Phantom II™

902-928 MHZ IP RADIO MODEM FOR LICENSE-FREE SPECTRUM

CalAmp®

High-Speed Data Connectivity for Industrial and Utility Applications

The Phantom II delivers secure, wireless connectivity in the license-free 902-928 MHz ISM band utilizing Frequency Hopping Spread Spectrum (FHSS) technology. Operational as a master, remote or repeater in a single unit, Phantom II offers extraordinary data throughput for point-to-point, point-to-multipoint and peer-to-peer networks. Typical uses include SCADA, industrial automation or any other data collection applications.

Featuring two serial ports, one Ethernet port and one USB connection, Phantom II provides connectivity between Ethernet and serial devices. This IP modem not only delivers wireless communications between a base station and multiple remotes, it also functions as a high-speed, transparent bridge between two Ethernet networks.

Phantom II features extensive system capabilities with full VLAN support (for separate management and data networking), user interface through local console, telnet, and web browser, and network management with SNMP V1, V2, and V3. And, assuring the best level of performance for each application, Quality of Service (QoS) is available for IP protocols and ports.

Experience
The Advantage

- Up to 1.2 Mbps wireless link rate
- Low power consumption
- Master, Remote, Repeater in one unit
- 2 serial ports , 1 USB port, and 1 Ethernet Port
- Supports Point-to-Point, Point-to-Multipoint, Repeater , and Peer-to-Peer
- Full VLAN support
- Supports SNMP V1,V2,V3
- QoS support for both serial and IP traffic
- 100 mW - 1 W adjustable Tx power
- Local and remote firmware upgrading through FTP
- RADIUS server support

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Phantom II Specifications

General

Frequency Range	902-928 MHz (US & Canada), 915-928 MHz (Australia), 921-929 MHz (New Zealand)
Spread Method	Frequency Hopping / DTS
Error Detection	32-bit CRC, ARQ
Modulation	RCFSK
Encryption	128/256-bit AES/WEP/WPA (US & Canada)
Network Protocols	TCP, UDP, TCP/IP, TFTP, ARP, ICMP, DHCP, HTTP, HTTPS, SSH, SNMP, FTP, DNS, Serial over IP, QoS
Management	Local Serial, Telnet, WebUI, SNMP, FTP Wireless Upgrade, RADIUS, VLAN
Certifications	FCC, IC, CSA Class 1 Div 2

Receiver

BER @ 1x10-6	-101 dBm @ 345 kbps; -97 dBm @ 1.2 Mbps

Transmitter

Carrier Output Power	100 mW - 1 W (20-30 dBm)

Electrical

Tx Current	350-500 mA
Rx Current	110-145 mA
Idle	35 mA
Sleep	< 1 mA
Primary Power	7-30 VDC

Mechanical

Nominal Dimensions	3.75 W x 1.75 H x 2.25" D, (95 x 45 x 57 mm)
Shipping Weight	8 oz, (237 g)

Environmental

Operating Temperature	-40° to +85° C
Operating Humidity	5% to 95% Non-condensing

Interfaces

Ethernet	10/100 BaseT Auto-MDIX RJ-45
Serial COM 1, COM 2	RS-232, RS-485, RS-422 DB-9
USB	Mini USB 2.0
Antenna	RP-TNC Female Bulkhead (Tx/Rx)
LEDs	RSSI, Tx, Rx, Status, Config

Phantom II Base Stations are available in three models: Standard, Repeater and Redundant.

Each Base Station has a main controller PC board which is accessible via HTML web pages. Access the Controller's web pages to configure the user programmable settings and to view the status of the Base Station.

Rugged Packaging. The Phantom II Base Station is housed in a rugged, 19" rack mountable, aluminum case. Built for industrial applications in a variety of environments, the Phantom II Base Station operates over an extended temperature range and provides worry-free operation in the harshest environments.

Flexible Management. Configuration, commissioning, maintenance and troubleshooting can be done locally or remotely. All operating parameters can be set via a web browser.

CalAmp's industrial wireless solutions combine utility-class performance and the proven reliability needed for mission critical communications. Our ruggedized line of licensed, unlicensed, and cellular devices provide narrowband, wideband and broadband data connectivity for fixed and mobile applications.

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