

PodNode-R

Robust Ad-Hoc IP MESH COFDM Video Surveillance



- ✓ Ad-Hoc MESH Network
- ✓ Rapidly Deployable Wireless Surveillance System
- ✓ Robust Reliable Wireless IP network
- ✓ Ruggedised Design
- ✓ Instant Ad-Hoc Networks
- ✓ Non Line of Sight
- ✓ Operates Between Fast Moving Vehicles
- ✓ High Data Rates Suitable for HD Video



The PodNode-R MESH video surveillance system is a powerful addition to any wireless communication surveillance system. Each PodNode in the same network automatically connect to other PodNode based equipment to create a self-healing, mobile and dynamic surveillance mesh network. Each PodNode-R automatically routes video, voice and data around the wireless network, and may easily be configured to operate without user intervention. This makes the system ideal for static or vehicle mounted scenarios. PodNode-Rs are supported by our extensive and powerful range of video cameras.

Using Rinicom's proprietary COFDM modulation, PodNode technology provides robust RF communication in a variety of harsh environments. Multiple PodNodes as part of the same network naturally expand the range of the overall network.

The PodNode-R operates both in mobile and fixed deployments. Typical fixed deployments include first responders and rapidly deployable surveillance networks. Mobile applications include vehicle mounted convoy applications and advanced ground robot control. Units may be left unattended or solar powered and enabled remotely.

Each PodNode-R in a network may be controlled remotely through Rinicom's web interface, allowing the network operator to control the PodNode independently, or simply to monitor the network status. With or without operator control, a PodNode network 'simply works'. Networked PodNodes automatically connect to other PodNode-Rs to create a self-healing, ad-hoc, mobile and dynamic surveillance mesh network. Each PodNode-R automatically routes video, voice and data around the wireless network, and may easily be configured to operate autonomously. This makes the system ideal for static or vehicle mounted scenarios.

For high quality standard definition video, the H.264 enabled PodNode-R-SD offers superb quality with low latency. For full high definition video transmission, the PodNode-R-HD offers the ability to transmit multiple HD video streams.

The PodNode-R is based on Rinicom's robust COFDM IP MESH PodNode technology, and is fully compatible with other PodNode MESH products in the range.



PodNode-R Datasheet

Connectors

Camera	12 pin female (Neutrik MRF12)
Network / Aux	12 pin male (Neutrik MRM12)
RF connectors	N-Type female
Battery	4 pin male (Binder 99 9207 00 04)

RF Interfaces

Antenna 1	TDMA transmit and receive
RF frequency	UHF, L-Band, S-Band
Frequency tuning	1MHz
Modulation	COFDM
Subcarrier modulation	QPSK, 16 QAM, 64 QAM (adaptive)
Output power	+30dBm (1W) Max
Output power tuning	0.5dB steps
Bandwidth	5 to 20 MHz
Bandwidth tuning	1 MHz
MESH capacity	Up to 50 Mbps

Video Encoder (PodNode-R-SD)

Video compression	MJPEG / H.264 (MPEG-4 Part 10/AVC)
Resolutions	167x120 to 720x576
Frame rate H.264	30/25 (NTSC/PAL) fps in all resolutions
Frame rate motion JPEG	30/25 (NTSC/PAL) fps in all resolutions
Audio streaming	Two way, full duplex
Audio compression	AAC-LC 8kHz 32 kbit/s, 16kHz 64 kbit/s, G.711 PCM 8kHz 64 kbit/s, G.726 ADPCM 8 kHz 32 or 24 kbit/s

System Status

LED 1	Ethernet activity
LED 2	MESH link
LED 3	Power on
LED 4-6	RF transmit power

Physical

Dimensions	202 mm x 120 mm x 56 mm
Weight (excl. battery)	1047g
Weight (incl. battery)	1618g
Enclosure	IP rated
Mount	Free standing/tripod mount
Temperature	-10°C to +45°C
Operating humidity	0 to 90%

Battery

Weight	571g
Voltage	14.8V
Capacity	6Ah
Duration	up to 4 hours
Fixing	Clip in

Power

DC input	9-16VDC
Power consumption @ 1W	22W Max (PodNode-R-SD)

System Control

Unit power	On/off button
RF power	Through web interface and button
Node control	Through web interface
Frequency control	Through web interface
Encryption control	Through web interface

MESH

Number of nodes	Up to 12
MESH configuration	Ad-hoc, P2MP, P2P
Routing	Smart routing

Accessories & Compatible Products

Additional Battery
Ethernet Interface Cable
Audio/Video Cable
Gooseneck Camera
eyeQuad Camera
PodNode-I
PodNode-Mini
PodComm
IP camera
H.264 encoder

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