

Xeta4 Linux

400 MHz FCC/IC Ethernet Software Defined Industrial Radio

The **Xeta4 Linux Ethernet radio** is an extremely capable and flexible industrial software defined radio. The **Xeta4** Ethernet radio is offered with an option to include 8 programmable inputs and outputs (I/O). The **Xeta4** is based on the XetaWave patented **Dual Decode Digital Architecture™** that offers optimal receiver performance.

The **Xeta4** 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 5 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, 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 New protocol with increased throughput and decreased latency.

Xeta4 Linux Specifications

Networking

Protocols	IEEE 802.3, TCP, UDP, ARP, DHCP, NTP, FTP, ICMP, HTTP, HTTPS, Multicast SNMP
Management	Web GUI, SNMP v1, v2, & v3
Serial	TCP/UDP Server, TCP Client, Modbus RTU Server
VLAN	802.1q VLANs and trunks, QoS
Features	IP Routing, Net Filter, NAT, Port Forwarding, Modbus TCP/RTU Bridging

Data Transmission

Data Interface	Ethernet & RS232/422/485 Serial
Data Connector	RJ45 (4)
Data Interface Rate	10/100 Mbps Base-T (Ethernet) Up to 1 Mbps (Serial)
Data Encryption	128 & 256-bit AES
Error Handling	CRC, FEC, Retransmit on error
Error Correction	Goley, Small Block, Reed-Solomon
Operating Modes	Point to Point, Point to MultiPoint, Enhanced MultiPoint, CSMA Peer to Peer
Compression	Low, Medium, High

Transmitter

Frequency Range	406 to 430 & 450 to 470 MHz
RF Output Power	50 mW to 8 Watts
Modulation	MSK, QPSK, 8PSK, 16QAM 32QAM, 64QAM
RF Data Rate	5 kbps to 91 kbps
Occupied Bandwidth	6.25, 12.5, 25 & 50 kHz
Frequency Stability	1.0 ppm

Receiver

Channel Size	Sensitivity	Data Rate	Modulation
6.25 kHz	-112 dBm	5 kbps	MSK
	-115 dBm	10 kbps	MSK
	-104 dBm	20 kbps	QPSK
12.5 kHz	-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

50 kHz Channel Size also Available



Xeta4 Linux Specifications

Interfaces

Power Connector	2-pin Phoenix
Input Voltage	+12 to +32 Vdc
RF Connector	TNC / 50 Ohms

Power

Transmit	2.6 A @ +12 Vdc
Receive	300 mA @ +12 Vdc
Idle	176 mA @ +12 Vdc

Environmental / Physical

Op. Temperature	-40°C to +75°C (ISM) -40°C to +60°C (MAS)
Humidity	95% @ +40°C non-condensing
Safety	UL Class 1 Div 2
Dimensions (LxWxH)	6.62" x 3.45" x 1.83"
Weight	700 grams

Ordering (other versions available)

XETA4-22MMLFB	Metal Enclosed, 2 Ethernet & 2 Serial
XETA4-22MMLFB-IO	Metal Enclosed, 2 Ethernet & 2 Serial , 8 IO
XETA4B-22MMLFB	Metal Enclosed, 2 Ethernet & 2 Serial, 450-470 MHz
XETA4B-22MMLFB-IO	Metal Enclosed, 2 Ethernet & 2 Serial, 8 IO, 450-470 MHz
XETA4X4-22MMLFB	Metal Enclosed, Dual Radio, 2 Ethernet & 2 Serial
XETA4BX4B-22MMLFB	Metal Enclosed, Dual Radio, 2 Ethernet & 2 Serial, 450-470 MHz

