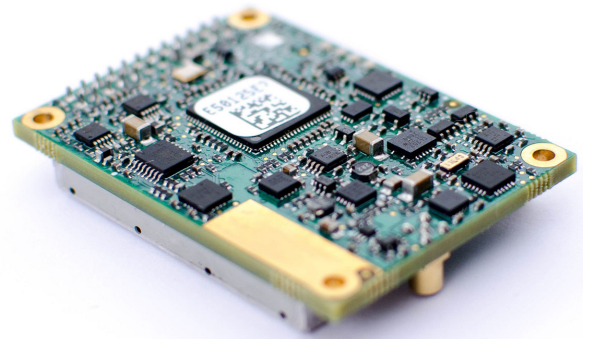


Xeta24 OEM Module

2.4 GHz Serial Software Defined Industrial Radio

The **Xeta24 OEM Module** is an extremely capable and flexible industrial Frequency Hopping Spread Spectrum (FHSS) and Digital Transmission System (DTS) software defined radio (SDR). This module utilizes a XetaWave patent pending **Dual Decode Digital Architecture™** that offers significant receiver performance.

The **Xeta24** supports multiple modulation schemes and features that selectively switches 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 (+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 TDMA or a dual row 14-pin MM2 compatible header.

Xeta24 OEM Module Specifications

Transmitter

Frequency Range	2.402 to 2.483 GHz
RF Output Power	0.01 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	BPSK
	-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

Ordering

XETA24-TIFA	Board level OEM, TTL interface, 24-pin Header
XETA24-TIFA-TDMA	Board level OEM, TTL interface, TDMA, 24-pin Header
XETA24-TIFA-TDMAMM2	Board level OEM, TTL interface, TDMA, 14-pin Header

Data Transmission

Data Interface	Serial TTL
Data Connector	14 or 24-pin Samtec Header
Data Interface Rate	Up to 2 Mbps
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	+3.3 to +12.0 Vdc
Transmit Current	< 800 mA @ +5.0 Vdc
Receive Current	< 150 mA @ +5.0 Vdc
Idle Current	< 90 mA @ +5.0 Vdc
Sleep Current	< 3 mA @ +5.0 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

