

XetaEdge4

Linux Edge Computer Software Defined Industrial Radio



The **XetaEdge4** combines the **XetaEdge** and **Xeta4** to provide an extremely capable and flexible industrial Edge Computing application device with built-in 400 MHz software defined radio. The **XetaEdge4** is compatible with the Xeta4 family of radios and is Class 1 Div 2 certified.

The **XetaEdge4** is 100% open source allowing quick and simple hosting of many existing or new applications like the **AUTOSOL eACM** and the **Inductive Automation Ignition Edge** to offer multiple protocols to interact with exiting devices like flow meters, ROCs, and PLCs while reducing bandwidth needs with the use of the **MQTT** protocol.

The **XetaEdge4** supports multiple modulation schemes with auto configuration, **MultiSpeed MultiPoint™** mode, and **Enhanced MultiPoint, XetaEMP**, mode providing an increase in throughput and decrease in latency over our standard modes and against competitive products.

Key Features

High Speed Over-the-air data rates from 5 kbps to 91 kbps.

Dual Mode Duplex and single channel operations.

Networks Point to Point, Point to MultiPoint, Enhanced MultiPoint, CSMA peer to peer.

Industrial Safe C1D2 certified and operating temperature of -40°C to +75°C.

Memory Capacity Host applications with 1 GB RAM and 4 GB Flash plus a micro SD slot.

Apps AUTOSOL eACM and Ignition Automation Ignition Edge installations available.

Open Source Utilize existing Linux applications or host new ones developed in Java, Python, Node-RED, Ruby, Perl, and many more.

XetaEdge4 Specifications

Processing

CPU	1 GHz ARM Cortex-A8
OS	Linux Debian
RAM / Flash	1 GB / 4 GB / micro SD slot 8GB & 16GB FLASH Options

Networking

Protocols	IEEE 802.3, TCP, UDP, ARP, DHCP, NTP, FTP, ICMP, HTTP, HTTPS
Management	Web GUI
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
		20 kbps	QPSK
	-100 dBm	31 kbps	8PSK
	-95 dBm	41 kbps	16QAM
	-91 dBm	51 kbps	32QAM
12.5 kHz	-90 dBm	61 kbps	64QAM
	-114 dBm	18 kbps	MSK
		29 kbps	QPSK
	-107 dBm	44 kbps	8PSK
	-98 dBm	59 kbps	16QAM
	-95 dBm	76 kbps	32QAM
25 kHz	-89 dBm	91 kbps	64QAM

50 kHz Channel Size also Available

Specifications subject to change without notice. 6.2021



XetaEdge4 Specifications

Interfaces

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

Power

Transmit	2.5 A @ +12 Vdc
Receive	190 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 variants available)

XETAEC4-22MMDFB	Metal Enclosed, 2 Ethernet & 2 Serial
XETAEC4-22MMDFB-IO	Metal Enclosed, 2 Ethernet & 2 Serial , 8 IO
XETAEC4B-22MMDFB	Metal Enclosed, 2 Ethernet & 2 Serial, 450-470 MHz
XETAEC4B-22MMDFB-IO	Metal Enclosed, 2 Ethernet & 2 Serial, 8 IO, 450-470 MHz
XETAEC4X4-22MMDFB	Metal Enclosed, Dual Radio, 2 Ethernet & 2 Serial
XETAEC4BX4B-22MMDFB	Metal Enclosed, Dual Radio, 2 Ethernet & 2 Serial, 450-470 MHz

