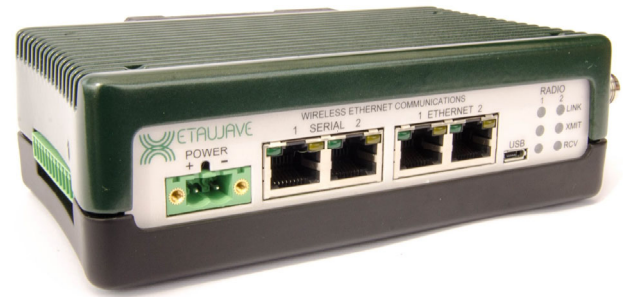


1.3 GHz Ethernet *Software Defined Industrial Radio*

The **Xeta13 Ethernet radio** is an extremely capable and flexible industrial Frequency Hopping Spread Spectrum (FHSS) and Digital Transmission System (DTS) software defined radio. The module utilizes a XetaWave patent pending **Dual Decode Digital Architecture™** that offers significant receiver performance.

The **Xeta13** supports multiple modulation schemes and features that can selectively switch the modulation scheme to achieve optimal data throughput given the available channel size and environmental noise.



The **MultiSpeed MultiPoint™** mode enables Endpoints operating at different over-the-air data transfer rates to communicate with an Access Point over the same network. Simultaneous transmissions within a network using the new **XetaMESH** feature increases the aggregate throughput while supporting peer to peer communications.

Key Features

High Speed Over-the-air data transfer rates from 57 kbps to 4.4 Mbps.

Selective Modulation Multiple MSK, FSK, PSK, and QAM modulations.

Dual Mode Frequency hopping and single channel operations.

Adjustable RF Output 100 mW to 5 Watts (+20 to +37 dBm) RF output.

Secure Over-the-air data encryption using 128-bit and 256-bit AES.

Network Types Point to Point, Point to Multipoint, CSAM Peer to Peer, and XetaMESH.

MultiSpeed Multipoint Access Point communicates with Endpoints operating at different RF data rates.

XetaMESH Provides peer to peer communications within a point to multipoint network.

Xeta13 Specifications

Transmitter

Frequency Range	1.35 to 1.39 GHz
RF Output Power	0.10 to 5 Watts
Modulation	MSK, 2FSK, BPSK, QPSK, 8PSK, 16PSK, 16QAM, 32QAM
RF Data Rate	57 kbps to 4.4 Mbps
Occupied Bandwidth	76 kHz to 1.2 MHz
Frequency Stability	1.0 ppm

Data Transmission

Data Interface	Ethernet & RS232/422/485 Serial
Data Connector	RJ45 (4)
Data Interface Rate	10/100 Mbps (Ethernet) Up to 230.4 kbps (Serial)
Data Encryption	128 & 256-bit AES
Error Handling	CRC, FEC, Retransmit on error
Error Correction	Goley, Small Block, Reed-Solomon
RF Connector	TNC / 50 Ohms

Networking

Protocols	TCP, UDP, ARP, DHCP, NTP, FTP, ICMP, HTTP, & HTTPS
Management	Web GUI, SNMP v1, v2, & v3
Serial	TCP/UDP Server, TCP Client,
VLAN	802.1q VLANs and trunks
Features	IP Routing, Net Filter, NAT, Port Forwarding, Modbus TCP/RTU Bridging, Data Concentrator, PLC, Wire Replacement, XetaMESH

Ordering (other variants available)

XETA13-22NMLRA	Metal Enclosed, 2 Ethernet & 2 Serial, Linux
XETA13-22NMLRA-IO	Metal Enclosed, 2 Ethernet & 2 Serial, 8 IO, Linux

Receiver

Channel Size	Sensitivity	Data Rate	Modulation
76 kHz	-110 dBm	57 kbps	MSK
154 kHz	-108 dBm	114 kbps	MSK
207 kHz	-107 dBm	153 kbps	MSK
310 kHz	-104 dBm	229 kbps	MSK
600 kHz	-100 dBm	530 kbps	BPSK
	-91 dBm	1.59 Mbps	8PSK
	-85 dBm	2.12 Mbps	16QAM
	-81 dBm	2.65 Mbps	32QAM
900 kHz	-98 dBm	663 kbps	2FSK
1.2 MHz	-98 dBm	884 kbps	BPSK
	-96 dBm	1.76 Mbps	QPSK
	-90 dBm	2.65 Mbps	8PSK
	-83 dBm	3.53 Mbps	16PSK
	-85 dBm	3.53 Mbps	16QAM
	-81 dBm	4.41 Mbps	32QAM

Power

Input Voltage	+15 to +32 Vdc
Transmit Current	1.6 A @ +24 Vdc
Receive Current	145 mA @ +24 Vdc
Power Connector	2-pin Phoenix

Environmental / Physical

Op. Temperature	-40°C to +75°C
Humidity	95% @ +40°C non-condensing
Dimensions	6.62" x 3.45" x 1.83" (L x W x H)
Weight	700 grams