

# PLUS Radios

## HT High Speed Ethernet 900 MHz Industrial Radio



HT-PE



HT-P

### KEY FEATURES

**Outstanding RF Performance:**  
Maintains high receiver sensitivity and noise immunity even in harsh RF conditions

**High Speed:** Up to 867 kbps over-the-air throughput

**Secure:** FHSS technology and AES encryption prevent unauthorized access

**Synthesized Waveform Transmit Data:** Reduces out-of-band modulation products

**Error Free Communications:** 32 bit CRC with automatic retransmission

**Versatile:** Operates as a Gateway, Repeater, or End Point

**Backward Compatible:** 100% compatible with existing 900 MHz FreeWave HTPlus radios

**Input Voltage Range:** +6 to +30 VDC

**UL Approved:** Class 1 Division 2

### OVERVIEW

The HT-PE and HT-P, high speed Ethernet radios, provide outstanding mission critical communications even in RF harsh environments. With two 10/100 Ethernet ports and two serial ports, the HT Ethernet radios easily interface with a broad range of in-field-devices - RTUs, PLCs and Controllers. Air link security has also been designed into the HT radios with AES encryption of data and a frequency hopping transceiver. These radios have a ruggedized enclosure and an industrial temperature range making them a perfect choice for industrial 900MHz data networks. HT Ethernet radios can operate as Gateways, Repeaters and End Points simplifying ordering, stocking and installation.

All radios are designed, manufactured and tested in Boulder, CO.

### Specifications

MODEL	FORM FACTOR	OPTIONS
HT-PE	6.8 L x 3.8 W x 1.4 H (in)	Enclosed
HT-P	7 L x 3.25 W x 1.25 H (in)	Board Level

# TECHNICAL SPECIFICATIONS

## TRANSMITTER

Frequency Range	902 to 928 MHz (FHSS/FCC DTS)
Output Power	5 mW up to 870 mW
Data Link Range	15 miles, clear LOS, high speed 30 miles, clear LOS, standard speed
Modulation	2 level GFSK
RF Data Rate	614 kbps standard speed 867 kbps high speed
Occupied Bandwidth	611.2 kHz
Hopping Patterns	15 per band, 105 total, user-selectable
Hopping Channels	41
Frequency Zones	16 zones, 2-3 channels per zone

## RECEIVER

Sensitivity	-102 dBm for BER 10 <sup>-6</sup> at 614 kbps -96 dBm for BER 10 <sup>-6</sup> at 867 kbps
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## DATA TRANSMISSION

Error Detection	32 bit CRC, retransmit on error
Data Security	AES 128 bit encryption FHSS technology RADIUS
Serial Interface	RS232/RS422/RS485, programmable (2) RJ-45 connectors
Ethernet Interface	802.3, IPv4, TCP, UDP, DHCP, ICMP, ARP, Multicast, TFTP, DNP3 over TCP, VLAN (2) 802.3u, Fast Ethernet, RJ-45

## POWER REQUIREMENTS

Operating Voltage	+6 VDC to +30 VDC
Typical Power	Transmit: 6.6 W Receive: 1.7 W Idle: 0.8 W

## GENERAL INFORMATION

Operating Temperature	-40°C to +75°C
Humidity	Up to 95% non-condensing
Dimensions	Board Level: 178 x 83 x 32 (mm) Enclosed: 173 x 97 x 36 (mm)
Weight	Board Level: 227 g Enclosed: 635 g
RF Connector	Board Level: SMA, Female Enclosed: TNC, Female
Certifications	FCC Part 15.247 / IC RSS-210 UL Class 1, Division 2

## APPLICATIONS



OIL & GAS

AGRICULTURE

UTILITIES

DEFENSE

SCADA

MINING

FLEET  
MANAGEMENT

MUNICIPAL

ENTERPRISE

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