

# NETNode10W-4R

## NETNode IP Mesh Radio Phase 4 (Robust) - 10W

### 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 can occupy just 1.25MHz of bandwidth (1.5, 1.75, 2.5, 3.0, 3.5, 5.0, 6.0, 8.0 and 10MHz are 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 IP 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.



### Product Information:

#### Product Includes

CA0406*	Control and data cable 2m
CA2240*	Microphone/headphone and control/debug cable 1m
CA3229	Screened XLR power/Ethernet cable (see options)
CA3256	Short bananas to XLR power cable

\*UHF variants are supplied with screened cables - see options

#### Accessory Options (sold separately)

AP000481	UK IEC power supply cable for use with CA0649
AP001483	US IEC power supply cable for use with CA0649
AP004634	EU IEC power supply cable for use with CA0649
AP007192	AU IEC power supply cable for use with CA0649
CA0649	12VDC power supply unit - for use with CA3229
CA2581	Control & data screened cable 2m
CA2585	Microphone/headphone and control/debug screened cable 1m
CA3185	GPS and talkback cable
CA3254	5m XLR to XLR extension for use with CA3229
CA3255	10m XLR to XLR extension for use with CA3229
Mission Commander	Tactical for desktop/tablet or Strategic client/server application - refer to datasheets
NETR-MB	NETNode Robust mounting bracket

#### Related Documents

100275	NETNode Phase 4 User Guide
Available on DTC website	Maritime IP Mesh Brochure
Available on DTC website	Maritime Mesh Networking White Paper

### Features and Benefits:

10W transmit power

COFDM waveform for excellent NLOS & multipath performance

Flexible RF channel bandwidths (1.25 to 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 optional subject to Export Control)

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### Technical Specification:

#### Interfaces

RF interfaces	N-type x 3
Power and Ethernet	Amphenol 38999 Series 3
Control and misc I/O	Amphenol 38999 Series 3

#### Typical Range

Line of sight	130km+
Light urban	Circa 5km

#### RF Interfaces

Antenna - Rx A	Receive port (channel A)
Antenna - Tx	Transmit port
Antenna - Rx B	Receive port (channel B)

#### RF and Modulation

Tuning step size	125kHz step
Output power	+40dBm to +10dBm in 0.25dB steps (+/-1dB)
Bandwidth	1.25, 1.5, 1.75, 2.5, 3.0, 3.5, 5.0, 6.0, 7.0, 8.0, 10.0MHz
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	100BaseT Ethernet
IP address allocation	DHCP dynamic IP addressing or fixed IP
Video and audio	Multicast VLC compatible
Streaming format	RTSP support

#### Store and Forward Options

Storage format	SD card interface
File download	From web browser interface
Video/audio clip size	30 seconds

#### Open Audio Comms Channel (shared voice channel)

Multi-user audio comms channel	Interface microphone level/headphone output
Compression	G.726 32kbit audio 8KHz sampling and mute

#### Encryption

DES	Standard
AES128/AES256	Licensed (subject to export control)

#### GPS

Dedicated GPS interface	RS232/RS485
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#### Data Interface

RS232/RS485 data input (shared with 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	Web browser control or Mission Commander

#### Power

DC input	12-14V
Power consumed	60W max

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### Technical Specification (con't):

#### Physical

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

#### Environment

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

#### Frequency

034047	340-470MHz
114140	1.14-1.40GHz
200250	2.00-2.50GHz

#### Licensing Options

AES128NN	128bit AES Encryption
AES256NN	256bit AES Encryption

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](mailto:solent.enquiries@domotactical.com)

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