind Speed	125 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	19.4 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	98 lbs. 152 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS7M13PDAU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

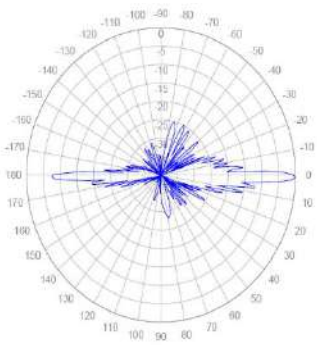
Features and Benefits

- "A-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

Radiation Pattern **Plots 5 dB/Div**

Horizontal (H-Plane) Vertical (E-Plane, -0.75°)





700 MHz Band Antenna - Magnum B-pattern Low-PIM/Hi-PIP 13 dBd Gain

Model – DS7M13PDBU -Series Antennas

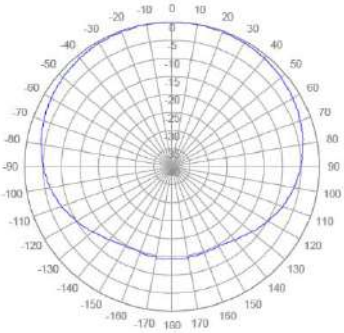
Specifications	
Design Type	True Corporate Feed "B-pattern" model
Frequency Range	764-805 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	41 MHz
Gain	15.1 dBi / 13 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	140°
Vertical Beamwidth (E-Plane), typ.	5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	4.9 sq. ft.
Lateral Wind load Thrust @100mph	205lbf.
Rated Wind Speed	175 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	14.9 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	88 lbs. 142 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
Ordering Information DS7M13PDBU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

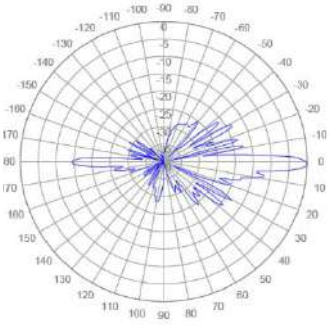
Features and Benefits

- "B-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

Radiation Pattern **Plots 5 dB/Div**

Horizontal (H-Plane) Vertical (E-Plane, -0.75°)





700 MHz Band Antenna - Magnum B-pattern Low-PIM/Hi-PIP 14.2 dBd Gain

Model – DS7M14PDBU -Series Antennas

Specifications	
Design Type	True Corporate Feed "B-pattern" /Offset
Frequency Range	764-805 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	41 MHz
Gain	16.3 dBi / 14.2 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	140°
Vertical Beamwidth (E-Plane), typ.	3.6°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	6.6 sq. ft.
Lateral Wind load Thrust @100mph	271 lbf.
Rated Wind Speed	125 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	19.5 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	100 lbs. 154 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS7M14PDBU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

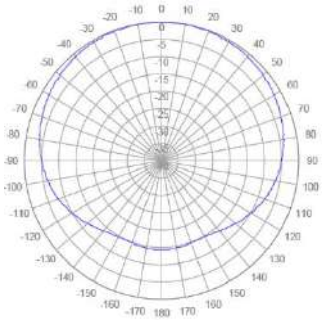
Features and Benefits

- "B-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

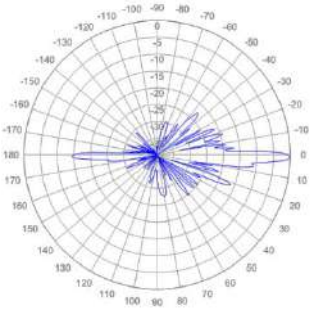
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



dbSpectra
Always a Better Value

700 MHz Band Antenna - Magnum D-pattern Low-PIM/Hi-PIP 13.8 dBd Gain

Model – DS7M14PDDU-Series Antennas

Specifications	
Design Type	True Corporate Feed "D-pattern/Offset"
Frequency Range	764-805 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	41 MHz
Gain	15.9 dBi / 13.8 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	120°
Vertical Beamwidth (E-Plane), typ.	5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	4.9 sq. ft.
Lateral Wind load Thrust @100mph	205 lbf.
Rated Wind Speed	175 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	14.9 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	88 lbs. 142 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS7M14PDDU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

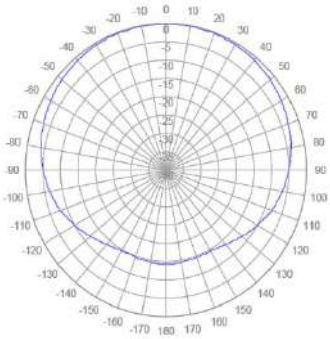
Features and Benefits

- "D-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

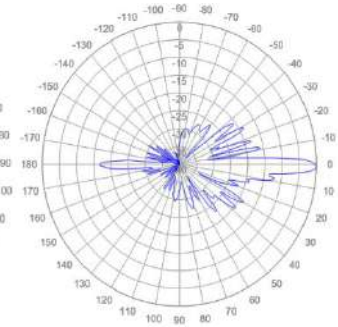
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



700 MHz Band Antenna - Magnum H-pattern Low-PIM/Hi-PIP 13.2 dBd Gain

Model – DS7M14PH2U-Series Antennas

Specifications	
Design Type	True Corporate Feed "H-pattern" model
Frequency Range	764-805 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	41 MHz
Gain	15.3 dBi / 13.2 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	90° Bidirectional
Vertical Beamwidth (E-Plane), typ.	3.5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	7.0 sq. ft.
Lateral Wind load Thrust @100mph	295 lbf.
Rated Wind Speed	125 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	18 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	85 lbs. 139 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS7M14PH2U(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

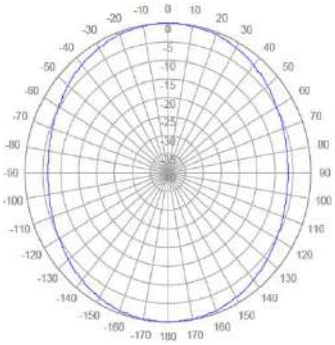
Features and Benefits

- "H-pattern Bidirectional coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

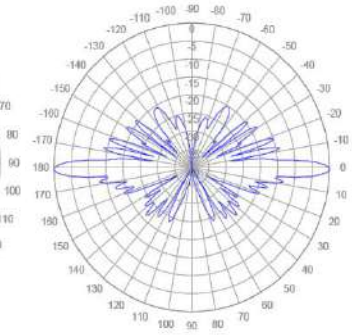
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



700 MHz Band Antenna - Magnum D-pattern Low-PIM/Hi-PIP 14.7 dBd Gain

Model – DS7M15PDDU-Series Antennas

Specifications	
Design Type	True Corporate Feed "D-pattern" model
Frequency Range	764-805 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	41 MHz
Gain	16.8 dBi / 14.7 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	120°
Vertical Beamwidth (E-Plane), typ.	3.7°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	6.5 sq. ft.
Lateral Wind load Thrust @100mph	279 lbf.
Rated Wind Speed	125 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	19.4 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	97 lbs. 151 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS7M15PDDU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

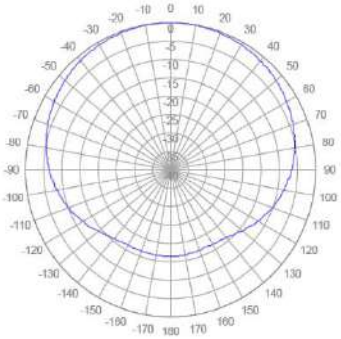
Features and Benefits

- "D-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

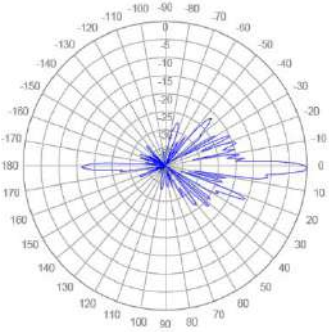
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



800 MHz Band Antenna - Magnum True Omni Low-PIM/Hi-PIP 10 dBd Gain

Model – DS8M10P36U-Series Antennas

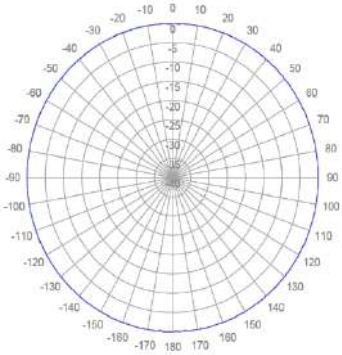
Specifications	
Design Type	True Corporate Feed "True Omni" model
Frequency Range	806-869 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	63 MHz
Gain	12.1 dBi / 10 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - or 3 degrees
Horizontal Beamwidth (H-Plane), typ.	Omnidirectional
Vertical Beamwidth (E-Plane), typ.	5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	5.1 sq. ft.
Lateral Wind load Thrust @100mph	216 lbf.
Rated Wind Speed	175 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	15.5 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	75 lbs. 129lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS8M10P36U(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

Features and Benefits

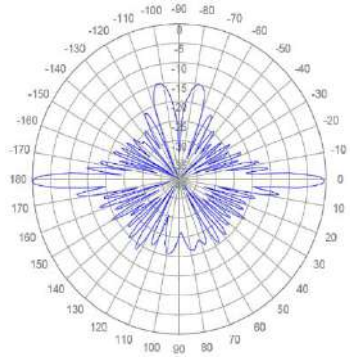
- Omnidirectional coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

Radiation Pattern **Plots 5 dB/Div**

Horizontal (H-Plane)



Vertical (E-Plane, -0.75° shown)



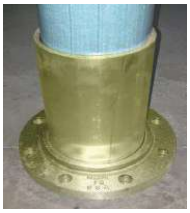
800 MHz Band Antenna - Magnum H-pattern Low-PIM/Hi-PIP 10 dBd Gain

Model – DS8M10PH3U-Series Antennas

Specifications	
Design Type	True Corporate Feed "H-pattern" model
Frequency Range	806-869 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	63MHz
Gain	12.1 dBi / 10 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2 , 3 degrees
Horizontal Beamwidth (H-Plane), typ.	85° Bi-directional
Vertical Beamwidth (E-Plane), typ.	7°
Impedance	50 Ohms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	3.3 sq. ft.
Lateral Wind load Thrust @100mph	138 lbf.
Rated Wind Speed	160 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	9.9 feet
Radome O.D.	6.0 inches
Mast O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	59 lbs. 113 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS8M10PH3U(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

Features and Benefits

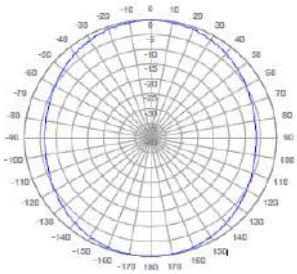
- "H-pattern" Bi-directional coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.



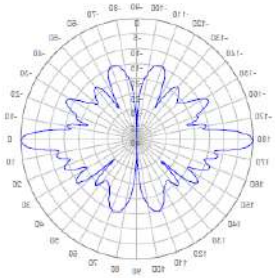
Radiation Patterns

Plots 5 dB/Div

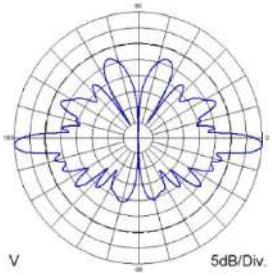
Horizontal (H-Plane)



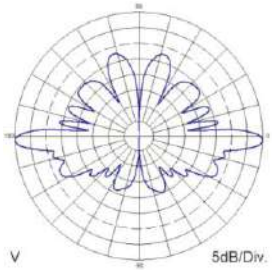
Vertical (E-Plane, -0.75°)



Vertical (E-Plane, -3°)



Vertical (E-Plane, -2˚)



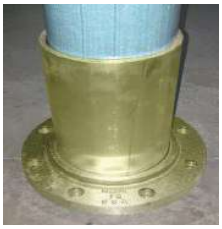
800 MHz Band Antenna - Magnum A-pattern Low-PIM/Hi-PIP 11.2 dBd Gain

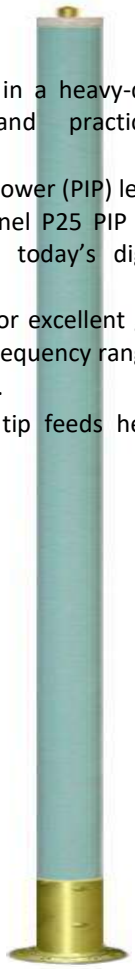
Model – DS8M11PDAU-Series Antennas

Specifications	
Design Type	True Corporate Feed "A-pattern"/Offset
Frequency Range	806-869 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	63 MHz
Gain	13.3 dBi / 11.2 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2 or 3 degrees
Horizontal Beamwidth (H-Plane), typ.	215°
Vertical Beamwidth (E-Plane), typ.	5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	4.6 sq. ft.
Lateral Wind load Thrust @100mph	195 lbf.
Rated Wind Speed	175 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	14 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	85 bs. 139 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
Ordering Information DS8M11PDAU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

Features and Benefits

- "A-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

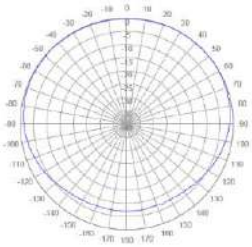




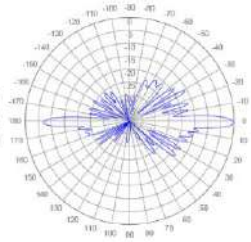
Radiation Pattern

Plots 5 dB/Div

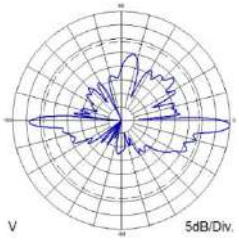
Horizontal (H-Plane)



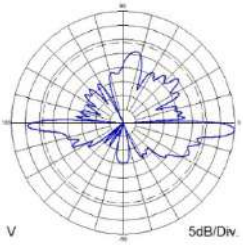
Vertical (E-Plane, -0.75°)



Vertical (E-Plane, -2°)



Vertical (E-Plane, -3 °)



800 MHz Band Antenna - Magnum True Omni Low-PIM/Hi-PIP 11.5 dBd Gain

Model – DS8M12P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed "True Omni" model
Frequency Range	806-869 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	63 MHz
Gain	13.6 dBi / 11.5 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - or 3 degrees
Horizontal Beamwidth (H-Plane), typ.	Omnidirectional
Vertical Beamwidth (E-Plane), typ.	3.5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.4:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	6.9 sq. ft.
Lateral Wind load Thrust @100mph	247 bf.
Rated Wind Speed	125 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	19 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	90 lbs. 144 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS8M12P36U(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

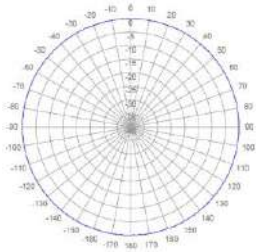
Features and Benefits

- Omnidirectional coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

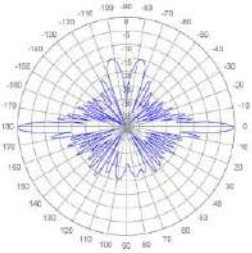
Radiation Patterns

Plots 5 dB/Div

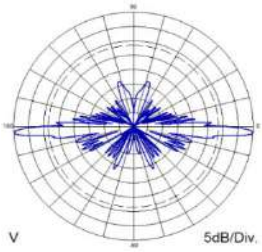
Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



Vertical (E-Plane, -3°)



dbSpectra
Always a Better Value

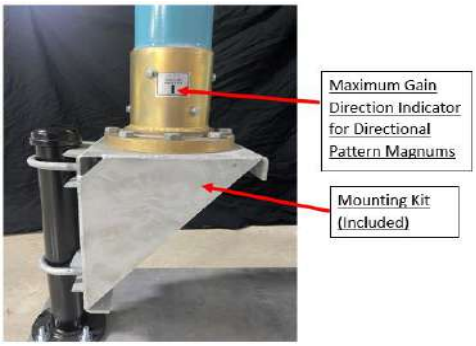
800 MHz Band Antenna - Magnum D-pattern, Low-PIM/Hi-PIP, 11.7 dBd Gain

Model – DS8M12PD2U-Series Antennas

Specifications	
Design Type	True Corporate Feed "D-pattern/Offset"
Frequency Range	806-869 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	63 MHz
Gain	13.8 dBi / 11.7 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - or 2 degrees
Horizontal Beamwidth (H-Plane), typ.	120°
Vertical Beamwidth (E-Plane), typ.	8°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	3.2 sq. ft.
Lateral Wind load Thrust @100mph	135 lbf.
Rated Wind Speed	200 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	9.7 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	60 lbs. 95 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS8M12PD2U(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

Features and Benefits:

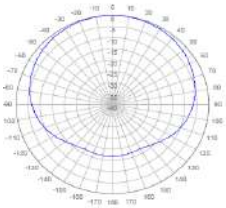
- "D-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.



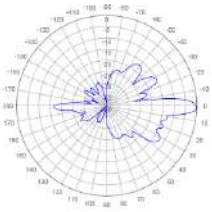
Radiation Pattern

Plots 5 dB/Div

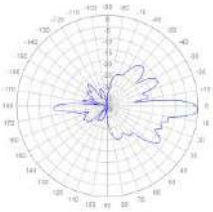
Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



Vertical (E-Plane, 2˚)



700 MHz Band Antenna - Magnum H-pattern Low-PIM/Hi-PIP 12 dBd Gain

Model – DS8M12PH2U-Series Antennas

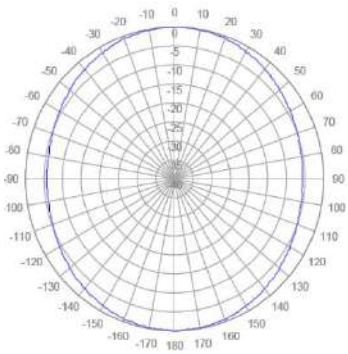
Specifications	
Design Type	True Corporate Feed "H-pattern" model
Frequency Range	806-869 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	63MHz
Gain	14.1 dBi / 12 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	75° Bi-directional
Vertical Beamwidth (E-Plane), typ.	5°
Impedance	50 Ohms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	4.5 sq. ft.
Lateral Wind load Thrust @100mph	190 lbf.
Rated Wind Speed	150 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	13.5 feet
Radome O.D.	6.0 inches
Mast O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	73 lbs. 127lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS8M12PH2U(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

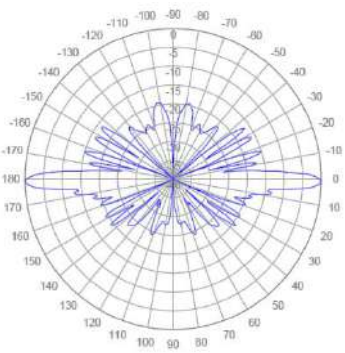
Features and Benefits

- "H-pattern" Bi-directional coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

Radiation Pattern **Plots 5 dB/Div**

Horizontal (H-Plane) Vertical (E-Plane, -0.75°)





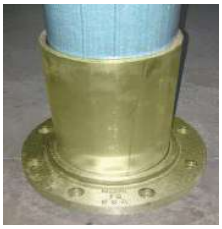
800 MHz Band Antenna - Magnum A-pattern Low-PIM/Hi-PIP 12.5 dBd Gain

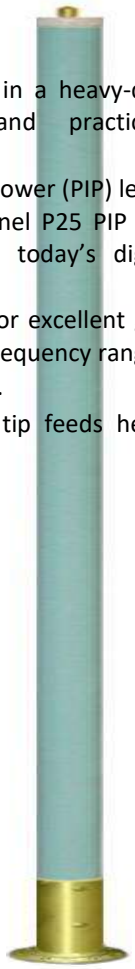
Model – DS8M13PDAU-Series Antennas

Specifications	
Design Type	True Corporate Feed "A-pattern"/Offset
Frequency Range	806-869 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	63 MHz
Gain	14.6 dBi / 12.5 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - , 2 or 3 degrees
Horizontal Beamwidth (H-Plane), typ.	215°
Vertical Beamwidth (E-Plane), typ.	3.5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	6.4 sq. ft.
Lateral Wind load Thrust @100mph	268 lbf.
Rated Wind Speed	125 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	19 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	95 bs. 149 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS8M13PDAU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

Features and Benefits

- "A-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

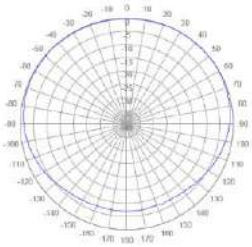




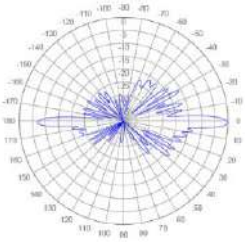
Radiation Pattern

Plots 5 dB/Div

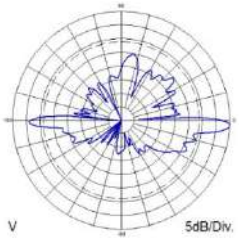
Horizontal (H-Plane)



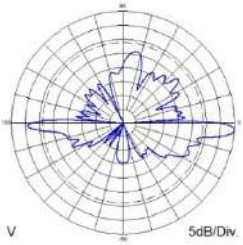
Vertical (E-Plane, -0.75°)



Vertical (E-Plane, -2o)



Vertical (E-Plane, -3o)



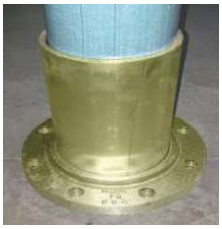
800 MHz Band Antenna - Magnum B-pattern Low-PIM/Hi-PIP 13.2 dBd Gain

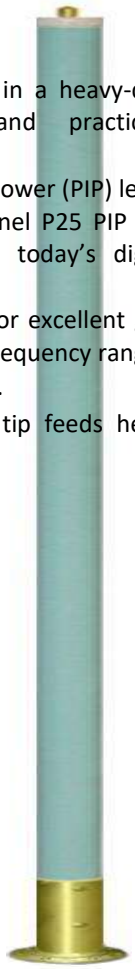
Model – DS8M13PDBU-Series Antennas

Specifications	
Design Type	True Corporate Feed "B-pattern"/Offset
Frequency Range	806-869 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	63 MHz
Gain	15.3 dBi / 13.2 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	140°
Vertical Beamwidth (E-Plane), typ.	5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	4.6 sq. ft.
Lateral Wind load Thrust @100mph	195 lbf.
Rated Wind Speed	175 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	14 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	85 bs. 139 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS8M13PDBU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

Features and Benefits

- "B-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

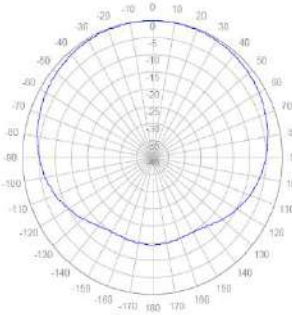




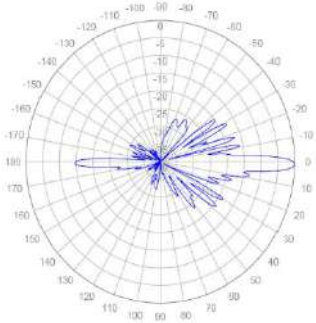
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



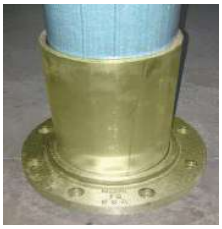
800 MHz Band Antenna - Magnum B-pattern Low-PIM/Hi-PIP 14.2 dBd Gain

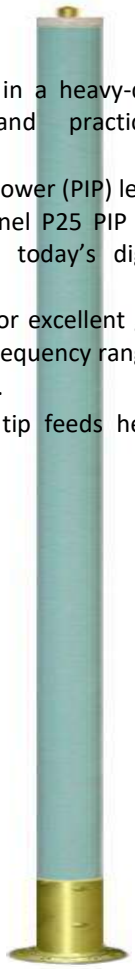
Model – DS8M14PDBU-Series Antennas

Specifications	
Design Type	True Corporate Feed "B-pattern"/Offset
Frequency Range	806-869 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	63 MHz
Gain	16.3 dBi / 14.2 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	140°
Vertical Beamwidth (E-Plane), typ.	3.5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	6.4 sq. ft.
Lateral Wind load Thrust @100mph	268 lbf.
Rated Wind Speed	125 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	19 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	95 bs. 149 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS8M14PDBU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

Features and Benefits

- "B-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

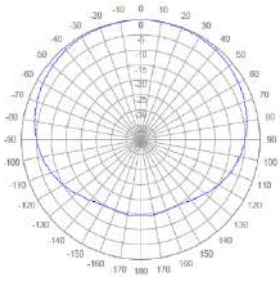




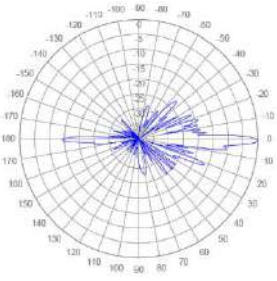
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



800 MHz Band Antenna - Magnum D-pattern Low-PIM/Hi-PIP 13.8 dBd Gain

Model – DS8M14PDDU-Series Antennas

Specifications	
Design Type	True Corporate Feed "D-pattern/Offset"
Frequency Range	806-869 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	63 MHz
Gain	15.9 dBi / 13.8 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	120°
Vertical Beamwidth (E-Plane), typ.	5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	4.6 sq. ft.
Lateral Wind load Thrust @100mph	195 lbf.
Rated Wind Speed	175 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	14 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	85 lbs. 139 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS8M14PDDU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

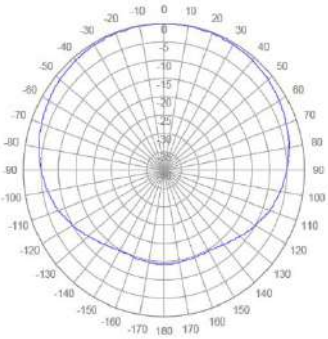
Features and Benefits

- "D-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

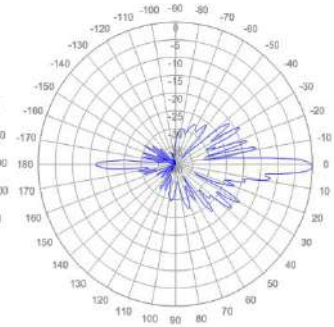
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



800 MHz Band Antenna - Magnum H-pattern Low-PIM/Hi-PIP 13.5 dBd Gain

Model – DS8M14PH2U-Series Antennas

Specifications	
Design Type	True Corporate Feed "H-pattern" model
Frequency Range	806-869 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	63MHz
Gain	15.6 dBi / 13.5 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	75° Bi-directional
Vertical Beamwidth (E-Plane), typ.	3.5°
Impedance	50 Ohms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	7.0 sq. ft.
Lateral Wind load Thrust @100mph	295 lbf.
Rated Wind Speed	120 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	19 feet
Radome O.D.	6.0 inches
Mast O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	85 lbs. 139 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS8M14PH2U(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

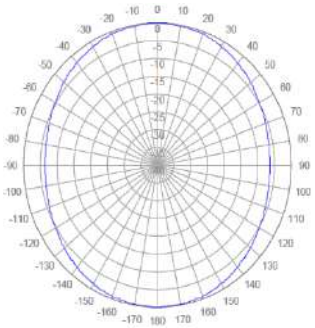
Features and Benefits

- "H-pattern" Bi-directional coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

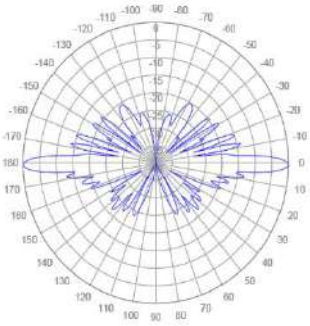
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



800 MHz Band Antenna - Magnum D-pattern Low-PIM/Hi-PIP 14.7 dBd Gain

Model – DS8M15PDDU-Series Antennas

Specifications	
Design Type	True Corporate Feed "D-pattern/Offset"
Frequency Range	806-869 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	63 MHz
Gain	16.8 dBi / 14.7 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	120°
Vertical Beamwidth (E-Plane), typ.	3.6°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	6.3 sq. ft.
Lateral Wind load Thrust @100mph	264 lbf.
Rated Wind Speed	125 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	19 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	95 lbs. 149 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS8M15PDDU(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

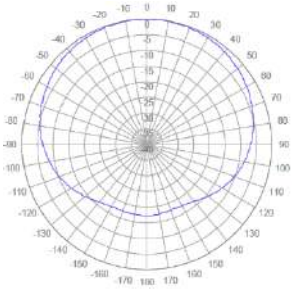
Features and Benefits

- "D-pattern"/Offset horizontal coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

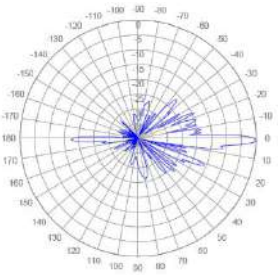
Radiation Pattern

Plots 5 dB/Div

Horizontal (H-Plane)



Vertical (E-Plane, -0.75°)



900 MHz Band Antenna - Magnum True Omni Low-PIM/Hi-PIP 10 dBd Gain

Model – DS9M10P36U-Series Antennas

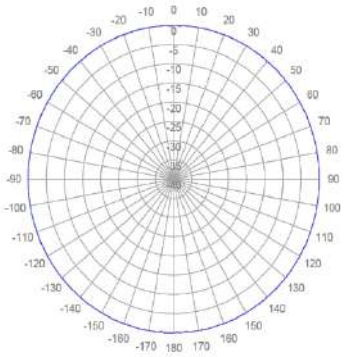
Specifications	
Design Type	True Corporate Feed "True Omni" model
Frequency Range	896-941 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	45 MHz
Gain	12.1 dBi / 10 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	Omnidirectional
Vertical Beamwidth (E-Plane), typ.	5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	4.9 sq. ft.
Lateral Wind load Thrust @100mph	198 lbf.
Rated Wind Speed	140 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	14 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	71 lbs. 125 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS9M10P36U(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75° down-tilt.

Features and Benefits

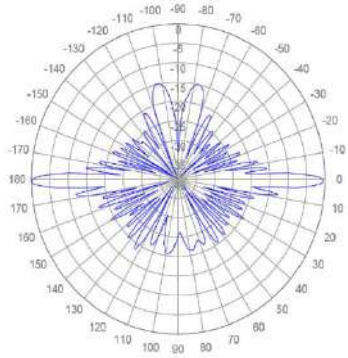
- Omnidirectional coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

Radiation Pattern

Horizontal (H-Plane)



Vertical (E-Plane, -0.75° shown)



900 MHz Band Antenna - Magnum True Omni Low-PIM/Hi-PIP 11.5 dBd Gain

Model – DS9M12P36U-Series Antennas

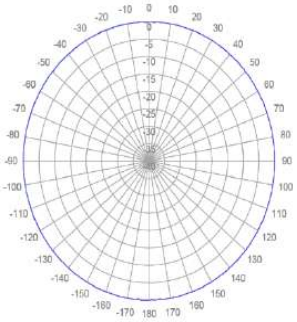
Specifications	
Design Type	True Corporate Feed "True Omni" model
Frequency Range	896-941 MHz
Passive Intermod – 3rd-order PIM	-150 dBc
Bandwidth	45 MHz
Gain	13.6 dBi / 11.5 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	(x) = - (0.75 degrees)
Horizontal Beamwidth (H-Plane), typ.	Omnidirectional
Vertical Beamwidth (E-Plane), typ.	3.5°
Impedance	50 Oms
Null fill pattern features	Included
VSWR / Return Loss	<1.5:1 / 14 dB (min.)
Average Power Rating	600 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN (F)
Equivalent Flat-Plate Area	6.85 sq. ft.
Lateral Wind load Thrust @100mph	247 lbf.
Rated Wind Speed	125 mph (without ice)
Total Length, antenna only Add for Mounting Kit: 1.3 ft.	18 feet
Radome O.D.	6.0 inches
Base O.D.	6.5 inches
Mounting design	Metal flange base see detail. (8 x ¾" bolts)
Radome color	Horizon Blue
Weight, antenna only (approx.) With DSH-MAG1HD mount, included	88 lbs. 135 lbs.
Shipping Weight (approx.)	Consult factory
Mounting kit, included	P/N DSH-MAG1HD H.D. pipe mount kit for 4" vertical members
Invertibility	Antennas are not invertible. For invertible beam tilt options contact dbSpectra at *tech@dbSpectra.com*
<u>Ordering Information</u> DS9M12P36U(x)D – 7/16 DIN Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0.75˚ down-tilt.

Features and Benefits

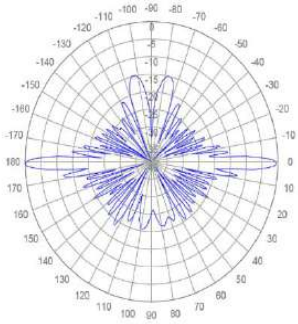
- Omnidirectional coverage in a heavy-duty package maximizes performance and practically eliminates tip deflection.
- Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.
- True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.
- PIM Rated Design – better than -150 dBc.
- Excellent Lightning Protection – brass tip feeds heavy internal conductor DC ground.

Radiation Pattern

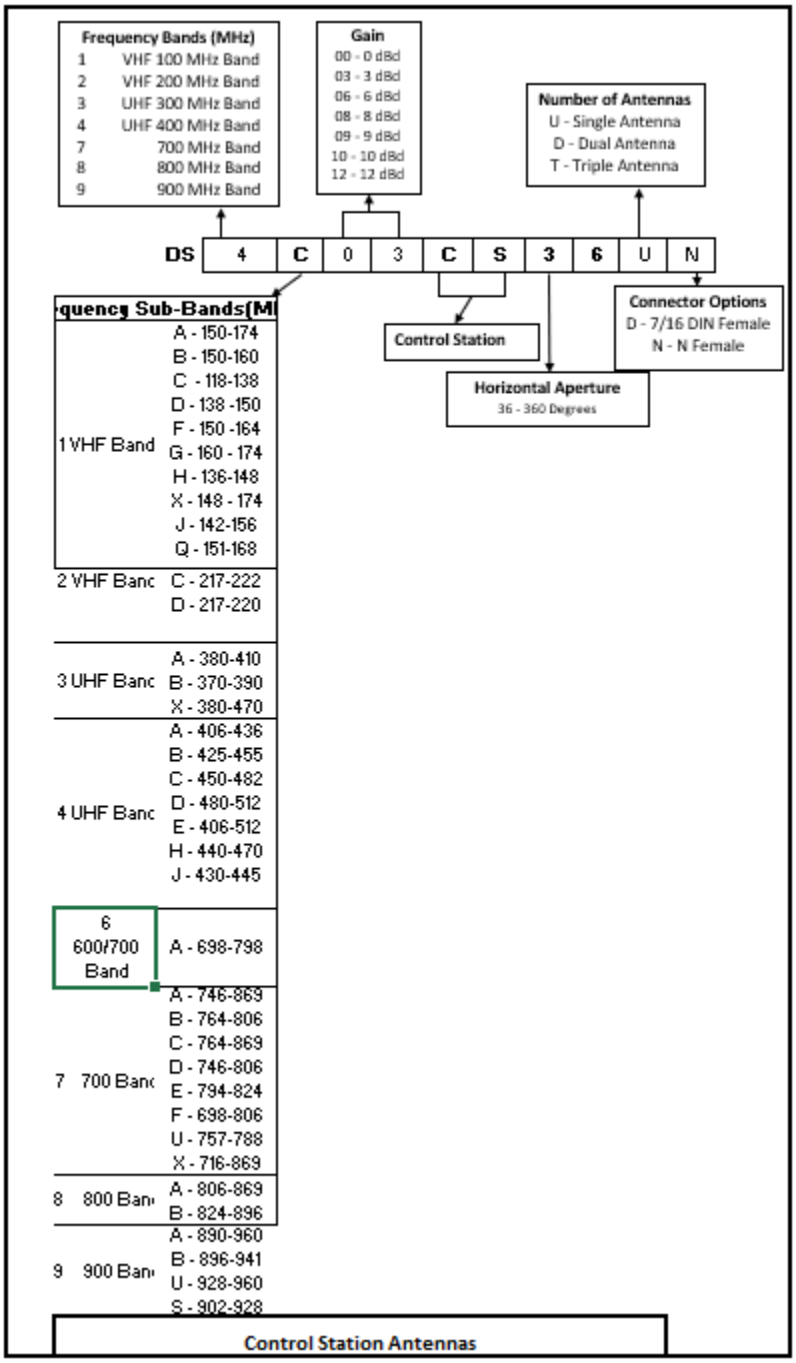
Horizontal (H-Plane)



Vertical (E-Plane, -0.75° shown)



CONTROL STATION Antennas



Control Station Antennas – VHF Band, Single Omni, Unity Gain

Models - DS1C00CS36UN, DS1D00CS36UN, DS1X00CS36UN

Specifications	
Design Type	2” Fiberglass radome
Frequency Ranges DS1C00CS36UN DS1D00CS36UN DS1X00CS36UN	 118-138 MHz 138-150 MHz 148-174 MHz
Gain (average over BW)	0 dBd
Beam Tilt (electrical downtilt)	0°
Vertical Beamwidth (E-Plane), nom.	60°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	300 W
Polarization	Vertical
Lightning Protection	Direct Ground w/ spike
Connector	N (F)
*Equivalent Flat-Plate Area, min. – max.	0.4 sq. ft. – 0.5 sq. ft.
*Lateral Windload Thrust @100mph, min. – max.	17 lbf. – 22 lbf.
*Rated Wind Speed	276 mph (no ice) 235 mph (½” ice)
Total Length *DS1C00CS36UN DS1D00CS36UN DS1X00CS36UN	 4.8 feet 3.9 feet 3.7 feet
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2 inches
Mast O.D.	2.5 inches
Mast Length	9 inches
Radome color	Horizon Blue
Weight, antenna, and hardware, min. – max.	11 – 15 lbs.
Shipping Weight, min. – max.	17 – 21 lbs.
Invertibility	Yes, all the models are invertible
*Note	Lengths and parameters dependent on length are approximates. Contact dbSpectra at tech@dbspectra.com for actual length values.

Features and Benefits:

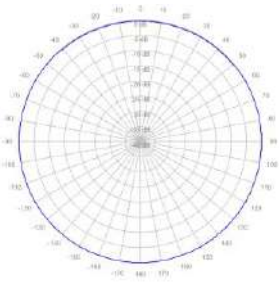
VHF Control Station Antennas are optimized for control station and similar applications where medium-duty lower-gain models are preferred.

Proven performance – dbSpectra’s Control Station-series antennas leverage decades of experience to assure readiness in mission critical environments.

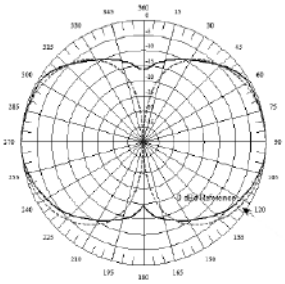
Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and wind loading properties.

Radiation Patterns:

Horizontal

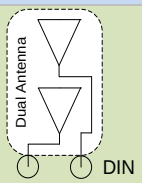


Vertical



Control Station Antennas – VHF band, Dual Omni, Unity Gain

Models - DS1D00CS36DN

Specifications	
Design Type	3” Fiberglass radome
Frequency Range	138-150 MHz
Configuration	Dual Antenna (2-ports)
Gain (average over BW)	0 dBd
Beam Tilt (electrical down-tilt)	0°
Vertical Beamwidth (E-Plane), nom.	60°
Impedance	50 ohms
Isolation between Antenna ports, typ.	25 dB
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	400 W (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground w/ spike
Connector	2 × N (F)
*Equivalent Flat-Plate Area	2.4 sq. ft.
*Lateral Wind-load Thrust @100mph	99 lbf.
*Rated Wind Speed	175 mph (without ice) 149 mph (with ½” radial ice)
*Total Length	14.3 feet
*Mounting Hardware (included)	DSH3V3N
Radome O.D	3.0 inches
Mast O.D.	2.5 inches
Mast Length	21 inches
Configuration: Dual, “Two Antennas in One”	
Radome color	Horizon Blue
Weight, antenna, and hardware	50 lbs.
Shipping Weight	80 lbs.
Invertibility	Yes, this model is invertible
*Note	Length and Parameters dependent on length are approximates. Contact dbSpectra at *tech@dbspectra.com* for actual length values.

Features and Benefits:

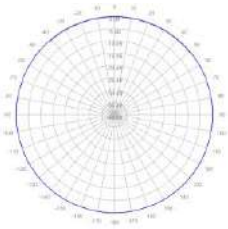
VHF Control Station Antennas are optimized for control station and similar applications where medium-duty lower-gain models are preferred.

“Dual” configuration saves antenna space – 2-port design offers “two antennas in one” package with guaranteed electrical isolation.

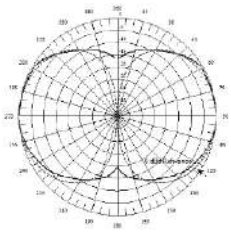
Sturdy Construction – Heavy-wall 3-inch diameter fiberglass radome minimizes tip deflection yet manages weight and windloading properties.

Radiation Patterns:

Horizontal

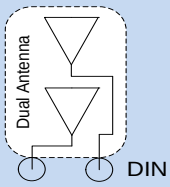


Vertical



Control Station Antennas – VHF band, Dual Omni, 3 dBd Gain

Models - DS1D03CS36DN

Specifications	
Design Type	3” Fiberglass radome
Frequency Range	138-150 MHz
Configuration	Dual Antenna (2-ports)
Gain (average over BW)	3.0 dBd
Beam Tilt (electrical downtilt)	0°
Vertical Beamwidth (E-Plane), nom.	30°
Impedance	50 Ohms
Isolation between Antenna ports, typ.	25 dB
VSWR / Return Loss	1.5 : 1 / 14 dB (min.)
Average Power Rating	400 W (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground w/ spike
Connector	2 x N (F)
Equivalent Flat-Plate Area	3.7 sq. ft.
Lateral Windload Thrust @100mph	153 lbf.
Rated Wind Speed	150 mph (without ice) 128 mph (with ½” radial ice)
Total Length	22 feet
Mounting Hardware (included)	DSH3V3N
Radome O.D.	3.0 inches
Mast O.D.	2.5 inches
Configuration: Dual, “Two Antennas in One”	
Mast Length	35 inches
Radome color	Horizon Blue
Weight, antenna, and hardware	95 lbs.
Shipping Weight	120 lbs.
Invertibility	Antennas are physically invertible, but the patterns are optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com

Features and Benefits:

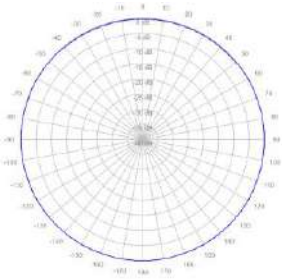
VHF Control Station Antennas are optimized for control station and similar applications where medium-duty lower-gain models are preferred.

“Dual” configuration saves antenna space – 2-port design offers “two antennas in one” package with guaranteed electrical isolation.

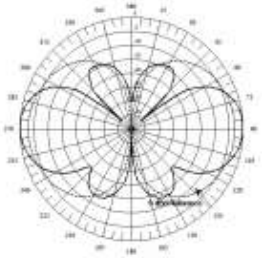
Sturdy Construction – Heavy-wall 3-inch diameter fiberglass radome minimizes tip deflection yet manages weight and windloading properties.

Radiation Patterns:

Horizontal



Vertical



Control Station Antenna – VHF band, Single Omni, 2.9 dBd Gain

Models - DS1X03CS36UN

Specifications	
Design Type	3” Fiberglass radome
Frequency Range	148-174 MHz
Gain (average over BW)	2.9 dBd
Beam Tilt (electrical downtilt)	0°
Vertical Beamwidth (E-Plane), nom.	30°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	300 W (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	N (F)
Equivalent Flat-Plate Area	1.7 sq. ft.
Lateral Windload Thrust @100mph	70 lbf.
Rated Wind Speed	190 mph (no ice) 162 mph (½” ice)
Total Length	10.1 feet
Mounting Hardware (included)	DSH2V3R
Radome O.D.	3 inches
Mast O.D.	2.5 inches
Mast Length	21 inches
Radome color	Horizon Blue
Weight, antenna, and hardware	30 lbs.
Shipping Weight	42 lbs.
Invertibility	Antennas are physically invertible, but the patterns are optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com

Features and Benefits:

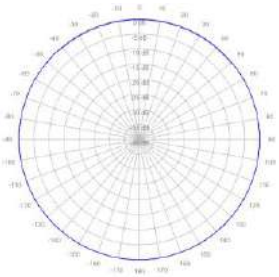
Control Station Antennas are optimized for control station applications where medium-duty lower-gain models are preferred.

Sturdy Construction – Heavy-wall 3-inch diameter fiberglass radome minimizes tip deflection yet manages weight and wind loading properties.

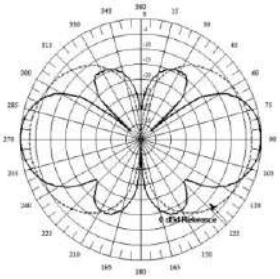
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



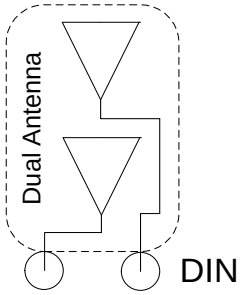
Vertical



Control Station Antennas – UHF band, Dual Omni, 2.9 dBd Gain

Models – DS3A03CS36DN, DS4A03CS36DN, DS4B03CS36DN, DS4C03CS36DN, DS4D03CS36DN, DS4H03CS36DN

Specifications	
Design Type	2" Fiberglass radome
Frequency Range DS3A03CS36DN DS4A03CS36DN DS4B03CS36DN DS4C03CS36DN DS4D03CS36DN DS4H03CS36DN	 380-410 MHz 406-436 MHz 425-455 MHz 450-482 MHz 480-512 MHz 440-470 MHz
Gain (average over BW)	2.9 dBd
Beam Tilt (electrical down-tilt)	0°
Vertical Beamwidth (E-Plane)	30°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	300 W (each antenna)
Polarization	Vertical
Isolation, typ.	25 dB
Lightning Protection	Direct Ground
Connector	2 × N (F)
*Equivalent Flat-Plate Area, min. – max.	0.8 sq. ft. – 1.1 sq. ft.
*Lateral Wind-load Thrust @100mph, min. – max.	35 lbf. – 44 lbf.
*Rated Wind Speed, min. – max.	191 mph – 213 mph (no ice) 162 mph – 181 mph (½" ice)
Total Length *DS3A03CS36DN *DS4A03CS36DN DS4B03CS36DN DS4C03CS36DN *DS4D03CS36DN DS4H03CS36DN	 9.5 feet 9.2 feet 9.1 feet 7.6 feet 7.5 feet 7.6 feet
*Mounting Hardware (included)	DSH1V3R
Radome O.D.	2 inches
Mast O.D.	2.5 inches
*Mast Length	9 inches
Radome color	Horizon Blue
Weight, antenna, and hardware, min. – max.	15-29 lbs.
Shipping Weight, min. – max.	39-75 lbs.
Invertibility	Antennas are physically invertible, but the patterns are optimized for upright mount, For optimized invertible mount options contact dbSpectra at tech@dbspectra.com
*Note	Lengths and parameters dependent on lengths are approximates. Contact dbSpectra at tech@dbspectra.com for actual length values.



Configuration:
Dual, "Two Antennas in One:

Features and Benefits

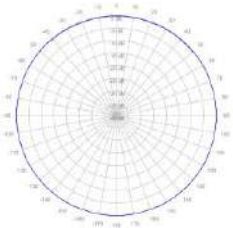
Control Station Antennas are optimized for control station and other applications where medium-duty, lower-gain models are preferred.

Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and windloading properties.

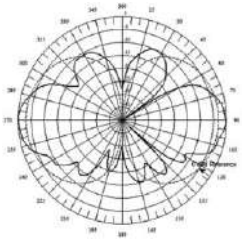
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal, all



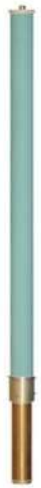
Vertical, 2.9 dBd models



Control Station Antennas – UHF band, Single Omni, 2.9 dBd Gain

Models – DS3X03CS36UN, DS3A03CS36UN, DS4A03CS36UN, DS4B03CS36UN, DS4C03CS36UN, DS4D03CS36UN, DS4H03CS36UN

Specifications	
Design Type	2" Fiberglass radome
Frequency Range DS3X03CS36UN DS3A03CS36UN DS4A03CS36UN DS4B03CS36UN DS4C03CS36UN DS4D03CS36UN DS4H03CS36UN	 380-470 MHz 380-410 MHz 406-436 MHz 425-455 MHz 450-482 MHz 480-512 MHz 440-470 MHz
Gain - (average over BW)	2.9 dBd
Beam Tilt (electrical down tilt)	0°
Vertical Beam width (E-Plane), nom.	30°
Impedance	50 Ohms
VSWR / Return Loss	1.5: 1 / 14 dB (min.)
Average Power Rating	300 W (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	N (F)
Equivalent Flat-Plate Area, min. – max.	0.4 sq. ft. – 0.6 sq. ft.
Lateral Wind load Thrust @100mph, min. – max.	17 lbf. – 23 lbf.
Rated Wind Speed, min. – max.	213 mph – 276 mph 181 mph – 235 mph
Total Length: DS3X03CS36UN DS3A03CS36UN DS4A03CS36UN *DS4B03CS36UN DS4C03CS36UN DS4D03CS36UN *DS4H03CS36UN	 4.8 feet 4.8 feet 5.0 feet 4.8 feet 3.9 feet 3.7 feet 4.8 feet
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2.0 inches
Mast O.D.	2.5 inches
Mast Length	9.0 inches
Radome color	Horizon Blue
Weight, antenna, and hardware, min. – max.	5-9 lbs.
Shipping Weight, min. – max.	9-13 lbs.
Invertibility	Antennas are physically invertible, but the patterns are optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com
*Note	Lengths are approximate. Contact dbSpectra at tech@dbspectra.com for actual length values.



Features and Benefits:

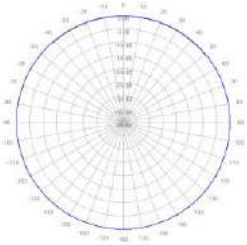
Control Station Antennas are optimized for control station and other applications where medium-duty, lower-gain models are preferred.

Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and wind loading properties.

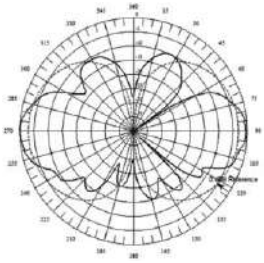
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal, all

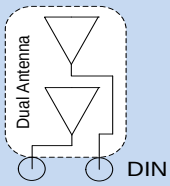


Vertical, 2.9 dBd model



Control Station Antennas – UHF band, Dual Omni, Unity Gain

Models – DS3X00CS36DN, DS3A00CS36DN, DS4A00CS36DN, DS4C00CS36DN, DS4D00CS36DN

Specifications	
Design Type	2” Fiberglass radome
Frequency Range DS3X00CS36DN DS3A00CS36DN DS4A00CS36DN DS4C00CS36DN DS4D00CS36DN	 380-470 MHz (wideband) 380-410 MHz 406-436 MHz 450-482 MHz 480-512 MHz
Gain (average over BW)	0 dBd
Beam Tilt (electrical downtilt)	0°
Vertical Beamwidth (E-Plane), nom.	60°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	300 W (each antenna)
Polarization	Vertical
Isolation, typ.	25 dB
Lightning Protection	Direct Ground
Connector	2 × N (F)
*Equivalent Flat-Plate Area, min. – max.	0.5 sq. ft. – 0.7 sq. ft.
*Lateral Wind load Thrust @100mph, min. - max	22 lbf. - 29 lbf.
*Rated Wind Speed, min. – max.	213 mph – 276 mph (no ice) 181 mph – 235 mph (½” ice)
Total Length *DS3X00CS36DN *DS3A00CS36DN *DS4A00CS36DN DS4C00CS36DN *DS4D00CS36DN	 5.5 feet 5.5 feet 5.5 feet 6.2 feet 4.8 feet
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2 inches
Mast O.D.	2.5 inches
Mast Length	9 inches
Configuration: Dual, “Two Antennas in One”	
Radome color	Horizon Blue
Weight, antenna, and hardware, min. – max.	10 - 15 lbs.
Shipping Weight, min. – max.	20 - 25 lbs.
Invertibility	Yes, all models are invertible
*Note	Lengths and parameters dependent on lengths are approximates. Contact dbSpectra at tech@dbspectra.com for actual length values.

Features and Benefits:

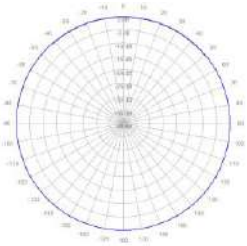
Control Station Antennas are optimized for control station and other applications where medium-duty, lower-gain models are preferred.

Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and windloading properties.

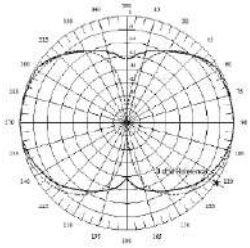
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal, all



Vertical, Unity gain model



Control Station Antennas – UHF band, Single Omni, Unity Gain

Models – DS3X00CS36UN, DS3A00CS36UN, DS4A00CS36UN, DS4B00CS36UN, DS4C00CS36UN, DS4D00CS36UN, DS4H00CS36UN

Specifications	
Design Type	2” Fiberglass radome
Frequency Range DS3X00CS36UN DS3A00CS36UN DS4A00CS36UN DS4B00CS36UN DS4C00CS36UN DS4D00CS36UN DS4H00CS36UN	 380-470 MHz 380-410 MHz 406-436 MHz 425-455 MHz 450-482 MHz 480-512 MHz 440-470 MHz
Gain (average over BW)	0 dBd
Beam Tilt (electrical downtilt)	0°
Vertical Beamwidth (E-Plane), nom.	60°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	300 W (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	N (F)
*Equivalent Flat-Plate Area, min. – max.	0.3 sq. ft. – 0.4 sq. ft
*Lateral Windload Thrust @100mph, min. – max.	12 lbf. – 13 lbf.
*Rated Wind Speed	276 mph (no ice) 235 mph (½” ice)
Total Length DS3X00CS36UN DS3A00CS36UN DS4A00CS36UN *DS4B00CS36UN DS4C00CS36UN *DS4D00CS36UN *DS4H00CS36UN	 2.5 feet 2.5 feet 2.8 feet 2.5 feet 2.7 feet 2.8 feet 2.5 feet
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2 inches
Mast O.D.	2.5 inches
Mast Length	9 inches
Radome color	Horizon Blue
Weight, antenna, and hardware, min. – max.	5-9 lbs.
Shipping Weight, min. – max.	9-13 lbs.
Invertibility	Yes, all the models are invertible.
*Note	Lengths and parameters dependent on length are approximates. Contact dbSpectra at tech@dbspectra.com for actual length values.

Features and Benefits:

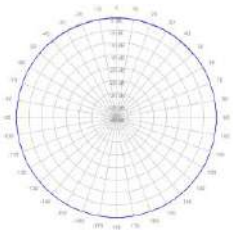
Control Station Antennas are optimized for control station and other applications where medium-duty, lower-gain models are preferred.

Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and windloading properties.

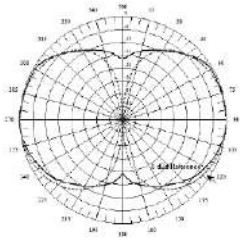
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal, all



Vertical, Unity Gain Models



Control Station Antennas – UHF band, Single Omni, 6 dBd Gain

Models - DS4B06CS36UN, DS4C06CS36UN

Specifications	
Design Type	2” Fiberglass radome
Frequency Range DS4B06CS36UN DS4C06CS36UN	 425-455 MHz 450-482 MHz
Gain (average over BW)	6 dBd
Beam Tilt (electrical downtilt)	0°
Vertical Beamwidth (E-Plane), nom.	16°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	350 W (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	N (F)
Equivalent Flat-Plate Area, min. – max.	0.9 sq. ft. – 1 sq. ft.
Lateral Wind-load Thrust @100mph, min. – max.	38 lbf. – 42 lbf.
Rated Wind Speed	191 mph (no ice) 162 mph (½” ice)
Total Length DS4B06CS36UN DS4C06CS36UN	 9.1 feet 8.1 feet
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2 inches
Mast O.D.	2.5 inches
Mast Length	9 inches
Radome color	Horizon Blue
Weight, antenna and hardware, min. – max.	20 – 23 lbs.
Shipping Weight, min. – max.	29 – 32 lbs.
Invertibility	Antennas are physically invertible, but the patterns are optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com

Features and Benefits:

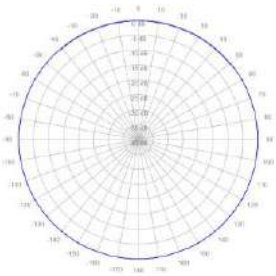
Control Station Antennas are optimized for control station and other applications where medium-duty, lower-gain models are preferred.

Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and windloading properties.

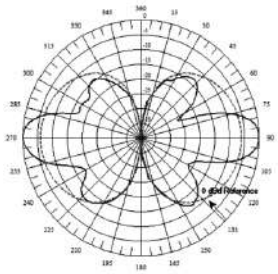
Excellent Lightning Protection – internal conductor DC ground.

Radiation Patterns:

Horizontal

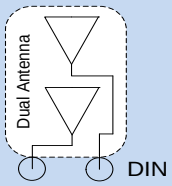


Vertical



Control Station Antennas – 700, 800, or 900 band, Dual Omni, Unity Gain

Models - DS7B00CS36DN, DS8A00CS36DN, DS9A00CS36DN

Specifications	
Design Type	2" Fiberglass radome
Frequency Range, models DS7B00CS36DN, 700 band DS8A00CS36DN, 800 band DS9A00CS36DN, 900 band	 764-806 MHz 806-869 MHz 890-960 MHz
Gain (average over BW)	0 dBd
Beam Tilt (electrical downtilt)	0°
Vertical Beamwidth (E-Plane)	60°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	300 W (each antenna)
Polarization	Vertical
Isolation, typ.	25 dB
Lightning Protection	Direct Ground
Connectors	2 x N (F)
*Equivalent Flat-Plate Area, min. – max.	0.3 sq. ft. – 0.4 sq. ft.
*Lateral Wind-load Thrust @100mph, min. – max.	13 lbf. – 15 lbf.
*Rated Wind Speed	276 mph (no ice) 235 mph (½" ice)
Total Length *DS7B00CS36DN, 700 band *DS8A00CS36DN, 800 band *DS9A00CS36DN, 900 band	 3.3 feet 3.0 feet 2.7 feet
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2 inches
Mast O.D.	2.5 inches
Mast Length	9 inches
Configuration: Dual "Two Antennas in One"	
Radome color	Horizon Blue
Weight, antenna, and hardware, min. – max.	5-10 lbs. (approx.)
Shipping Weight, min. – max	9-18 lbs. (approx.)
Invertibility	Yes, all the models are invertible
*Note	Lengths and parameters dependent on length are approximates. Contact dbSpectra at tech@dbspectra.com for actual length values.

Features and Benefits:

Control Station Antennas are optimized for control station or similar applications where medium-duty, lower-gain, yet field-proven and dependable antennas are preferred.

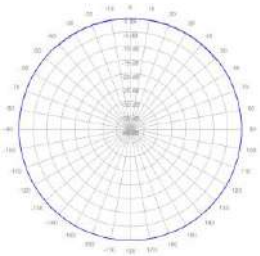
"Dual" configuration saves antenna space: 2-port design offers "two antennas in one" package with guaranteed electrical isolation.

Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and windloading properties.

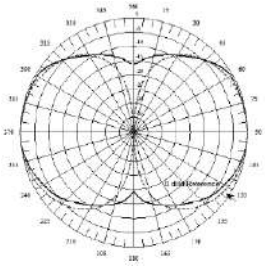
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal

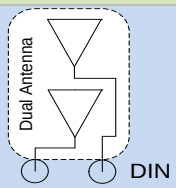


Vertical



Control Station Antennas – 700, 800, or 900 band, Dual Omni, 3 dBd Gain

Models - DS7B03CS36DN, DS8A03CS36DN, DS9A03CS36DN

Specifications	
Design Type	2" Fiberglass radome
Frequency Range, models DS7B03CS36DN, 700 band DS8A03CS36DN, 800 band DS9A03CS36DN, 900 band	 764-806 MHz 806-869 MHz 890-960 MHz
Gain (average over BW)	3.0 dBd – bottom antenna 2.9 dBd – top antenna
Beam Tilt (electrical downtilt)	0°
Vertical Beamwidth (E-Plane)	30°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	300 W (each antenna)
Polarization	Vertical
Isolation, typ.	25 dB
Lightning Protection	Direct Ground
Connectors	2 x N (F)
*Equivalent Flat-Plate Area, min. – max.	0.5 sq. ft. – 0.6 sq. ft.
*Lateral Windload Thrust @100mph, min. – max.	21 lbf. – 26 lbf.
*Rated Wind Speed, min. – max.	213 mph – 276 mph (no ice) 181 mph – 235 mph (½" ice)
Total Length DS7B03CS36DN, 700 band *DS8A03CS36DN, 800 band *DS9A03CS36DN, 900 band	 5.7 feet 5.0 feet 4.6 feet
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2 inches
Mast O.D.	2.5 inches
Mast Length	9 inches
Configuration: Dual, "Two Antennas in One"	
Radome color	Horizon Blue
Weight, antenna, and hardware, min. – max.	15.5 – 18 lbs. (approx.)
Shipping Weight, min. – max.	25.5 – 28 lbs. (approx.)
Invertibility	Antennas are physically invertible, but the patterns are optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com
*Note	Lengths and parameters dependent on lengths are approximates. Contact dbSpectra at tech@dbspectra.com for actual length values.

Features and Benefits:

Control Station Antennas are optimized for control station or similar applications where medium-duty, lower-gain, yet field-proven and dependable antennas are preferred.

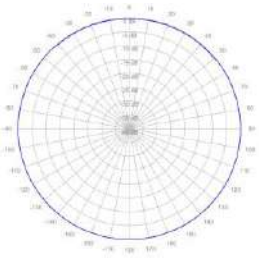
"Dual" configuration saves antenna space: 2-port design offers "two antennas in one" package with guaranteed electrical isolation.

Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and windloading properties.

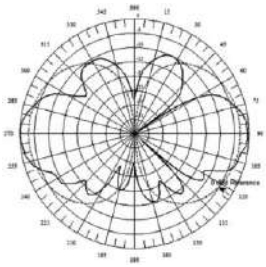
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



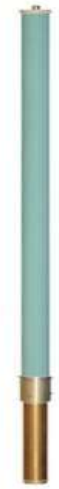
Vertical



Control Station Antennas – 700, 800, or 900 MHz Band, Single Omni, Unity or 3 dBd Gain

Models- DS7B03CS36UN, DS8A00CS36UN, DS8A03CS36UN, DS9A00CS36UN, DS9A03CS36UN, SP7C00CS36UN, SP7C03CS36UN

Specifications	
Design Type	**2" Fiberglass radome**
Frequency Range DS7B03CS36UN, 700 band - "3dBd" DS8A00CS36UN, 800 band – Unity DS8A03CS36UN, 800 band - "3dBd" DS9A00CS36UN, 900 band - Unity DS9A03CS36UN, 900 band - "3dBd" SP7C00CS36UN, 700/800 band - Unity SP7C03CS36UN, 700/800 band - "3dBd"	 **764-806 MHz** **806-869 MHz** **806-869 MHz** **890-960 MHz** **890-960 MHz** **764-869 MHz** **764-869 MHz**
Gain specs (average over BW) - All DSxx00- and SP7C00-models - All DSxx03-models - Model SP7C03CS36UN	 **0 dBd** **2.9 dBd** **2.7 dBd**
Beam Tilt (electrical down tilt)	**0°**
Vertical Beam width (E-Plane) - All Unity-gain models - All 2.7 and 2.9 dBd models	 **60°** **30°**
Impedance	**50 Ohms**
VSWR / Return Loss	**1.5:1 / 14 dB (min.)**
Average Power Rating	**300 W (each antenna)**
Polarization	**Vertical**
Lightning Protection	**Direct Ground**
Connector	**N (F)**
Equivalent Flat-Plate Area, min. – max.: - Unity Gain Models - 2.7 and 2.9 dBd Gain Models	 **0.2 sq. ft. – 0.3 sq. ft.** **0.3 sq. ft. – 0.4 sq. ft.**
Lateral Wind load Thrust @100mph, min. – max.: - Unity Gain Models - 2.7 and 2.9 dBd Gain Models	 **8 lbf. – 10 lbf.** **13 lbf. – 14 lbf.**
Rated Wind Speed (All models)	**276 mph (no ice)** **235 mph (½" ice)**
Total Length DS7B03CS36UN DS8A00CS36UN DS8A03CS36UN DS9A00CS36UN DS9A03CS36UN SP7C00CS36UN SP7C03CS36UN	 **2.9 feet** **1.8 feet** **3.1 feet** **1.7 feet** **2.9 feet** **2.2 feet** **3.1 feet**
Mounting Hardware (included)	**DSH1V3R**
Radome O.D.	**2.0 inches**
Mast O.D.	**2.5 inches**
Mast Length	**9.0 inches**
Radome color	**Horizon Blue**
Weight, antenna, and hardware, min. – max.	**5-7 lbs. (approx.)**
Shipping Weight, min. – max.	**9-11 lbs. (approx.)**
Invertibility: - Unity Gain Models - 2.7 and 2.9 dBd Gain Models	 **All unity gain models are invertible.** **All models are physically invertible but optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com**



Features and Benefits:

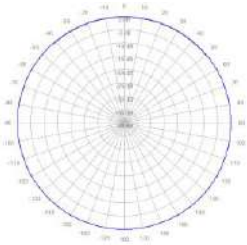
Control Station Antennas are optimized for control station or similar applications where medium-duty, lower-gain models are preferred.

Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and wind loading properties.

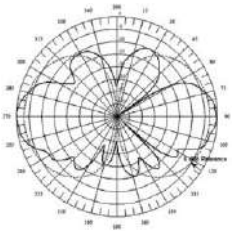
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

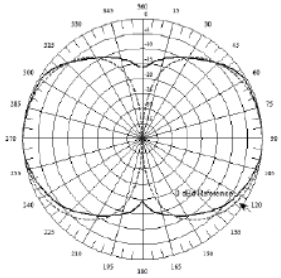
Horizontal, all



Vertical, 2.7/2.9 dBd models



Vertical, Unity gain models



Control Station Antennas – 800 or 900 MHz Band, Single Omni, 6 dBd Gain

Models - DS8A06CS36UN, DS9A06CS36UN

Specifications	
Design Type	2” Fiberglass radome
Frequency Range - DS8A06CS36UN - DS9A06CS36UN	 806-869 MHz 890-960 MHz
Gain (average over BW)	6 dBd
Beam Tilt (electrical downtilt)	0°
Vertical Beamwidth (E-Plane), nom.	16°
Impedance	50 Ohms
VSWR / Return Loss	1.5: 1 / 14 dB (min.)
Average Power Rating	300 W
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	N (F)
Equivalent Flat-Plate Area	0.5 sq. ft.
Lateral Windload Thrust @100mph	22 lbf.
Rated Wind Speed	276 mph (no ice) 235 mph (½” ice)
Total Length - DS8A06CS36UN - DS9A06CS36UN	 4.7 feet 4.7 feet
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2.0 inches
Mast O.D.	2.5 inches
Mast Length	9.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware, est.	15 lbs.
Shipping Weight, est.	32 lbs.
Invertibility	Antennas are physically invertible but optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com

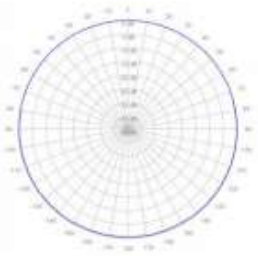
Features and Benefits:

Control Station Antennas are optimized for control station and other applications where medium-duty, lower-gain models are preferred.

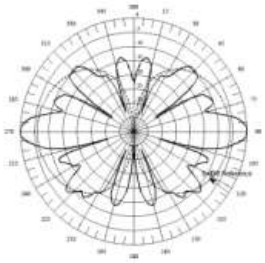
Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and wind loading properties.

Excellent Lightning Protection – internal conductor DC ground.

Radiation Patterns:



Horizontal



Vertical

Control Station Antenna – 600/700 MHz Band, Single Omni, 6 dBd

Models - SP6A06CS36UN

Specifications	
Design Type	2” Fiberglass radome
Frequency Range	698-788 MHz
Gain (average over BW)	6 dBd
Beam Tilt (electrical down tilt)	0°
Vertical Beamwidth (E-Plane), nom.	16°
Impedance	50 Ohms
VSWR / Return Loss	1.5: 1 / 14 dB (min.)
Average Power Rating	300 W
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	N (F)
*Equivalent Flat-Plate Area	0.6 sq. ft.
*Lateral Windload Thrust @100mph	26 lbf.
*Rated Wind Speed	213 mph (no ice) 181 mph (½” ice)
*Total Length	5.5
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2.0 inches
Mast O.D.	2.5 inches
Mast Length	9.0 inches
Radome color	Horizon Blue
Weight, antenna, and hardware	18 lbs. (approx.)
Shipping Weight	28 lbs. (approx.)
Invertibility	Antennas are physically invertible, but the patterns are optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com
*Note	Length and parameters dependent on length are approximates. Contact dbSpectra at tech@dbspectra.com for actual length value.

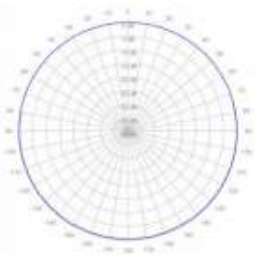
Features and Benefits:

Control Station Antennas are optimized for control station and other applications where medium-duty, lower-gain models are preferred.

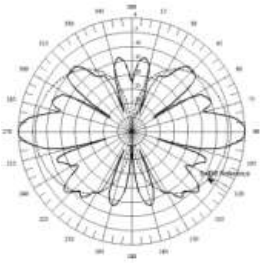
Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and wind loading properties.

Excellent Lightning Protection – internal conductor DC ground.

Radiation Patterns:



Horizontal



Vertical

Control Station Antennas – 700/800 MHz Band, Single Omni, 5.9 dBd

Models - SP7Z06CS36UD, SP7Z06CS36UM (Band 28 Antennas)

Specifications	
Design Type	True Corporate Feed, Band 28 Antenna
Frequency Range	703-803 MHz
Gain (average over BW)	5.9 dBd / 8 dBi
Beam Tilt (electrical down tilt)	0°
Vertical Beamwidth (E-Plane), nom.	16°
Passive Intermodulation, PIM PIM5: 5th order @2x 10W tones, (typical)	<-150dBc
Impedance	50 Ohms
VSWR / Return Loss	1.5: 1 / 14 dB (min.)
Average Power Rating	300 W
Polarization	Vertical
Lightning Protection	Direct Ground
Connector: SP7Z06CS36UD SP7Z06CS36UM	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	0.9 sq. ft.
Lateral Windload Thrust @100mph	38 lbf.
Rated Wind Speed	250 mph (no ice) 213 mph (½" ice)
Total Length	5.5 feet
Mounting Hardware (included)	DSH2V3R
Radome O.D.	3.0 inches
Mast O.D.	2.5 inches
Mounting Mast Length	21 inches
Radome color	Horizon Blue
Weight, antenna, and hardware	21 lbs. (approx.)
Shipping Weight	31 lbs. (approx.)
Invertibility	The antennas are physically invertible, but patterns are optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com
Ordering Information - With 7/16 DIN Connector - With 4.3-10 Connector	 SP7Z06CS36UD SP7Z06CS36UM

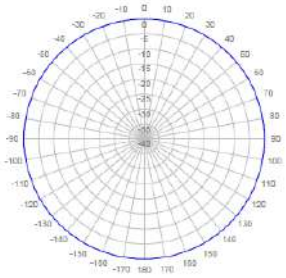
Features and Benefits:

This dbSpectra Pro-series Antenna is optimized for the Band 28 application where a medium-duty, higher-gain omni model is preferred.

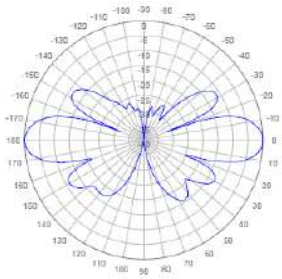
Sturdy Construction – Heavy-wall diameter fiberglass radome minimizes tip deflection yet manages weight and wind loading properties.

Excellent Lightning Protection – internal conductor DC ground.

Radiation Pattern:



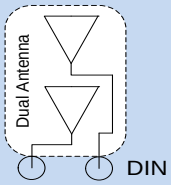
Horizontal Patterns



Vertical Patterns

Control Station Antennas – 900 MHz Band, Dual Omni, 3 dBd Gain

Models – SP9S03CS36DN, SP9S03CS36DM (*Heavy-duty-ISM Series)*

Specifications	
Design Type	2" Fiberglass radome
Frequency Range	902-928 MHz
Gain (average over BW)	3 dBd / 5.1 dBi – bottom antenna 2.9 dBd/5 dBi – top antenna
Beam Tilt (electrical down tilt)	0°
Vertical Beam width (E-Plane)	30°
Impedance	50 Ohms
VSWR	1.4:1 or better
Average Power Rating	300 W (each antenna)
Polarization	Vertical
Isolation, typ.	25 dB
Lightning Protection	Direct Ground w/ solid spike
Connector SP9S03CS36DN SP9S03CS36DM	 2 × N (F) 2 × 4.3-10 (F)
*Equivalent Flat-Plate Area	0.5 sq. ft.
*Lateral Wind load Thrust @100 mph.	21 lbf.
*Rated Wind Speed	276 mph (no ice) 235 mph (½" ice)
*Total Length	4.6 feet
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2.0 inches
Mast O.D.	2.5 inches
Mast Length	9.0 inches
Configuration: Dual, "Two Antennas in One"	
Radome color	Horizon Blue
Weight, antenna, and hardware	15.5 lbs. (approx.)
Shipping Weight	25.5 lbs. (approx.)
Invertibility	Antennas are physically invertible, but patterns are optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com
*Note	Lengths and parameters dependent on lengths are approximates. Contact dbSpectra at tech@dbspectra.com for actual length values.
Ordering Information: - With N-Type Connector - With 4.3-10 Connector	 SP9S03CS36DN SP9S03CS36DM

Features and Benefits:

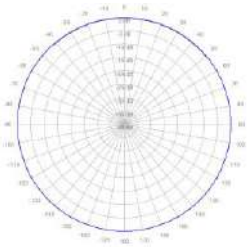
These antennas are optimized for ISM-band applications where heavier-duty, 3 dBd-gain models are preferred in multiple configurations.

Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and wind loading properties.

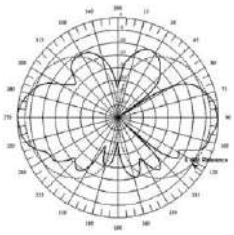
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



Control Station Antennas – 900 MHz Band, Single Omni, 3 dBd Gain

Models – SP9S03CS36UN, SP9S03CS36UM (*Heavy-duty-ISM Series)*

Specifications	
Design Type	2" Fiberglass radome
Frequency Range	902-928 MHz
Gain (average over BW)	3 dBd / 5.1 dBi
Beam Tilt (electrical down tilt)	0°
Vertical Beam width (E-Plane)	30°
Impedance	50 Ohms
VSWR	1.4:1 or better
Average Power Rating	300 W (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground w/ solid spike
Connector SP9S03CS36UN SP9S03CS36UM	 N (F) 4.3-10 (F)
Equivalent Flat-Plate Area	0.3 sq. ft.
Lateral Wind load Thrust @100 mph.	13 lbf.
Rated Wind Speed	276 mph (no ice) 235 mph (½" ice)
Total Length	2.9 feet
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2.0 inches
Mast O.D.	2.5 inches
Mast Length	9.0 inches
Radome color	Horizon Blue
Weight, antenna, and hardware	7 lbs. (approx.)
Shipping Weight	11 lbs. (approx.)
Invertibility	Antennas are physically invertible, but patterns are optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com
Ordering Information: - With N-Type Connector - With 4.3-10 Connector	 SP9S03CS36UN SP9S03CS36UM

Features and Benefits:

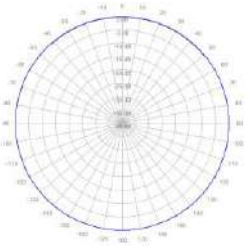
These antennas are optimized for ISM-band applications where heavier-duty, 3 dBd-gain models are preferred in multiple configurations.

Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and wind loading properties.

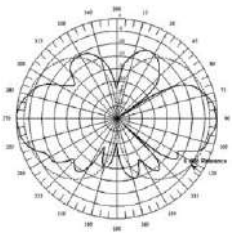
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



YAGI Antennas

UHF Antenna - Directional Yagi, 7 dBd Gain

Model - DS4A07Y90U-Series Antennas

Specifications	
Design Type	Directional Yagi
Frequency Range	406-430 MHz
Bandwidth	24 MHz
Gain, typ.	7 dBd
Horizontal Beamwidth, typ.	90°
Vertical Beamwidth, typ.	60°
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Front-to-back ratio, typ.	15 dB
Impedance	50 Ohms
VSWR / Return Loss	2.0:1 / 9.5 dB (min.)
Average Power Rating	300 W
Polarization	Vertical or Horizontal
Lightning Protection	Direct Ground
Connector DS4A07Y90U(x)N DS4A07Y90U(x)M	 N (F) 4.3-10 (F)
Lateral Wind-load Thrust @100mph	11.6 lbf
Rated Wind Speed	125 mph (without ice)
Total Length (boom + connector)	20 inches
Height/width	14 inches
Mounting Hardware	Included
Primary material	Aluminum/Stainless Steel
Color/finish	UV inhibited polyester coat
Weight, antenna, and hardware	3.9 lbs.
Shipping Weight	6.4 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4A07Y90U(x)N – N-Type Connector DS4A07Y90U(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam-Tilt Options. 2. "-" in the beam-tilt options represents 0˚ down-tilt

Image for representation purpose only. Actual antenna similar to image.

Features and Benefits:

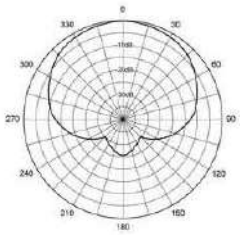
Ruggedized Yagi antenna features all-welded construction for consistent performance and trouble-free service.

High-gain design for demanding UHF applications.

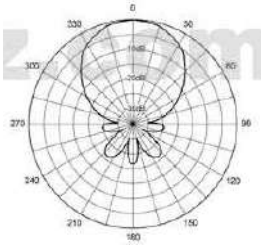
Can be mounted for either Vertical or Horizontal pol, depending upon the desired application.

Radiation Patterns:

Horizontal



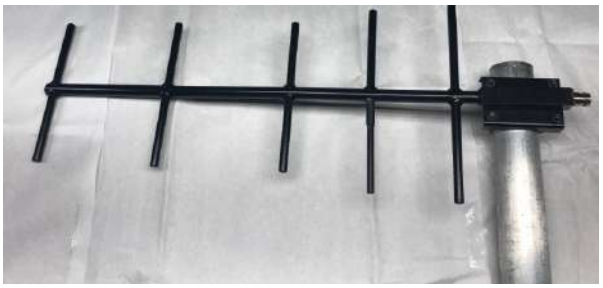
Vertical



UHF Antenna - Directional Yagi, 7 dBd Gain

Model - DS4C07Y55U-Series Antennas

Specifications	
Design Type	Directional Yagi
Frequency Range	450-482 MHz
Bandwidth	32 MHz
Gain (average over BW)	7 dBd
Horizontal Beamwidth, typ.	55° (±5)
Vertical Beamwidth, typ.	45° (±5)
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Front-to-back ratio, typ.	20 dB
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	300 W
Polarization	Vertical or Horizontal
Lightning Protection	Direct Ground
Connector DS4C07Y55U(x)N DS4C07Y55U(x)M	 N (F) 4.3-10 (F)
Equivalent Flat-Plate Area	0.42 sq. ft.
Lateral Windload Thrust @100mph	25.5 lbf
Rated Wind Speed	150 mph (without ice)
Total Length (boom + connector)	24 inches
Height/width	15 inches
Mounting Hardware	Included
Primary material	Aluminum/Stainless Steel
Color/finish	Black/multi-coat powder coating finish
Weight, antenna, and hardware	3 lbs.
Shipping Weight	6 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4C07Y55U(x)N – N-Type Connector DS4C07Y55U(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam-Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.



Features and Benefits

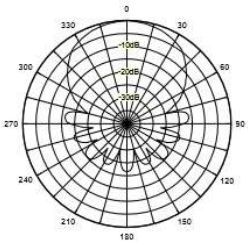
Ruggedized Yagi antenna features all-welded construction for consistent performance and trouble-free service.

High-gain design for demanding UHF applications.

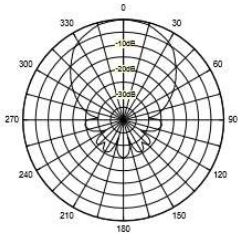
Can be mounted for either Vertical or Horizontal pol, depending upon the desired application.

Radiation Patterns:

Horizontal



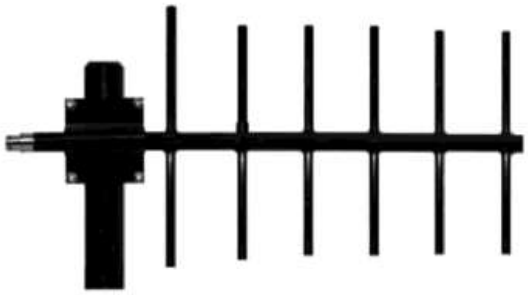
Vertical



UHF Antenna – Directional Yagi, 7 dBd Gain

Model – DS4K07Y85U-Series Antennas

Specifications	
Design Type	Directional Yagi
Frequency Range	450-512 MHz
Bandwidth	62 MHz
Gain (average over BW)	7.0 dBd (±0.5 dBd)
Horizontal Beamwidth, typ.	55° (±5°)
Vertical Beamwidth, typ.	60° (±5°)
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Front-to-back ratio, typ.	14 dB
Impedance	50 Ohms
VSWR	≤2.0:1
Average Power Rating	250 W
Polarization	Vertical or Horizontal
Lightning Protection	Direct Ground
Connector DS4K07Y85U(x)M DS4K07Y85U(x)N	 4.3-10 (F) N (F)
Equivalent Flat-Plate Area	0.42 sq. ft.
Lateral Windload Thrust @100mph	25.5 lbf.
Rated Wind Speed	150 mph (without ice)
Total Length	24 inches
Height/width	15/3 inches
Mounting Hardware, (included)	DSH2V3V
Material/Construction	Aluminum/Stainless Steel
Radome Material	UV Polyester
Weight, antenna, and hardware	4 lbs.
Shipping Weight	13 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS4K07Y85U(x)M – 4.3-10 Connector DS4K07Y85U(x)N – N-Type Connector	1. Replace (x) in the model number with Beam-Tilt options 2. "-" in the beam-tilt options represents 0˚ down-tilt.



Features and Benefits:

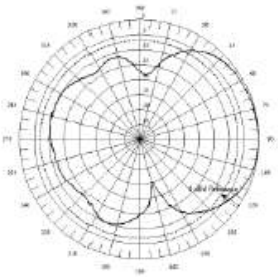
Ruggedized Yagi antenna features all-welded construction for consistent performance and trouble-free service.

High-gain design for demanding UHF applications.

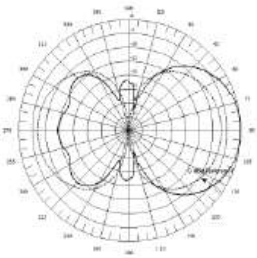
Can be mounted for either Vertical or Horizontal pol, depending upon the desired application.

Radiation Patterns:

Horizontal



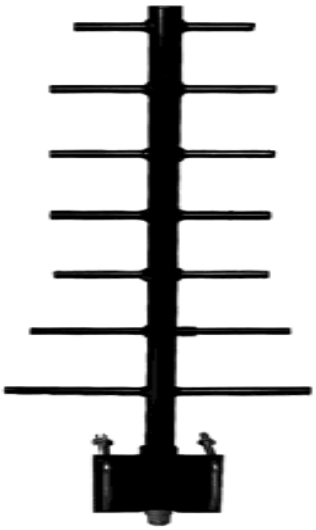
Vertical



700/800 MHz Antenna – Directional Yagi, 8 dBd

Model – DS7G08Y60U-Series Antennas

Specifications	
Design Type	Directional Yagi
Frequency Range	746-896 MHz
Bandwidth	150 MHz
Gain (average over BW)	8 dBd (±0.5 dBd)
Horizontal Beamwidth, typ.	60° (±15˚)
Vertical Beamwidth, typ.	45° (±10˚)
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Front-to-back ratio, typ.	22 dB
Impedance	50 Ohms
VSWR	≤2.0:1
Average Power Rating	150 W
Polarization	Vertical or Horizontal
Lightning Protection	Direct Ground
Connector DS7G08Y60U(x)M DS7G08Y60U(x)N	 4.3-10 (F) N (F)
Equivalent Flat-Plate Area	0.27 sq. ft.
Lateral Wind-load Thrust @100mph	15.9 lbf.
Rated Wind Speed	125 mph (without ice)
Total Length	27 inches
Height/width	8.5/1.5 inches
Mounting Hardware, (included)	DSH2V3V
Material/Construction	Aluminum/Stainless Steel
Radome Material	UV Polyester
Weight, antenna, and hardware	4 lbs.
Shipping Weight	13 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7G08Y60U(x)M – 4.3-10 Connector DS7G08Y60U(x)N – N-Type Connector	1. Replace (x) in the model number with Beam-Tilt options 2. "-" in the beam-tilt options represents 0˚ down-tilt.



Features and Benefits:

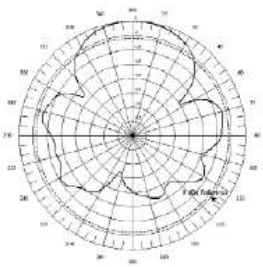
Ruggedized Yagi antenna features all-welded construction for consistent performance and trouble-free service.

High-gain design for demanding applications.

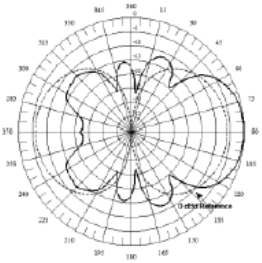
Can be mounted for either Vertical or Horizontal pol, depending upon the desired application.

Radiation Patterns:

Horizontal



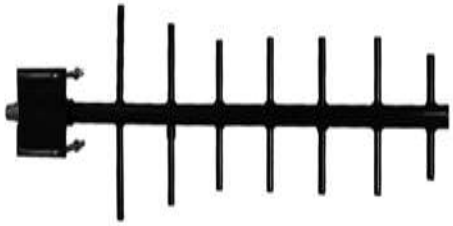
Vertical



700 MHz Antenna – Directional Yagi, 8 dBd Gain

Model - DS7S08Y60UC-Series Antennas

Specifications	
Design Type	Welded Yagi
Frequency Range	755-790 MHz
Bandwidth	35 MHz
Gain (average over BW)	8 ± 0.5 dBd
Horizontal Beamwidth, typ.	60˚ ± 15˚
Vertical Beamwidth, typ.	45˚ ± 10˚
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Front-to-back ratio, typ.	20 dB
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	250 W
Polarization	Vertical or Horizontal
Lightning Protection	Direct Ground
Connector DS7S08Y60UCN DS7S08Y60UCM	 N (F) 4.3-10 (F)
Equivalent Flat-Plate Area	0.27 sq. ft.
Lateral Wind-load Thrust @100mph	15.9 lbs
Rated Wind Speed	125 mph (without ice)
Total Length (boom + connector)	27 inches
Height/width	8.5 inches
Mounting Hardware	DSH2V3V
Primary material	Aluminum
Color/finish	Black/multi-coat powder coating finish
Weight, antenna and hardware	3 lbs.
Shipping Weight	13 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7S08Y60UCN – N-Type Connector DS7S08Y60UCM – 4.3-10 Connector	1. Replace (x) in the model number with Beam-Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.



Features and Benefits:

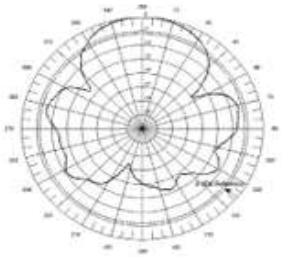
Yagi antenna features all-welded construction for consistent performance and trouble-free service.

High-gain design for demanding applications.

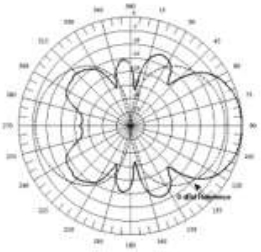
Can be mounted for either Vertical or Horizontal pol, depending upon the desired application.

Radiation Patterns:

Horizontal



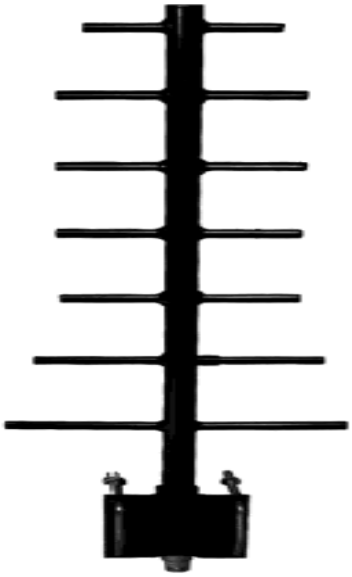
Vertical



700 MHz Antenna – Directional Yagi, 8 dBd Gain

Model – DS7S08Y60U-Series Antennas

Specifications	
Design Type	Directional Yagi
Frequency Range	756-790 MHz
Bandwidth	34 MHz
Gain (average over BW)	8 dBd (±0.5 dBd)
Horizontal Beamwidth, typ.	60° (±15˚)
Vertical Beamwidth, typ.	45° (±10˚)
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Front-to-back ratio, typ.	22 dB
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	250 W
Polarization	Vertical or Horizontal
Lightning Protection	Direct Ground
Connector DS7S08Y60U(x)M DS7S08Y60U(x)N	 4.3-10 (F) N (F)
Equivalent Flat-Plate Area	0.27 sq. ft.
Lateral Windload Thrust @100mph	15.9 lbf.
Rated Wind Speed	125 mph (without ice)
Total Length	27 inches
Height/width	8.5/1.5 inches
Mounting Hardware, (included)	DSH2V3V
Material/Construction	Aluminum/Stainless Steel
Radome Material	UV Polyester
Weight, antenna, and hardware	4 lbs.
Shipping Weight	13 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7S08Y60U(x)M – 4.3-10 Connector DS7S08Y60U(x)N – N-Type Connector	1. Replace (x) in the model number with Beam-Tilt options 2. "-" in the beam-tilt options represents 0˚ down-tilt.



Features and Benefits:

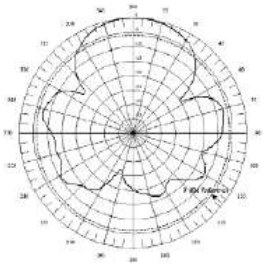
Ruggedized Yagi antenna features all-welded construction for consistent performance and trouble-free service.

High-gain design for demanding applications.

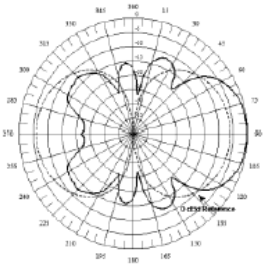
Can be mounted for either Vertical or Horizontal pol, depending upon the desired application.

Radiation Patterns:

Horizontal



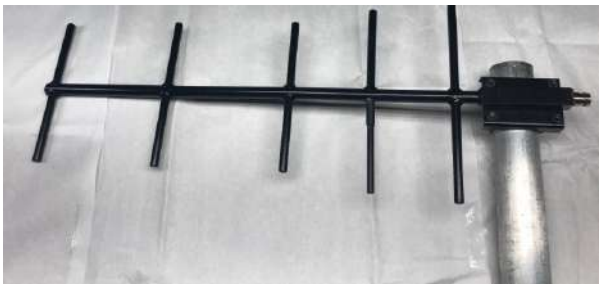
Vertical



900 MHz Antenna - Directional Yagi, 9 dBd Gain

Model - DS9A09Y55U-Series Antennas

Specifications	
Design Type	Directional Yagi
Frequency Range	890-960 MHz
Bandwidth	70 MHz
Gain (average over BW)	9 dBd
Horizontal Beamwidth, typ.	55° (±5)
Vertical Beamwidth, typ.	45° (±5)
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Front-to-back ratio, typ.	20 dB
Impedance	50 Ohms
VSWR	2.0:1
Average Power Rating	300 W
Polarization	Vertical or Horizontal
Lightning Protection	Direct Ground
Connector DS9A09Y55U(x)M DS9A09Y55U(x)N	 4.3-10 (F) N (F)
Equivalent Flat-Plate Area	0.3 sq. ft.
Lateral Wind load Thrust. (@100mph)	15.9 lbf
Rated Wind Speed	125 mph (without ice)
Total Length	27 inches
Height/width	8.5 inches
Mounting Hardware	Included
Primary material	Aluminum
Color/finish	Black/UV inhibited polyester coat.
Weight, antenna, and hardware	3 lbs.
Shipping Weight	6 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9A09Y55U(x)M – 4.3-10 Connector DS9A09Y55U(x)N – N-Type Connector	1. Replace (x) in the model number with Beam-Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.



Features and Benefits:

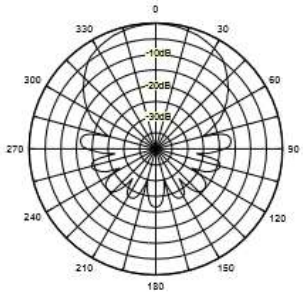
Ruggedized Yagi antenna features all-welded construction for consistent performance and trouble-free service.

High-gain design for demanding UHF applications.

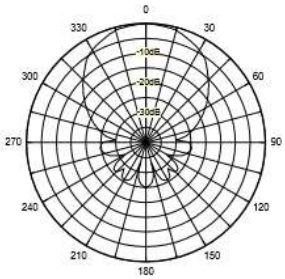
Can be mounted for either Vertical or Horizontal pol, depending upon the desired application.

Radiation Patterns:

Horizontal



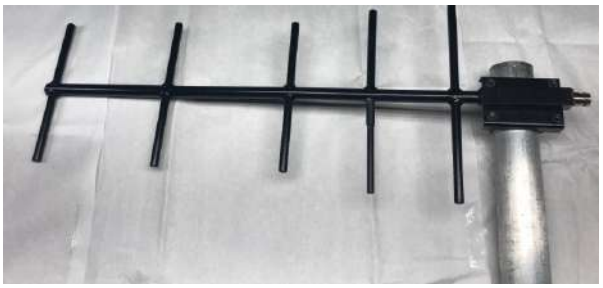
Vertical



UHF Antenna – Directional Yagi, High-performance/Low-PIM, 9.5 dBd

Model - SP4T10PY60U-Series Antennas

Specifications	
Design Type	Welded Yagi
Frequency Range	470-490 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	20 MHz
Gain (average over BW)	9.5 dBd (11.6 dBi)
Horizontal Beamwidth, typ.	65°
Vertical Beamwidth, typ.	50°
Beam Tilt (electrical downtilt)	(x) = - (0 degrees)
Front-to-back ratio, typ.	15 dB
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	250 W
Polarization	Vertical or Horizontal
Lightning Protection	Direct Ground
Connector SP4T10PY60U(x)M SP4T10PY60U(x)N	 4.3-10 (F) N (F)
Equivalent Flat-Plate Area	0.32 sq. ft.
Lateral Windload Thrust @100mph	20 lbf.
Rated Wind Speed	150 mph (without ice)
Total Length (boom + connector)	33 inches
Height/width	12 inches
Mounting Hardware	Included, H- or V-pol
Primary material	Aluminum
Color/finish	Black/multi-coat powder coating finish
Weight, antenna, and hardware	3.5 lbs.
Shipping Weight	6 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information SP4T10PY60U(x)M – 4.3-10 Connector SP4T10PY60U(x)N – N-Type Connector	1. Replace (x) in the model number with Beam-Tilt options 2. "-" in the beam-tilt options represents 0˚ down-tilt.



Features and Benefits:

Ruggedized Yagi antenna features all-welded construction for consistent performance and trouble-free service.

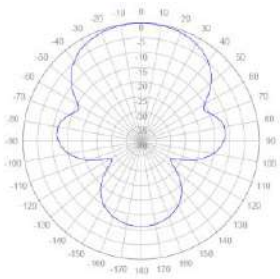
PIM-rated Design – 3rd-Order performance better than -150 dBc.

High-gain design for demanding UHF applications.

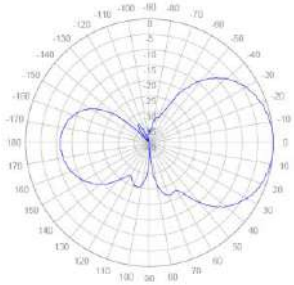
Can be mounted for either Vertical or Horizontal pol, depending upon the desired application.

Radiation Patterns:

Horizontal



Vertical



SCADA Antennas

698-798 MHz Antenna - Omnidirectional, Low-PIM/Hi-PIP, 10 dBd
Model DS6A10P36U-D

Specifications	
Design Type	True Corporate Feed
Frequency Range	698-798 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-153 dBc, 3rd Order
Bandwidth	100 MHz
Gain - dBd (average over BW)	10 dBd
Configuration	Single antenna
Beam Tilt (electrical downtilt)	None (0°)
Vertical Beamwidth (E-Plane) typ.	5°
Impedance – Ohms	50
VSWR / Return Loss -- dB	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector	7/16 DIN female
Equivalent Flat-Plate Area	2.9 sq. ft.
Lateral Windload Thrust @100mph	120 lbf.
Rated Wind Speed	175 mph (without ice)
Total Length	17.5 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	H.D. No-torsion mount
Mast O.D.	2.5 inches
Radome color	Horizon Blue
Weight, antenna and hardware	75 lbs.
Shipping Weight	95 lbs.
Invertibility	The antenna is physically invertible but the pattern is optimized for upright mounting.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's 12-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

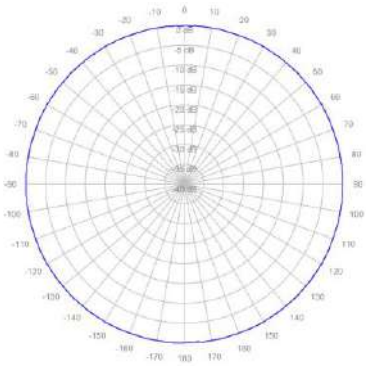
PIM-rated Design – 3rd-Order performance better than -153 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Dual Hi-Band Antenna – Directional Log Periodic, 9 dBi/10 dBi

Model - DS6X09L60U-Series Antennas

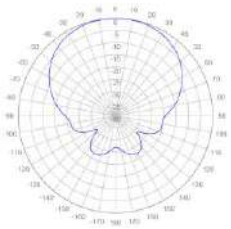
Specifications	
Design Type	Log-periodic
Frequency Range	690-960, 1700-2700 MHz
Passive Intermodulation – PIM certified (2 x 20W sources)	-150 dBc, 3rd Order When equipped with 4.3-10 DIN
Bandwidth	1270 MHz
Gain, typ. 690-960 MHz 1700-2700 MHz	 9 dBi 10 dBi
Front to Back Ratio, no tilt/typ.	25 dB
Horizontal beamwidth, typ.	60˚
Vertical beamwidth, typ.	50˚
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Impedance	50 Ohms
VSWR, typ.	1.5:1 or better
Average Power Rating	200 W
Polarization	Vertical or Horizontal
Lightning Protection	Direct Ground (clamps)
Connector DS6X09L60U(x)N DS6X09L60U(x)M	 N (F) 4.3-10 (F)
Width x Height x Depth, not including clamps	27.5 in. x 10.5 in. x 5 in.
Wind Speed rating	125 mph (without ice)
Wind loading, flat plate @100 mph	1.4 sq-ft @39 lbs. (max/lateral force, broadside)
Mounting Hardware	Pipe mount clamps included. *Shown in image with typical pole bracket, not included
Radome material and color	ABS, light gray
Weight, antenna and hardware, est.	9-12 lbs. nom., depending on clamps selected
Shipping Weight, est.	15 lbs., typ.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at tech@dbspectra.com
Ordering Information DS6X09L60U(x)N – N Type Connector DS6X09L60U(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits:

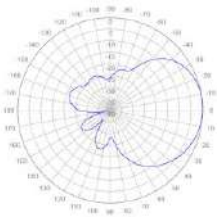
Premium directional Log-periodic antenna for higher-gain applications requiring broadband or dual-band performance and solid pattern control in a 60-degree azimuth plane package.

Radiation Patterns:

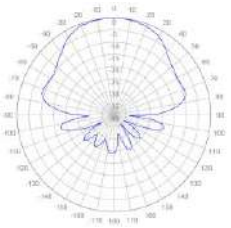
Low-band: Horizontal



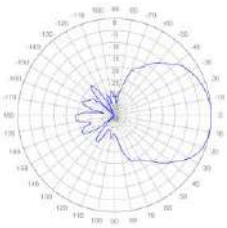
Vertical



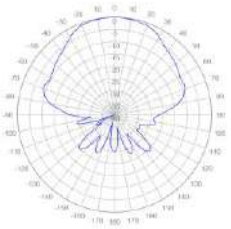
Mid-band: Horizontal



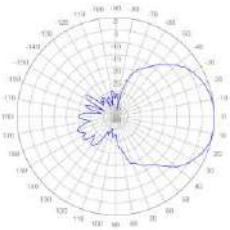
Vertical



Hi-band: Horizontal



Vertical



750 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 7.7 dBd

Model - DS7U08H60U-Series Antennas

Articulated Mount Model - DS7U08H60UA-Series Antennas

Specifications	
Design Type	Directional Panel – Patch design, High Performance
Frequency Range	757-788 MHz
Passive Intermodulation – PIM certified, (2 x 20W sources)	-150 dBc 3rd Order, when equipped with 4.3-10 DIN
Bandwidth	31 MHz
Gain, typ.	7.7 dBd
Front to Back Ratio, no tilt/typ.	20 dB
Horizontal Beamwidth (H-Plane), typical	60°
Beam Tilt (electrical downtilt)	0°
Impedance	50 Ohms
VSWR	1.4:1 or better
Average Power Rating	150 W
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7U08H60U-N / DS7U08H60UAN DS7U08H60U-M / DS7U08H60UAM	 N (F) 4.3-10 (F)
Height x Width x Depth, nom., not including clamps	12 in. x 12 in. x 1.7 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware DS7U08H60U-N/DS7U08H60U-M DS7U08H60UAN/DS7U08H60UAM	 (4) PEM studs on antenna included (bracket not included) Includes 2-axis/articulating mount for Azimuth and Elevation adjustment
Radome material and color	ABS, light gray
Weight, antenna and hardware, est.	2.5 lbs.
Shipping Weight, est.	4.5 lbs.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information With N-type Connector With 4.3-10 Connector	 DS7U08H60U-N / DS7U08H60UAN DS7U08H60U-M / DS7U08H60UAM

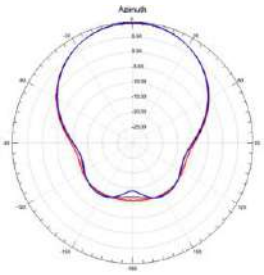
Features and Benefits:

Premium directional Panel antenna for lower-gain applications requiring good pattern control in a 60-degree Horizontal-aperture package.

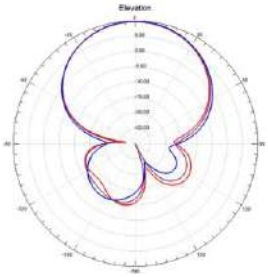
Panel design is optimized for the 757-788 MHz band, packaged in a compact and light weight platform.

Radiation Patterns:

Horizontal



Vertical



700/800 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 10.8 dBd

Model - DS7X11PPTU-Series Antennas

Specifications	
Design Type	Directional Panel – 4-foot-class Antenna
Frequency Range	716-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	153 MHz
Gain (average over BW)	10.8 dBd
Front to Back Ratio, no tilt/typ.	16 dB
Horizontal Beamwidth (H-Plane), nom.	120˚
Beam Tilt (electrical down-tilt)	(x) = - (0 degrees)
Vertical Beamwidth (E-Plane), typ.	16°
Impedance	50 Ohms
Null fill	Included
VSWR, better than:	1.4:1 @ 716-806 MHz 1.5:1 @ 806-869 MHz
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7X11PTU(x)D DS7X11PTU(x)M	 7/16 DIN (F) 4.3-10 (F)
Height x Width x Depth, nom., not including clamps	48 in. x 6.5 in. x 6 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Mechanical Down-tilt kit	DSH2VDT4P
Radome material and color	ABS, light gray
Weight, antenna, and hardware	22 lbs.
Shipping Weight	30 lbs.
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS7X11PTU(x)D – 7/16 DIN Connector DS7X11PTU(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt

Features and Benefits:

High-performance directional Panel antenna for medium-gain applications requiring strong pattern control in a 120-degree Horizontal-aperture package.

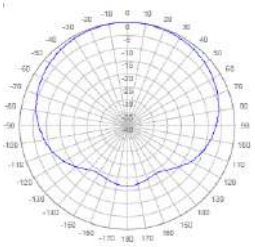
Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

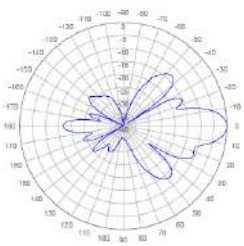
Robust design incorporates proven mechanical performance with modern PIM and PIP – rated features.

Radiation Patterns:

Horizontal



Vertical



700/800 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 13.5 dBd

Model – DS7X14PP12S-Series Antennas

Specifications	
Design Type	Directional Panel – 8-Foot Class Antenna
Frequency Range	716-869 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-153 dBc or better
Bandwidth	153 MHz
Gain (average over BW)	13.5 dBd
Front to Back Ratio, no tilt/typ.	18 dB
Horizontal Beamwidth (H-Plane), nom.	120°
Beam Tilt (electrical down-tilt)	0°
Vertical Beamwidth (E-Plane), typ.	9°
Impedance	50 Ohms
Null Fill, typ.	-12 dB
Upper Sidelobe Suppression, typ.	-17 dB
VSWR, better than:	1.35:1 @ 716-806 MHz 1.5:1 @ 806-869 MHz
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS7X14PP12SD DS7X14PP12SM	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	96 in. x 6.5 in. x 6.0 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 - 4" diameter vertical members
Mechanical Downtilt kit (optional)	DSH2VDT4P
Radome material and color	UV-Rated ABS, Light Gray
Weight, antenna, and hardware	40 lbs. (approx.)
Shipping Weight	50 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information With 7/16 DIN Female Connector With 4.3-10 Female Connector	 DS7X14PP12SD DS7X14PP12SM

Features and Benefits:

High-performance directional panel antenna for high-gain applications requiring strong pattern control in a 120-degree Horizontal-Aperture package.

Tested to stringent Peak Instantaneous Power (PIP) levels of up to 25 KW using dbSpectra's multi-channel P25 PIP test beds. High PIP level is demanded by today's digital systems.

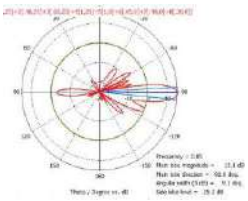
PIM-rated Design – 3rd-Order performance better than -150 dBc.

Optimized for 750MHz LMR frequencies popular with Utilities including Cellular/LTE frequencies with tight pattern control.

Radiation Patterns:

Horizontal

Vertical



900 MHz Antenna – Omnidirectional, Low-PIM/Hi-PIP, 10 dBd

Model - DS9A10P36U-Series Antennas

Specifications	
Design Type	True Corporate Feed
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W)	-150 dBc, 3rd Order
Bandwidth	70 MHz
Gain (average over BW)	10 dBd
Configuration	Single Antenna
Beam Tilt (electrical downtilt)	(x) = - , 3, or 6 degrees
Vertical Beamwidth (E-Plane) typ.	5°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W (each antenna)
Peak Instantaneous Power	25 kW (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground
Connector DS9A10P36U(x)D DS9A10P36U(x)M	 7/16 DIN (F) 4.3-10 (F)
Equivalent Flat-Plate Area	2.43 sq. ft.
Lateral Windload Thrust @100mph	102 lbf.
Rated Wind Speed	175 mph (without ice) 149 mph (with ½" radial ice)
Total Length	14.7 feet
Mounting Mast Length	35 inches
Mounting Hardware (included)	DSH3V3N (No Torsion)
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, Antenna and Hardware	68 lbs.
Shipping Weight (approx.)	85 lbs.
Invertibility	Antennas are not invertible. For invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9A10P36U(x)D – 7/16 DIN Connector DS9A10P36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits

Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

True Corporate Feed Array – provides for excellent gain and pattern consistency across a wider frequency range.

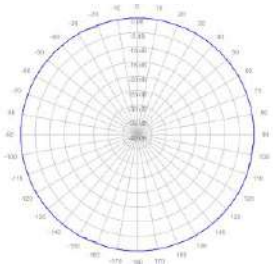
PIM Rated Design – better than -150 dBc.

Sturdy Construction – Heavy-wall fiberglass radome minimizes tip deflection.

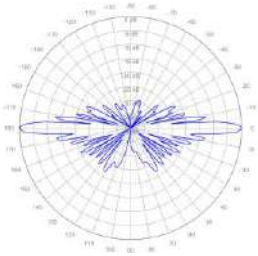
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical (No Tilt)



900 MHz Antenna – Directional Panel, Low-PIM/Hi-PIP, 10.8/10.3 dBd

Offset Horizontal Patterns: Model - DS9A11PPYU-Series Antennas

Bidirectional Horizontal Patterns: Model - DS9A10PPVU-Series Antennas

Specifications	
Design Type	Slim-line Panel, 8-foot class
Frequency Range	890-960 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	70 MHz
Gain (average over BW)	Offset: 10.8 dBd max. Bidirectional: 10.3 dBd max.
Front to Back Ratio, no tilt/typ.	Offset: 15 dB Bidirectional: 10 dB
Horizontal Beamwidth (H-Plane), typ.	Offset Models: 195˚ Bidirectional Models: 220˚
Beam Tilt (electrical down-tilt)	(x) = - , 2 , 4 , 6 , or 8 degrees
Vertical Beamwidth (E-Plane), typ.	6.5°
Impedance	50 Ohms
Null fill	Included
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	Vertical
Lightning Protection	Direct Ground
Connector (Offset / Bidirectional) DS9A11PPYU(x)D / DS9A10PPVU(x)D DS9A11PPYU(x)M / DS9A10PPVU(x)M	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, not including clamps	107 in. x 3.3 in. x 8 in.
Equivalent Flat-Plate Area – max. (side)	6.0 sq. ft.
Lateral Windload Thrust @100mph	240 lbf. (max.)
Wind Speed rating	160 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2 – 4" diameter vertical members
Spacing between clamp locations	42 inches x 2 (vertical)
Mechanical Downtilt kit (optional)	Available, DSH2VDT4P (purchase separately)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	25 lbs. (approx.)
Shipping Weight	35 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information (Offset / Bidirectional) With 7/16 DIN Connector: DS9A11PPYU(x)D / DS9A10PPVU(x)D With 4.3-10 Connector: DS9A11PPYU(x)M / DS9A10PPVU(x)M	1. Replace (x) in the model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt

Bottom View

Features and Benefits:

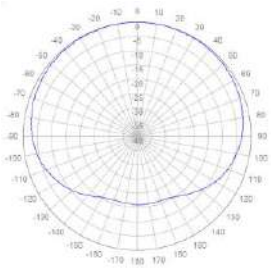
Tested to stringent Peak Instantaneous Power (PIP) levels of 25 KW using dbSpectra's multi-channel P25 PIP test bed. High PIP level is demanded by today's digital systems.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

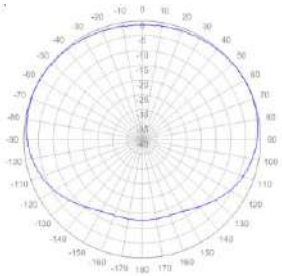
Specific pattern options for maximum versatility and performance in severe environments.

Radiation Patterns:

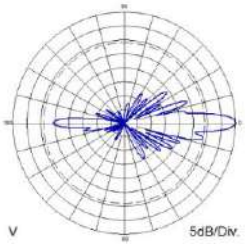
Horizontal: ***Offset Models***



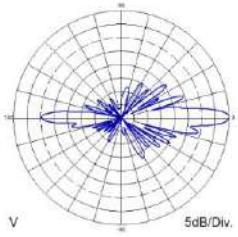
Bi-directional Models



Vertical: Offset Models



Bi-directional Models



900 MHz Antenna – Directional Panel, X-pol, Low-PIM/Hi-PIP, 14.3 dBd

Model - DS9B14PP6X-Series Antennas

Specifications	
Design Type	Directional Panel Antenna, X-pol, 6-foot class
Frequency Range	896-941 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order
Bandwidth	45 MHz
Gain (average over BW)	14.3 dBd
Front to Back Ratio, no-tilt, typ.	23 dB
Horizontal Beamwidth (H-Plane), typ.	60°
Beam Tilt (electrical down-tilt)	(x) = - or 4 degrees
Vertical Beamwidth (E-Plane), typ.	9°
Impedance	50 Ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	500 W
Peak Instantaneous Power	25 kW
Polarization	X-pol, +/- 45 degrees
Lightning Protection	Direct Ground
Connector DS9B14PP6X(x)D DS9B14PP6X(x)M	 7/16 DIN (F) 4.3-10 (F)
Length x Width x Depth, nominal, not including clamps	72 in. x 11 in. x 5 in.
Equivalent Flat-Plate Area – max. (side)	5.9 sq. ft.
Lateral Wind-load Thrust @100mph	180 lbf. (max.)
Wind Speed rating	150 mph (without ice)
Mounting Hardware (included)	Pipe-mount kit, fits 2-4" diameter vertical members
Mechanical Down-tilt kit	DSH2VDT4P (Optional; order separate)
Radome material and color	ABS, light gray
Weight, antenna, and hardware	22 lbs. (approx.)
Shipping Weight	30 lbs. (approx.)
Invertibility	Antennas are not invertible. For inverted options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9B14PP6X(x)D – 7/16 DIN Connector DS9B14PP6X(x)M – 4.3-10 Connector	1. Replace (x) in the model number with Beam-Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt

Features and Benefits:

Performance-optimized 900 MHz cross-polarized Antenna for LTE and specialized applications where high-gain and tight pattern control are required.

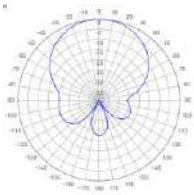
dbSpectra antennas are tested to stringent Peak Instantaneous Power (PIP) levels of up to 25 KW using dbSpectra's multi-channel P25 PIP test beds.

PIM-rated Design – 3rd-Order performance better than -150 dBc.

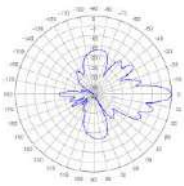
Robust and field-proven package guarantees long service life.

Radiation Patterns:

Horizontal



Vertical



900 MHz Antenna – Directional Panel, Low-PIM/Optimized, 6 dBd

Model DS9S06H90U-Series Antennas

Specifications	
Design Type	Directional Panel - Patch design
Frequency Range	902-928 MHz, ISM band
Passive Intermodulation - PIM (2 x 20W sources)	-150 dBc, 3rd Order when equipped with 7/16 DIN or 4.3-10 connector
Bandwidth	26 MHz
Gain, typ.	6 dBd
Front to Back Ratio, no tilt/typ.	16 dB
Azimuth-plane Beamwidth (Horizontal), typ. When V-pol mounted: When H-pol mounted:	 90° 60°
Elevation-plane Beamwidth (Vertical), typ. When V-pol mounted: When H-pol mounted:	 60° 90°
Beam Tilt (electrical downtilt)	0°
Impedance	50 Ohms
VSWR	1.4:1 or better
Average Power Rating	150 W
Polarization	Vertical or Horizontal (User can mount in either polarization) **
Lightning Protection	Direct Ground
Connector options	N (F), 7/16 DIN (F), or 4.3-10 (F)
Height x Width x Depth, nom. not including mounting clamps	10 in. x 7 in. x 1.7 in.
Wind Speed rating	125 mph (without ice)
Mounting Hardware options	*Standard pipe mount with stainless band clamps, allows Azimuth adjustment (1-axis) *2-axis/articulating mount for both Azimuth and Elevation adjustment
Mechanical Downtilt kit	Included
Radome material and color	ABS, light gray
Weight, antenna and hardware, est.	2 lbs.
Shipping Weight, est.	4.5 lbs.
**Installation note	Always make sure the open drain hole is facing downward after install
Ordering Information For standard mounting bracket With N-Type Female Connector With 7/16 DIN Female Connector With 4.3-10 Female Connector For 2-axis Articulating mounting bracket With N-Type Female Connector With 7/16 DIN Female Connector With 4.3-10 Female Connector	 DS9S06H90U-N DS9S06H90U-D DS9S06H90U-M DS9S06H90UAN DS9S06H90UAD DS9S06H90UAM

Features and Benefits:

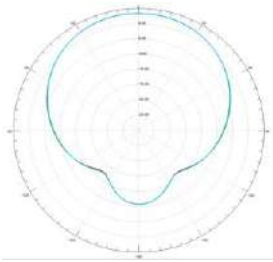
Premium directional Panel antenna for medium-gain applications requiring good pattern control in a 90-degree Horizontal-aperture package (V-pol) or 60-degree Horizontal-aperture package (H-pol).

Panel design is optimized for the 902-928 MHz "ISM" band, packaged in a compact and light weight platform.

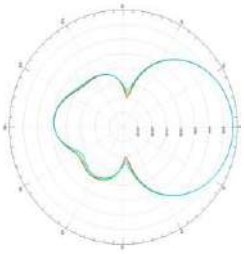
Allows field choice of Vertical or Horizontal polarization.

Radiation Patterns:

Horizontal



Vertical



900 MHz Antenna - Omnidirectional, H-POL, Low and Mid Gain

Model - DS9S04H36U-Series Antennas; DS9S07H36U-Series Antennas

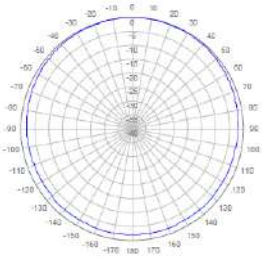
Specifications	
Design Type	Horizontal-polarized Omni
Frequency Range	902-928 MHz
Passive Intermodulation – PIM (2 x 20W sources)	-150 dBc, 3rd Order (if 4.3-10 connector equipped)
Bandwidth	26 MHz
Gain Model DS9S04H36U(x)N Model DS9S07H36U(x)N	 6.1 dBi/4 dBd +/-1.2 dB 8.6 dBi/6.5 dBd +/- 1.2 dB
Configuration	Single H-pol antenna
Beam Tilt (electrical down tilt)	(x) = - (0 degrees)
Elevation Beam width Model DS9S04H36U(x)N Model DS9S07H36U(x)N	 34° 17°
Impedance	50 ohms
VSWR / Return Loss	1.5:1 / 14 dB (min.)
Average Power Rating	200 W
Polarization	Horizontal
Connector DS9S04H36U(x)N DS9S07H36U(x)N	 N (F) N (F) (4.3-10 Female available)
Equivalent Flat-Plate Area	0.41 / 0.80 sq. ft.
Lateral Windload Thrust @100mph	17 /34 lbf.
Wind Speed rating	325 mph (without ice) 276 mph (with ½" radial ice)
Total Length Model DS9S04H36U(x)N Model DS9S07H36U(x)N	 30 inches 58 inches
Mounting Mast Length	5 inches/9 inches
Mounting Hardware (included)	DSH1V3R/DSH2V3R
Mast O.D.	2.5 inches
Radome O.D.	3.0 inches
Radome color	Horizon Blue
Weight, antenna and hardware	9 lbs. / 14 lbs. (approx.)
Shipping Weight	15 lbs. /19 lbs.
Invertibility	0˚ electrical down-tilt models are invertible. For other invertible tilt options contact dbSpectra at *tech@dbspectra.com*
Ordering Information DS9S04H36U(x)N – N Connector DS9S07H36U(x)N – N Connector DS9S04H36U(x)M – 4.3-10 Connector DS9S07H36U(x)M – 4.3-10 Connector	1. Replace (x) in model number with Beam Tilt options. 2. "-" in the beam-tilt options represents 0˚ down-tilt.

Features and Benefits:

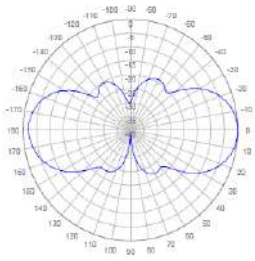
Horizontally polarized for specialized 900 MHz/ISM-band applications seeking isolation from vertically polarized interference sources.
Professional-grade antennas and VSWR/pattern control ratings ensure optimal performance.
PIM Rated Design – better than -150 dBc.
Professional-grade VSWR rating ensures optimal performance.
Sturdy Construction – Heavy-wall fiberglass radome practically eliminates tip deflection.
Antennas from dbSpectra provide long term, trouble-free service in severe environments, mission critical environments.

Radiation Pattern:

Horizontal

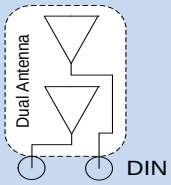


Vertical



Control Station Antennas – 900 MHz Band, Dual Omni, 3 dBd Gain

Models – SP9S03CS36DN, SP9S03CS36DM (*Heavy-duty-ISM Series)*

Specifications	
Design Type	2" Fiberglass radome
Frequency Range	902-928 MHz
Gain (average over BW)	3 dBd / 5.1 dBi – bottom antenna 2.9 dBd/5 dBi – top antenna
Beam Tilt (electrical down tilt)	0°
Vertical Beam width (E-Plane)	30°
Impedance	50 Ohms
VSWR	1.4:1 or better
Average Power Rating	300 W (each antenna)
Polarization	Vertical
Isolation, typ.	25 dB
Lightning Protection	Direct Ground w/ solid spike
Connector SP9S03CS36DN SP9S03CS36DM	 2 × N (F) 2 × 4.3-10 (F)
*Equivalent Flat-Plate Area	0.5 sq. ft.
*Lateral Wind load Thrust @100 mph.	21 lbf.
*Rated Wind Speed	276 mph (no ice) 235 mph (½" ice)
*Total Length	4.6 feet
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2.0 inches
Mast O.D.	2.5 inches
Mast Length	9.0 inches
Configuration: Dual, "Two Antennas in One"	
Radome color	Horizon Blue
Weight, antenna, and hardware	15.5 lbs. (approx.)
Shipping Weight	25.5 lbs. (approx.)
Invertibility	Antennas are physically invertible, but patterns are optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com
*Note	Lengths and parameters dependent on lengths are approximates. Contact dbSpectra at tech@dbspectra.com for actual length values.
Ordering Information: - With N-Type Connector - With 4.3-10 Connector	 SP9S03CS36DN SP9S03CS36DM

Features and Benefits:

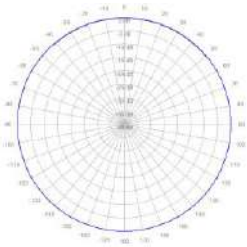
These antennas are optimized for ISM-band applications where heavier-duty, 3 dBd-gain models are preferred in multiple configurations.

Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and wind loading properties.

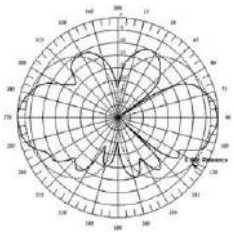
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



Control Station Antennas – 900 MHz Band, Single Omni, 3 dBd Gain

Models – SP9S03CS36UN, SP9S03CS36UM (*Heavy-duty-ISM Series)*

Specifications	
Design Type	2" Fiberglass radome
Frequency Range	902-928 MHz
Gain (average over BW)	3 dBd / 5.1 dBi
Beam Tilt (electrical down tilt)	0°
Vertical Beam width (E-Plane)	30°
Impedance	50 Ohms
VSWR	1.4:1 or better
Average Power Rating	300 W (each antenna)
Polarization	Vertical
Lightning Protection	Direct Ground w/ solid spike
Connector SP9S03CS36UN SP9S03CS36UM	 N (F) 4.3-10 (F)
Equivalent Flat-Plate Area	0.3 sq. ft.
Lateral Wind load Thrust @100 mph.	13 lbf.
Rated Wind Speed	276 mph (no ice) 235 mph (½" ice)
Total Length	2.9 feet
Mounting Hardware (included)	DSH1V3R
Radome O.D.	2.0 inches
Mast O.D.	2.5 inches
Mast Length	9.0 inches
Radome color	Horizon Blue
Weight, antenna, and hardware	7 lbs. (approx.)
Shipping Weight	11 lbs. (approx.)
Invertibility	Antennas are physically invertible, but patterns are optimized for upright mount. For optimized invertible mount options contact dbSpectra at tech@dbspectra.com
Ordering Information: - With N-Type Connector - With 4.3-10 Connector	 SP9S03CS36UN SP9S03CS36UM

Features and Benefits:

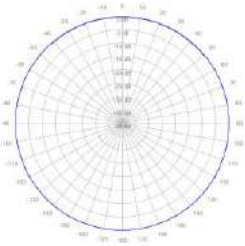
These antennas are optimized for ISM-band applications where heavier-duty, 3 dBd-gain models are preferred in multiple configurations.

Sturdy Construction – Heavy-wall 2-inch diameter fiberglass radome minimizes tip deflection yet manages weight and wind loading properties.

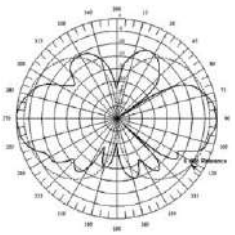
Excellent Lightning Protection – heavy internal conductor DC ground.

Radiation Patterns:

Horizontal



Vertical



dbSpectra

www.dbspectra.com

We manufacture Land Mobile Radio, Public Safety, and Wireless/Cellular equipment.

All products are proudly designed and manufactured in the USA. dbSpectra is certified ISO 9001:2015 and ISO 14001:2015.

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Quality & Safety Guaranteed

Certified SBA Small Business

Revision: 2021-05