

NETNode5W-4R

NETNode IP Mesh Radio Phase 4 (Robust) - 5W

Overview:

NETNode IP Radios can be combined in a fluid self-forming, self-healing mesh containing up to sixteen radios. The NETNode radios within the mesh exchange data on a single frequency, simplifying frequency management. The entire mesh occupies just 2.5MHz of bandwidth (1.25, 1.5, 1.75, 2.5, 3.0, 3.5, 5.0, 6.0, 8.0 and 10MHz also available). The NETNode radios employ the unique DTC COFDM modulation scheme and therefore offer excellent RF penetration and performance in the presence of multipath.

The NETNode mesh radios can provide up to 14.6Mb/s of IP data (data rate depends on mode, number of nodes and range between nodes). This available bit-rate can be used to exchange IP data traffic between nodes.



Features and Benefits:

5W transmit power

COFDM waveform for excellent NLOS & multipath performance

Flexible RF channel bandwidths (1.25,1.5,1.75,2.5,3,3.5, 5,6,7,8,10 MHz)

Range of frequency variants across public and private bands

Up to 14.6Mbps UDP data capacity in a Mesh

Up to 16 nodes in Mesh

Built in encryption (DES as standard, AES128/256 available subject to Export Control)

Product Information:

Product Includes

CA0406*	Control and data cable 2m
CA2240*	Microphone/headphone and control/debug cable 1m
CA3229	Robust NETNode screened power/Ethernet cable 5m XLR
CA3256	Short bananas to XLR power cable

*UHF variants are supplied with screened cables - see options

Accessory Options (sold separately)

MISCDR	Mission Commander control interface (levels-Bronze/Silver/Gold)
CA2581	Control & data screened cable 2m
CA2585	Microphone/headphone and control/debug screened cable 1m

Related Documents

100115	NETNode Phase 3 and 4 User Guide
100130	NETNode Phase 3 and 4 Operations Guide
Available on DTC website	Maritime IP Mesh Brochure
Available on DTC website	Maritime Mesh Networking White Paper

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Technical Specification:

Interfaces

RF Interfaces	N-Type x 3 (Rx A, Rx B, Tx)
Power and Ethernet	Amphenol 38999 Series 3
Control and misc I/O	Amphenol 38999 Series 3

Typical Range

Line of sight	60km+
Light urban	Circa 5km

RF Interfaces

Antenna - Rx A	Receive antenna [Ch A]
Antenna - Tx	Transmit antenna
Antenna - Rx B	Receive antenna [Ch B]

RF and modulation

Tuning step size	125kHz step
Output power	+37 to +10dBm in 0.25dB steps
Bandwidth	1.25, 1.5, 1.75, 2.5, 3.0, 3.5, 5.0, 6.0, 7.0, 8.0, 10.0 MHz
Mesh capacity	Up to 14.6Mb/s (10MHz)
Modulation	COFDM 360 carrier modulation
Carrier modulation	BPSK/QPSK/16QAM (adaptive)
FEC rate	1/2 - 2/3 (adaptive)
Receive diversity	Maximum ratio combining
Receive sensitivity	-98dBm for most robust mode (BW 2.5MHz)

IP Interface

Primary and secondary Ethernet electrical	100BaseT Ethernet
IP address allocation	DHCP dynamic IP addressing Static IP
Video and audio	Multicast VLC compatible
Streaming format	RTSP support

Store and Forward Options*

Storage format	SD card interface (Secure Digital card)
Record options	Continuous or triggered (Milestone)
Files download	From web browser interface/RTSP
Video/audio clip size	30 seconds

Open Audio Comms Channel (shared voice channel)

Multi-user audio comms channel	Interface microphone level/headphone o/p
Compression	G726 32kbit audio 8KHz sampling and mute

Encryption

Type	DES as standard, AES128 or AES256 (both optional)
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GPS

Dedicated GPS interface	RS232/RS485
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Data Interface

RS232/RS485 data input (shared with user camera control)	1K2 to 115K2 baud switchable with UDP and TCP routing protocol
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Control

Local control	LEDs power and mesh status
Remote control	Mission Commander PC application. Full control of all parameters in a map based application. Web browser control.

Physical

Dimensions	H 78mm, W 145mm, D 309mm
Mounting options - base	M5 blind holes on base and 5mm dia. through holes on flange
Weight	2.56kg

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Technical Specification (con't):

Power

DC input	12-14V
Power consumed	60W max
Output power 5W	+37 to 10dBm in 0.25dB steps (+/-1dB)

Environment

Temperature range	-20° to 50°C (-4° to 122°F)
Sealing	IP66 Minimum

Frequency

034047*	340-470MHz
114140	1.14-1.50GHz
200250*	2.00-2.50GHz
440500*	4.40-5.00GHz

Licensing Options

AES128NN	128bit AES Encryption
AES256NN	256bit AES Encryption

*Will be supported in future releases

Export of encrypted products is subject to United Kingdom regulatory export controls.

For further information contact your Sales Account Manager, one of our Regional Sales Offices, or email solent.enquiries@domotactical.com

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