

LINKnet™ UHF MODULE



PRODUCT DESCRIPTION

The LINKnet™ - UHF module is a synthesized 'on-frequency-repeater' that receives and transmits on the same frequency, at the same time, extending two-way voice and data communications into shielded areas. The LINKnet UHF module provides continuous and transparent communications, maintaining a constant RF power at all times and is ideal for extending UHF radio services into buildings, tunnels, subways, malls and isolated outdoor areas.

Available in off-the-air or fiber-optic fed models, the LINKnet UHF series will cover the full range of UHF from 406 MHz to 512 MHz. See reverse for Sub-band selections.

For multicoupling options, please contact your Kaval representative.

The LINKnet UHF module is designed to operate in the LINKnet Platform. However, it may be configured as a stand alone single frequency device with AC power supply. Please contact your Kaval representative for further details.

KEY FEATURES & BENEFITS

Easy Set-up / Configuration

All level settings, including programming of frequency, gain, AGC, etc are easily configured into the module via the LINKnet System Controller or through PC software provided during set-up.

Constant 5 Watts Per Channel

AGC (automatic gain control) and limiting provides constant high output power ensuring predictable, above ground extended coverage and complete coverage inside large buildings.

Up to 140 dB RF Gain

High gain ensures constant RF output even with marginal receive signals. LINKnet provides precise gain control to ensure consistent and reliable communications.

Responds Only to Assigned Channels

The LINKnet UHF module will not re-transmit noise, interference or adjacent channels. Only those frequencies desired will be retransmitted, ideal for congested urban or high density RF environments.

Vendor Independent

The LINKnet UHF module is compatible with all vendors' equipment, including conventional, trunked radio and paging formats.

Fault Alarming and Remote Control

All LINKnet modules are capable of local and remote alarm control when used with the LINKnet System Controller. Thermal control, up/downlink over/under current, AGC,DGC and module fail alarms are available (See the LINKnet System catalog sheet for details)

Off the air Signal Pick Up or Optional Fiber-Optic Fed Amplification

The LINKnet UHF modules are configured to take signals 'off the air'. An optional single mode fiber-optic interface is also available. If fiber-optic links are used the uplink path is replaced with an RF to fiber-optic interface. At the base station, or donor site, a fiber to RF interface is supplied to complete the link.

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SPECIFICATIONS	Frequency Bands	See Model Chart Below
	Channel Spacing	25 KHz as per Model Chart (or 12.5 KHz)
	Modulation Types	Narrowband FM
	Max. RF Output Power	37 dBm
	RF Frequency Stability	Tracks Input Signal Exactly
	Adjacent Channel Selectivity	60 dB Minimum
	RF Output Power Range	Power can be reduced 20 dB in 1 dB Steps (AGC Controlled)
	RF Output Power Variation vs. Input (over -90 to -30 dBm)	+/- 1 dB
	Input Dynamic Range	-110 to -30 dBm
	Input Sensitivity Adjust Range	-110 to -50 dBm
	Input Hysteresis	1 to 10 dB
	Transmit Duty Cycle	Continuous
	Transmit Spurious Output	-13 dBm max
	Receive Conducted Spurious Output	-57 dBm Max
	Maximum Gain	140 dB
	Audio Distortion & Noise	<3% Increase
	Transmit Key-Up Time	< 2 mS
	Transmit Key-Down Time	< 1 mS
	Group Delay	<120 uS for 25 KHz, <160 uS for 12.5 KHz
	Input / Output Connectors	SMA Connectors on back of Card-Cage
	Input / Output Impedance	50 Ohms
	Connections	Edge Connector & 2 Blind-Mate RF Connectors to Card-Cage, DB-15 Connector on back of Card-Cage provides per-Module Fault Relay, Interconnect to other Modules, & RS-232 Connection
	Module Power Supply Requirements	45 Watts Maximum
	Front Panel Indicators	Operating, Stand by, Fault, Program Mode, Receive, Transmit
	Configuration Options	RF Modules may be configured either via the optional Controller Module, or via a PC and an RS-232 Connection via the Card-Cage.
	Operating Temperature Range	-10 to +50°C; Consult Kaval for installation specific forced-air cooling requirements
	Operating Humidity Range	10 to 90% RH, Non-Condensing
	Module Size	9.11" High, 2.00" Wide, 14.00" Deep
	Module Weight	10 lbs, 4.5 kg Max

OFR400 FAMILY	MODEL	TYPE	FREQUENCY
	OFR400-C 1	25 KHz Channels	450-470 MHz (FM)
	OFR400-D 1	25 KHz Channels	470-490 MHz (FM)
	OFR400-E 1	25 KHz Channels	490-512 MHz (FM)

OFR400-A1
OFR400-A2

25 KHz Channels
12.5 KHz Channels

406.125 MHz (FM)
406.125 MHz (FM)