

The **Xeta24 Linux 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 patented **Dual Decode Digital Architecture™** that offers unsurpassed receiver performance.

The **Xeta24** 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 RF power output from 10 mW to 1 Watt (+10 to +30 dBm).

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

Network Types Point to Point, Point to Multipoint, Enhanced MultiPoint, CSMA 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.

Xeta24 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 (2 or 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, XetaMESH, CSMA Peer to Peer
Compression	Low, Medium, High

Transmitter

Frequency Range	2.402 to 2.483 GHz
RF Output Power	10 mW to 1 Watt
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

Receiver

Channel Size	Sensitivity	Data Rate	Modulation
76 kHz	-110 dBm	57 kbps	MSK
154 kHz	-107 dBm	114 kbps	MSK
207 kHz	-106 dBm	153 kbps	MSK
310 kHz	-103 dBm	229 kbps	MSK
600 kHz	-98 dBm	530 kbps	BPSK
	-99 dBm	1.06 Mbps	QPSK
	-96 dBm	1.59 Mbps	8PSK
	-91 dBm	2.12 Mbps	16QAM
	-85 dBm	2.65 Mbps	32QAM
	1.2 MHz	-100 dBm	884 kbps
-96 dBm		1.76 Mbps	QPSK
-90 dBm		2.65 Mbps	8PSK
-84 dBm		3.53 Mbps	16PSK
-85 dBm		3.53 Mbps	16QAM
-80 dBm		4.41 Mbps	32QAM



Xeta24 Linux Specifications

Interfaces

Power Connector	2-pin Phoenix
Input Voltage	+10 to +32 Vdc
RF Connector	TNC / 50 Ohms

Power

Transmit	335 mA @ +12 Vdc
Receive	290 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" (metal)
	5.5" x 3.5" x 1.5" (plastic)
Weight	700 grams (metal)
	182 grams (plastic)

Ordering

XETA24-22IMLFC	Metal Enclosed, 2 Ethernet & 2 Serial, Linux
XETA24-22IMLFC-IO	Metal Enclosed, 2 Ethernet & 2 Serial, 8 IO, Linux
XETA24X24- 22IMLFC	Metal Enclosed Dual Radio, 2 Ethernet & 2 Serial, Linux
XETA24-22IPLFC	Plastic Enclosed, 2 Ethernet & 2 Serial

