

FM-OMNI-3

Fluidmesh 3dBi Omni Antenna

 Fluidmesh is
now part of Cisco.

The FM-OMNI-3 antenna provides superior wave patterning, and more consistent performance for both indoor and outdoor wireless communications. The FM-OMNI-3 can transmit and receive in the vertical and horizontal planes simultaneously. This allows higher throughput and more stable signal strength values in real-world environments where other antennas may fail to connect, particularly when obstructions are present.



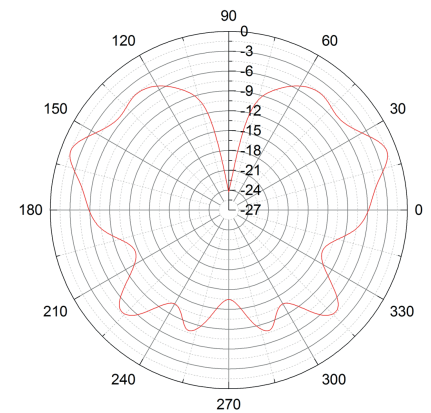
Features

- Multi-polarized, three-dimensional antenna element design
- Enhanced ability to transmit and receive if physical obstructions are present
- Enhanced connectivity and quicker throughput
- Built-in polarization diversity and spatial diversity
- Low profile and rugged design
- RoHS compliant

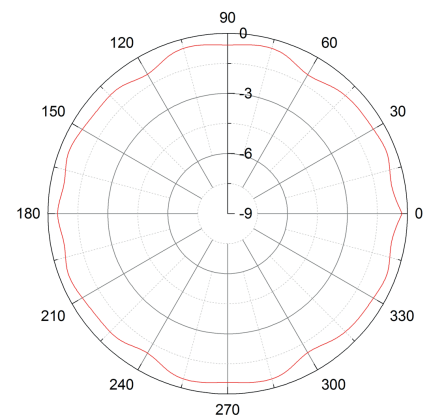
Specifications

Dimensions	25.4 x 30.48 mm (1 x 1.2")
Connector type	1.0 in N-Female
Weight	56.7 g (0.125 lb)
Frequency Range	4.9-5.9 GHz
Nominal Gain	3 dBi
VSWR	1.2-1.6:1
Maximum Power	50 Watt
Nominal Impedance	50 Ohm

Antenna Pattern



V-Plane



H-Plane

FM-OMNI-5-H

Fluidmesh 5dBi Omni Antenna H-polarized



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FM-OMNI-5-H horizontally polarized omnidirectional antennas are designed for long-lasting operation with outdoor access points. Their rugged design withstands harsh environments, making the antennas ideal for industrial wireless, enterprise, and military applications. The antennas in this series are DC grounded for ESD protection of radio components.



Features

- UV-stable, white ruggedized plastic radome
- Chrome plated mounting base
- DC grounded design
- Fully sealed IP67 design
- N-Female connector
- Wind rated 125 mph
- Temperature -40°C to +85°C

Specifications

Dimensions	32 x 166,3 mm (1.26 x 6.55")
Weight	115g (4 oz)
Housing Material	White UV-stable ASA
Frequency Range	5.1-5.9 GHZ
Nominal Gain	5 dBi
VSWR	<2:1
Elevation Half Power Beamwidth	30°
Maximum Power	40 Watt
Nominal Impedance	50 Ohm
Bending Moment at Rated Wind	0.57 lbf-ft
Lateral Thrust at Rated Wind	2.1 lbf
Equivalent Flat Plate Area	0.03 ft ²

PRODUCT CODES

FM-OMNI-5-H	5 dBi Horizontal polarization omnidirectional antenna
FM-OMNI-5-V	5 dBi Vertical polarization omnidirectional antenna
FM-OMNI-5-KIT	Kit containing 1 x FM-OMNI-5-V and 1 x FM-OMNI-5-H antenna, 5 dBi Single Polarization



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FM-OMNI-5-V

Fluidmesh 5dBi Omni Antenna V-polarized



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The FM-OMNI-5-V omnidirectional base station antenna design utilizes a linear array, encapsulated in a heavy-duty fiberglass radome with a thick-walled mounting base for reliable, long term use. This rugged design withstands harsh environments, making the antennas ideal for Industrial Wireless and Military applications. The antennas in this series are DC grounded for ESD protection of radio components.



Features

- UV-stable, black fiberglass radome (0.625" diameter)
- Black chrome plated mounting base
- DC grounded design
- Fully sealed IP67 design
- N-Female connector
- Wind rated 125 mph
- Temperature -40°C to +85°C

Specifications

Dimensions	20,9 x 139 mm (0.825 x 5.5")
Weight	124 g (0.27 lb)
Housing Material	Black UV-Stable Pultruded Fiberglass (0.625" diameter)
Frequency Range	5.1-5.9 GHz
Nominal Gain	4 dBi
VSWR	< 1.5:1
Elevation Half Power Beamwidth	42°
Maximum Power	20 Watt
Nominal Impedance	50 Ohm
Bending Moment at Rated Wind	0.30 lbf-ft
Lateral Thrust at Rated Wind	1.31 lbf
Equivalent Flat Plate Area	0.02 ft ²

PRODUCT CODES

FM-OMNI-5-H	5 dBi Horizontal polarization omnidirectional antenna
FM-OMNI-5-V	5 dBi Vertical polarization omnidirectional antenna
FM-OMNI-5-KIT	Kit containing 1 x FM-OMNI-5-V and 1 x FM-OMNI-5-H antenna, 5 dBi Single Polarization



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FM-SHARK-DUAL

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Bidirectional antenna for Train to Ground communication

FEATURES

- Dual feed, dual slant $\pm 45^\circ$, linear polarization
- Designed for metallic or non-metallic roof mounting, no ground plane required
- Extremely rugged purpose built for rail and metro applications
- Symmetrical patterns, maintains same pattern performance over each polarization
- High port-to-port performance correlation

CUSTOM CONFIGURATIONS

- Painting or anodizing available
- Custom mounting plate and bolt pattern available
- Custom connector location available
- Dual H/V polarization available
- Circular polarization available
- Other connector options available



RAIL CERTIFICATION

Meets EN50155 requirements

ELECTRICAL SPECIFICATIONS

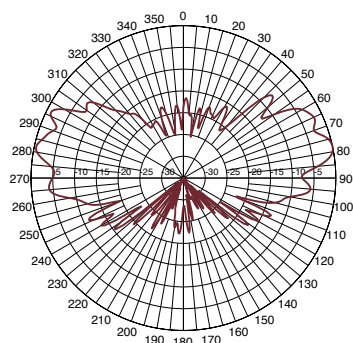
Nominal Impedance	50 ohms
Polarization	Dual Slant 45° , Linear
Bandwidth	4.9-5.9 GHz
Gain	10-13 dBi*
VSWR	< 2.0 : 1

ELECTRICAL SPECIFICATIONS

Free Space, Non-Metallic Ground Plane	H-Plane Beamwidth	42°
	E-Plane Beamwidth	28°
Ground Plane Mounted Performance	H-Plane Beamwidth	39°
	E-Plane Beamwidth	21°
	Port-to-Port Isolation	>22 dB

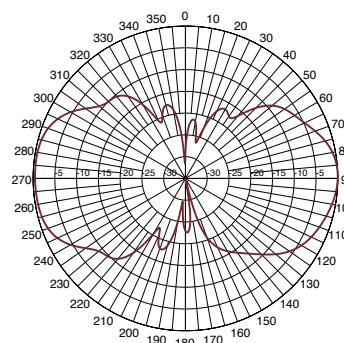
MECHANICAL SPECIFICATIONS

Dimensions	8.3 x 5.5 x 3.3 inches (210 x 140 x 85 mm)
Weight	8.5 lbs
Connector Options	QMA Female
IP rating	IP 67 - following installation instructions



ELEVATION PATTERN

NOTE: Radiation patterns reflect ground mounting.



AZIMUTH PATTERN

* Depending on the installation and metal plane dimension

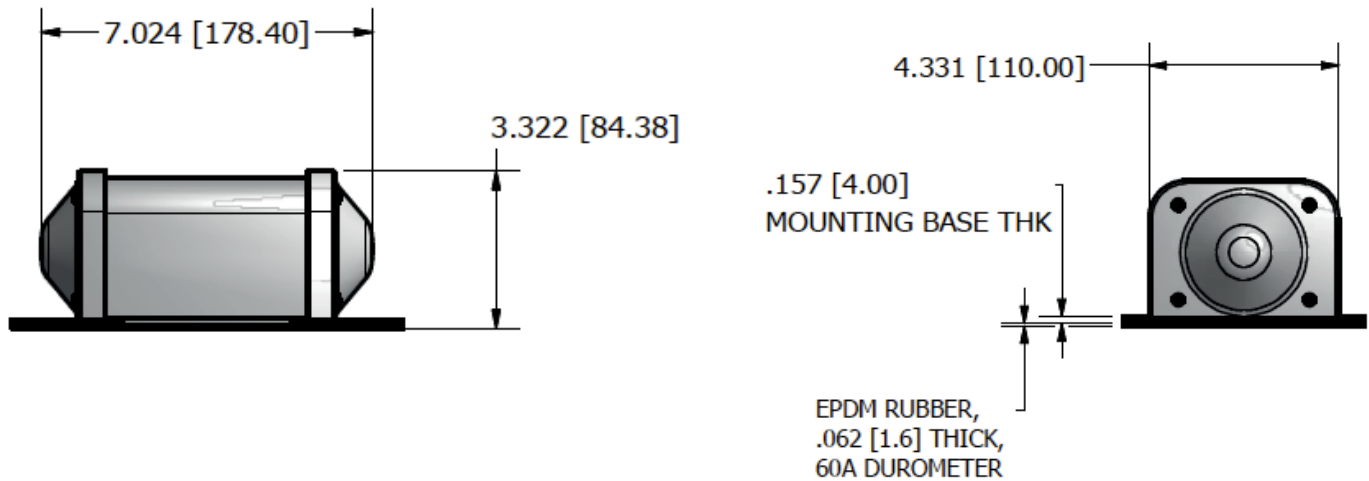
FM-SHARK-DUAL

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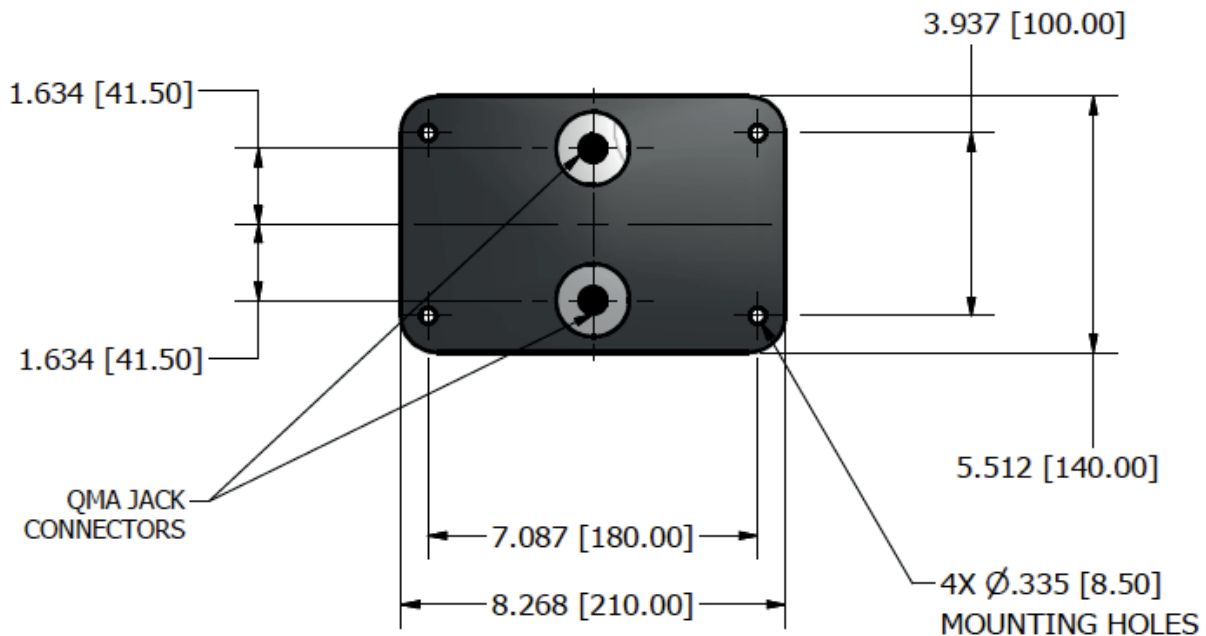
Bidirectional antenna for Train to Ground communication.

ANTENNA DIMENSIONS (inches [mm])

Front and side view



Bottom view



FM-TUBE

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Directional Endfire Array Antenna

This 5 GHz dual port, dual polarized directional array antenna provides high gain and confined field, enabling a variety of broadband wireless applications. Due to its strong directivity, FM-TUBE is the ideal choice for applications in tunnels and closed environments such as Train to Ground communications for metros and underground mobility. The platform's discrete directional antenna technology combines two traditional antennas into a single package without sacrificing performance. Unlike traditional panel antennas, this end fire array antenna is physically and visually less obtrusive making it ideal for installations with limited space availability.

FEATURES

- MIMO performance for optimized data speed and throughput
- Dual port, dual polarization package replaces two traditional directional panels
- Gain and pattern optimized for point-to-point and point-to-multi point connectivity
- Small footprint design can accommodate tunnel or trackside installations with as little as 3,54" (9 cm) clearance
- Includes a robust wall/mast mount bracket designed to withstand maximum 56 m/s wind speed
- High front-to-back ratio allows for back-to-back mounting of antennas; ideal for trackside or roadside coverage



RF/ELECTRICAL SPECIFICATIONS

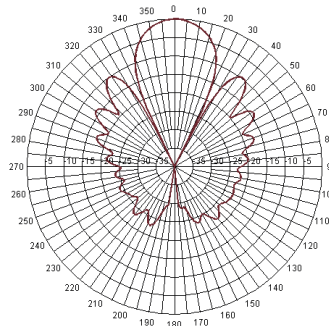
Frequency Range	4.9-5.9 GHz
Peak Gain	14.6 dB
Side Lobes	12-15 dB below peak
E-Plane Beamwidth	25-35°
H-Plane Beamwidth	25-35°
Front-to-Back Ratio	> 35 dB
Port-to-Port Isolation	19 dB minimum

MECHANICAL SPECIFICATIONS

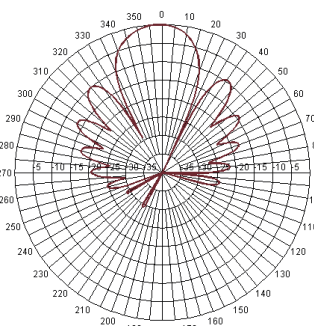
Temperature Range	- 40°F to 158°F (40°C to +70°C)
Dimensions	1.57 x 1.57 x 11.18 in (40 x 40 x 284 mm)

TECHNICAL DATA

Polarization	Dual port, dual orthogonal polarization
Nominal Impedance	50 ohms
VSWR	< 2.0:1, typical < 2.5:1, across band
Wind Survival	184 ft/s (56 m/s)
Cable	Feed cables available
Termination	N Female bulkhead *



ELEVATION PATTERN



AZIMUTH PATTERN

NOTE: Radiation patterns reflect ground mounting.

* Proper connector sealing could be needed