



*Plastic & metal
enclosures available*

The **XetaEdge9** combines the **XetaEdge** and **Xeta9** to provide an extremely capable and flexible industrial Edge Computing application device with built-in 900 MHz Frequency Hopping Spread Spectrum (FHSS) and Digital Transmission System (DTS) software defined radio. The **XetaEdge9** is compatible with the Xeta9 family of radios in the ISM and MAS band and is Class 1 Div 2 certified.

The **XetaEdge9** 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 **XetaEdge9** supports multiple modulation schemes with auto configuration, **MultiSpeed MultiPoint™** mode, and simultaneous peer to peer transmission within a network using **XetaMESH**.

Key Features

High Speed Over-the-air data rates from 10 kbps to 4.4 Mbps.

Dual Mode Frequency hopping and single channel operations in the 902 to 928 MHz unlicensed ISM band.

Networks Point to Point, Point to MultiPoint, Enhanced MultiPoint, CSMA Peer to Peer, and XetaMESH.

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.

XetaEdge9 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, 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, XetaMESH, CSMA Peer to Peer
Compression	Low, Medium, High

* Frequency Range may vary by Country, for example

Australia, Peru	916-928 MHz
Brazil	902-907 & 916-928 MHz

ISM Transmitter

Frequency Range	902 to 928 MHz
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

ISM 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	154 kbps	MSK
310 kHz	-103 dBm	229 kbps	MSK
600 kHz	-99 dBm	530 kbps	BPSK
	-91 dBm	1.59 Mbps	8PSK
	-87 dBm	2.12 Mbps	16QAM
	-81 dBm	2.65 Mbps	32QAM
	-98 dBm	663 kbps	2FSK
1.2 MHz	-98 dBm	884 kbps	BPSK
	-95 dBm	1.76 Mbps	QPSK
	-90 dBm	2.65 Mbps	8PSK
	-83 dBm	3.53 Mbps	16PSK
	-86 dBm	3.53 Mbps	16QAM
	-81 dBm	4.41 Mbps	32QAM
RF Selectivity	50 dB		



XetaEdge9 Specifications

Interfaces

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

Power

Transmit	225 mA @ +12 Vdc (ISM)
	395 mA @ +12 Vdc (MAS)
Receive	190 mA @ +12 Vdc (ISM)
	280 mA @ +12 Vdc (MAS)
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)

MAS Transmitter

Frequency Range	928 to 960 MHz
RF Output Power	10 mW to 3 Watts
Modulation	MSK, 4FSK, QPSK, 8PSK, 16QAM, 32QAM, 64QAM
RF Data Rate	210 kbps to 210 kbps
Occupied Bandwidth	12.5, 25 & 50 kHz
Frequency Stability	1.0 ppm

MAS Receiver

Channel Size	Sensitivity	Data Rate	Modulation
12.5 kHz	-115 dBm	10 kbps	MSK
	-102 dBm	19 kbps	4FSK
	-103 dBm	23 kbps	QPSK
	-97 dBm	34 kbps	8PSK
	-93 dBm	45 kbps	16QAM
25 kHz	-89 dBm	57 kbps	32QAM
	-83 dBm	70 kbps	64QAM
	-112 dBm	19 kbps	MSK
	-106 dBm	36 kbps	QPSK
	-100 dBm	52 kbps	8PSK
50 kHz	-93 dBm	87 kbps	32QAM
	-86 dBm	105 kbps	64QAM
	-109 dBm	39 kbps	MSK
	-102 dBm	71 kbps	QPSK
	-97 dBm	101 kbps	8PSK
RF Selectivity	-90 dBm	175 kbps	32QAM
	-84 dBm	210 kbps	64QAM
RF Selectivity	33 dB (12.5 kHz) / 30 dB (25 & 50 kHz)		

Ordering (other variants available)

XETAEC9-22DMDFC	Metal Enclosed, 2 Ethernet & 2 Serial
XETAEC9-22DMDFC-IO	Metal Enclosed, 2 Ethernet & 2 Serial, 8 IO
XETAEC9-22IMDFC	Metal Enclosed, 2 Ethernet & 2 Serial, ISM Only
XETAEC9-22IMDFC-IO	Metal Enclosed, 2 Ethernet & 2 Serial, 8 IO, ISM Only
XETAEC9-22IPDFC	Plastic Enclosed, 1 Ethernet & 1 Serial, ISM Only
XETAEC9-22IPDFC-IO	Plastic Enclosed, 2 Ethernet & 2 Serial, 8 IO, ISM Only

