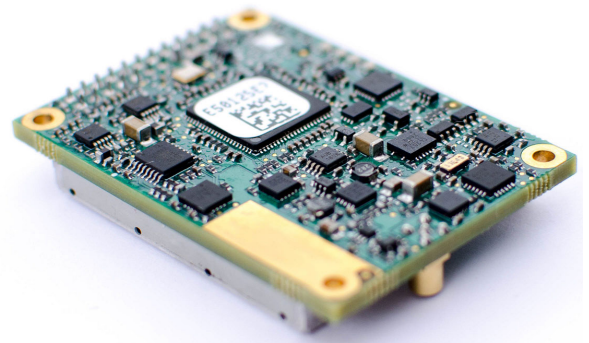


Xeta13 OEM Module

1.3 GHz Serial Software Defined Industrial Radio

The **Xeta13 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 **Xeta13** 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 100 mW to 5 Watts (+20 to +37 dBm) RF output.

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, and TDMA.

Xeta13 OEM Module Specifications

Transmitter

Frequency Range	1.35 to 1.39 GHz
RF Output Power	0.10 to 5 Watts
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	-112 dBm	57 kbps	MSK
154 kHz	-110 dBm	114 kbps	MSK
207 kHz	-109 dBm	153 kbps	MSK
310 kHz	-107 dBm	229 kbps	MSK
600 kHz	-98 dBm	530 kbps	BPSK
	-91 dBm	1.59 Mbps	8PSK
	-87 dBm	2.12 Mbps	16QAM
900 kHz	-81 dBm	2.65 Mbps	32QAM
	-100 dBm	663 kbps	2FSK
	-103 dBm	884 kbps	BPSK
1.2 MHz	-99 dBm	1.76 Mbps	QPSK
	-92 dBm	2.65 Mbps	8PSK
	-82 dBm	3.53 Mbps	16PSK
	-89 dBm	3.53 Mbps	16QAM
	-81 dBm	4.41 Mbps	32QAM

Ordering

XETA13-TORA	Board level OEM, TTL interface
XETA13-RORA	Board level OEM, RS232 interface
XETA13-TORA-TDMA	Board level OEM, TTL interface, 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 / 50 Ohms

Power

Input Voltage	+12 Vdc (TTL)
	+15 to +30 Vdc (RS232)
Transmit Current	< 2.3 A @ +12Vdc
Receive Current	< 70mA @ +12 Vdc
Idle Current	< 3mA @ +12 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 2.0" x 0.37" (L x W x H)
Weight	30 grams

