Xeta4B

400 MHz FCC/IC Ethernet
Software Defined Industrial Radio

The **Xeta4B Ethernet radio** is an extremely capable and flexible industrial software defined radio. The **Xeta4B** Ethernet radio is offered with an option to include 8 programmable inputs and outputs. The **Xeta4B** is based on the XetaWave patent pending **Dual Decode Digital Architecture™** that offers significant receiver performance.

The **Xeta4B** supports multiple modulation schemes and features that can selectively switch to achieve optimal data throughput given the available channel size and environmental noise.

MultiSpeed MultiPoint™ mode enables Endpoints operating at different over-the-air data transfer rates to communicate with an Access Point over the same network. The new **Enhanced MultiPoint**, **XetaEMP**, mode provides an increase in throughput and decreased in latency over our standard modes and against competitive products.

Key Features

High Speed Over-the-air data transfer rates from 10 kbps to 91 kbps and increased throughput with the **XetaEMP** mode.

Selective Modulation Multiple MSK, PSK, and QAM modulations.

Dual Mode Duplex and single channel operations.

Network Types Point to Point, Point to MultiPoint, CSMA peer to peer, and Enhanced MultiPoint.

Adjustable RF Output 50 mW to 8 Watts (+17 to +39 dBm) RF output.

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

MultiSpeed Multipoint Access Points communicate with Endpoints operating at different RF Data Rates.

XetaEMP Additional new protocol with increased throughput and decreased latency.

Xeta4B Specifications

Transmitter

Frequency Range	450 to 470 MHz
RF Output Power	0.50 to 8 Watts
Modulation	MSK, QPSK, 8PSK, 16QAM 32QAM, 64QAM
RF Data Rate	10 kbps to 91 kbps
Occupied Bandwidth	12.5 & 25 kHz
Frequency Stability	1.0 ppm

Data Transmission

Data Interface	Ethernet & RS232/422/485 Serial
Data Connector	RJ45 (2 Ethernet & 2 Serial)
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, XetaEMP

Receiver

Channel Size	Sensitivity	Data Rate	Modulation
12.5 kHz	-115 dBm	10 kbps	MSK
	-104 dBm	20 kbps	QPSK
	-100 dBm	31 kbps	8PSK
	-95 dBm	41 kbps	16QAM
	-91 dBm	51 kbps	32QAM
	-90 dBm	61 kbps	64QAM
25 kHz	-114 dBm	18 kbps	MSK
	-107 dBm	29 kbps	QPSK
	-101 dBm	44 kbps	8PSK
	-98 dBm	59 kbps	16QAM
	-95 dBm	76 kbps	32QAM
	-89 dBm	91 kbps	64QAM

Power

Input Voltage	+12 to +32 Vdc
Transmit Current	2.6 A @ +12 Vdc
Receive Current	300 mA @ +12 Vdc
Power Connector	2-pin Phoenix

Environmental / Physical

Op. Temperature	-40°C to +75°C
Humidity	95% @ +40°C non-condensing
Safety	UL Class 1 Div 2
Dimensions	6.62" x 3.45" x 1.83" (L x W x H)
Weight	700 grams

Ordering (other variants available)

XETA4B-22MMLFA	Metal Enclosed, 2 Ethernet & 2 Serial, Linux
XETA4B-22MMLFA-IO	Metal Enclosed, 2 Ethernet & 2 Serial, 8 IO, Linux

Specifications subject to change without notice.　　　　　2.2020

XETAWAVE
CUSTOM RF SOLUTIONS