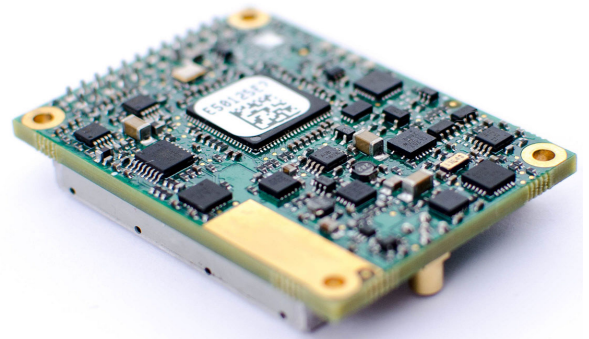


# Xeta9 OEM Module

## *900 MHz Serial Software Defined Industrial Radio*

The **Xeta9 OEM Module** 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 patent pending **Dual Decode Digital Architecture™** that offers significant receiver performance.

The **Xeta9** 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 50 mW to 1 Watt (+17 to +30 dBm).

**Interchangeable** Xeta9 and Xeta24 radio modules are drop in replacements.

**Multi-Speed TDMA** Offers multiple logical data channels with different speeds within a single radio.

**XetaMESH** Provides peer to peer communications within a point to multipoint network.

**Options** Available with TTL or RS232 serial interface, higher RF power output to 5 Watts (+37 dBm), and TDMA.

# Xeta9 OEM Module Specifications

## Transmitter

Frequency Range	902 to 928 MHz
RF Output Power	0.05 to 1 Watt / 5 Watt Option
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	-99 dBm	530 kbps	BPSK
	-91 dBm	1.59 Mbps	8PSK
	-87 dBm	2.12 Mbps	16QAM
900 kHz	-81 dBm	2.65 Mbps	32QAM
	-98 dBm	663 kbps	2FSK
	-98 dBm	884 kbps	BPSK
1.2 MHz	-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

## Ordering

XETA9-TIFC	Board level OEM, TTL interface, 1W
XETA9-RIFC	Board level OEM, RS232 interface, 1W
XETA9-TIFC-TDMA	Board level OEM, TTL interface, 1W, TDMA
XETA9-TIRC-TDMA5W	Board level OEM, TTL interface, 5W, TDMA
XETA9-RIRC-TDMA5W	Board level OEM, RS232 interface, 5W, TDMA

## Data Transmission

Data Interface	Serial TTL or RS232
Data Connector	24-pin Samtec Header
Data Interface Rate	Up to 2 Mbps (TTL) Up to 921.6 kbps (RS232)
Error Detection	32-bit CRC, Retransmit on error
Error Correction	Golay, Small Block, Reed-Solomon
RF Connector	MMCX
RF Impedance	50 Ohms

## Power

Input Voltage	+4.5 to +7.5 Vdc / 1W +9.5 to 10 Vdc / 5W
Transmit Current	< 600 mA @ +7.5 Vdc / 1W < 2.5 A @ +10 Vdc / 5W
Receive Current	< 275 mA @ +7.5 Vdc
Idle Current	< 150 mA @ +7.5 Vdc

## Environmental / Physical

Operating Temperature	-40°C to +75°C
Humidity	95% @ +40°C non-condensing
Safety	UL Class 1 Div 2
Dimensions	2.0" x 1.4" x 0.37" (L x W x H)
Weight	24 grams

