XETAWAVE
CUSTOM RF SOLUTIONS

Key Differentiators

XetaWave's innovative technology platform offers many unique features including:

Dynamic Modulation Automatically optimizes parameters across three axes – power output, channel size, and modulation. XetaWave radios selectively switch modulation schemes to ensure required throughput given available channel size and noise.

MultiSpeed MultiPoint ™ Enables both high and low speed remotes to operate on the same network using a single access point.

Seamless Serial Allows Ethernet and serial data to be transmitted within a single network. The ability to integrate serial-only sub networks allows for complete flexibility with network design.

Multi-Master Sync (MMS) network synchronization for serial and Ethernet networks precisely controls the transmission timing within a multiple Master network to eliminate self-interference.

Affordable Migration Path for Legacy Networks The Xeta9-INS (for legacy FreeWave radios) and XetaX710 (4710 and 9710 replacement) offer seamless migration paths from legacy ISM technology into next generation, higher performing XetaWave technology.

Founded in 2010, XetaWave is a leading provider of the industry's most advanced, high performing, reliable platform of software defined radios designed for wireless data applications across many industries including oil and gas, electric power, water and wastewater, railroad, environmental, mining, irrigation, traffic, electronic signage, the military, and more. All XetaWave radios are 100% designed, manufactured, and tested at its headquarters in Louisville, Colorado.

Product Offering

- Multi-Speed: 9.6 kbps - 8.8 Mbps
- Global frequency range:
  902-960 MHz Dual Band ISM/MAS, 136-174 MHz, 217-222 MHz, 225-380 MHz, 406-430 MHz & 450-470 MHz, 757-758 & 787-788 MHz, 1.3 GHz, 1.4 GHz, and 2.4 GHz
- Licensed & Unlicensed
- Dual-band/frequency/path
- Board level, module, enclosed
- Ethernet and Serial IO radios
- Data Concentrator

- 10mW to 10W power output
- Two radios in one small enclosure:
  * Dual band
  * Simultaneous Serial & Ethernet
  * Dual Ethernet
  * Back-to-back repeaters
  * Full duplex
- UL Class 1 Div 2 & c-UL approved; ETSI certified
- AES-256 encryption available; FIPS 140-2 validation in progress
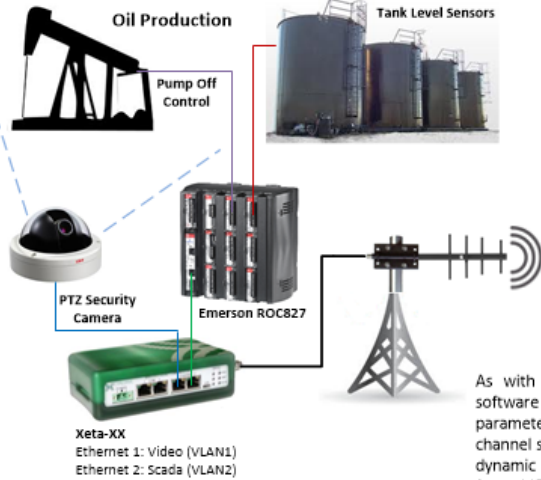- Most stringent production testing in the industry (-55°C)

Superior Customer Service & Support
The team at XetaWave has designed, built and supported over 1,000,000 radios across multiple industries worldwide. XetaWave is committed to providing unsurpassed customer service and support from an initial inquiry through installation and beyond. XetaWave leverages its expertise to guide its customers in the optimal network planning and design, conducts path studies, and guarantees reliability and performance. All XetaWave radios have a 3 year warranty.
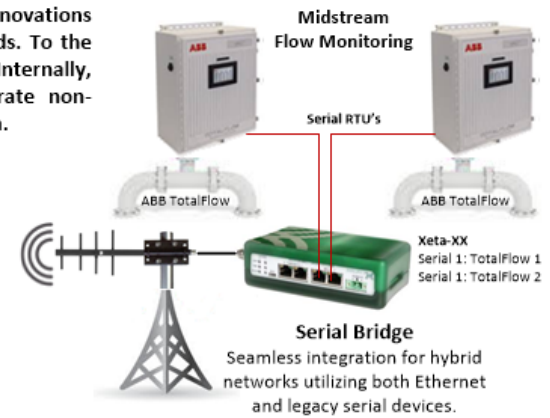
Additional Information
Please contact us at ph: 303.447.2745 or email: sales@xetawave.com and visit our web site at www.xetawave.com.

Oil Production

Tank Level Sensors

The Xeta-XX ("Double X") is XetaWave's newest offering, expanding on its innovations and representing a whole new way of communicating in congested ISM bands. To the user, the Xeta-XX looks like a single radio operating into a single antenna. Internally, theXeta-XX has two independent data channels operating on two separate non-interfering frequencies. Each channel dynamically and transparently sends data.

Midstream Flow Monitoring

Serial RTU's

ABB TotalFlow   ABB TotalFlow

Xeta-XX
Serial 1: TotalFlow 1
Serial 1: TotalFlow 2

Pump Off Control

PTZ Security Camera

Emerson ROC827

902-928MHz ISM 8.8Mbps Dynamic
VLAN Trunk Link - VLAN1, 2

902-928MHz ISM 8.8Mbps Dynamic
VLAN Trunk Link - VLAN2

Serial Bridge
Seamless integration for hybrid networks utilizing both Ethernet and legacy serial devices.

Xeta-XX
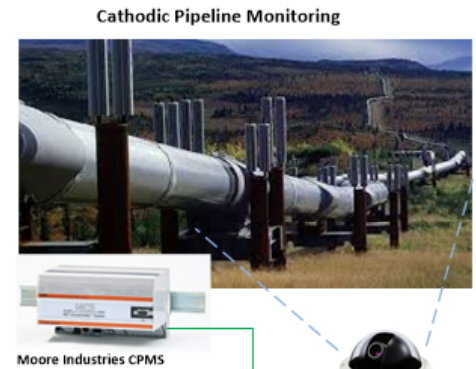Ethernet 1: Video (VLAN1)
Ethernet 2: Scada (VLAN2)

Xeta-XX Repeater

Dynamic Modulation
As with all XetaWave radios, the Xeta-XX is a software defined radio that automatically optimizes parameters across three axes - power output, channel size, and modulation. For the Xeta9-XX, this dynamic modulation allows for data transfer rates from 115 kbps to 8.8 Mbps, power out put from 10mW to 1W, and variable channel sizing from 250 kHz to 1.5 MHz. The Xeta-XX selectively switches modulation schemes to ensure required throughput given available channel sizes and environmental noise. Based on its patent pending Dual Decode Digital Architecture™, XetaWave's technology platform offers performance second to none in the commercial market today.
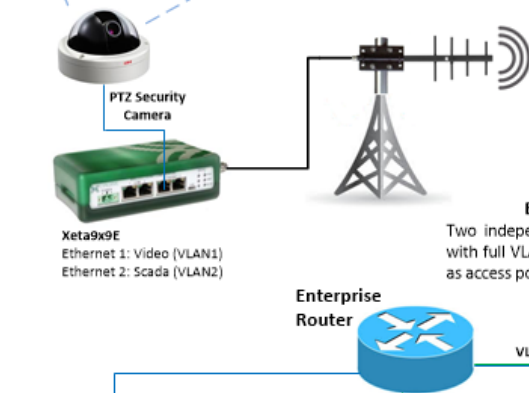
Cathodic Pipeline Monitoring

Repeaters
As a repeater, the Xeta-XX functions as a single radio using a single antenna remote/repeater without causing any degradation in the network bandwidth.

902-928 MHz ISM 8.8Mbp Dynamic
VLAN Trunk Link - VLAN1, 2

Storage Tank Offloading

Multi-Speed TDMA
Unique to XetaWave, a single radio can have multi-logical data channels with different speeds. This allows for the prioritization/trade off of reliability versus speed.

Multiple Frequencies Supported
The Xeta-XX is available as follows: Xeta9-XX for 902-960 MHz, Xeta24-XX for 2.4 GHz, Xeta924-XX that includes both 900 MHz & 2.4 GHz, and Xeta924-XXI which is a 900 MHz & 2.4 GHz in an enclosure with an integrated antenna.

Moore Industries CPMS

PTZ Security Camera

PTZ Security Camera

902-928MHz ISM 8.8Mbps Dynamic
VLAN Trunk Link - VLAN1, 2

902-928MHz ISM 8.8Mbps Dynamic
VLAN Trunk Link - VLAN1, 2

Xeta9x9E
Ethernet 1: Video (VLAN1)
Ethernet 2: Scada (VLAN2)

Xeta9x9E
Ethernet 1: Video (VLAN1)
Ethernet 2: Scada (VLAN2)

Ethernet Switch
Two independent Ethernet ports, each with full VLAN support and configurable as access ports, trunks, or mixed.

Enterprise Router

Point-to-Multipoint
For point-to-multipoint networks, the Xeta-XX master can either communicate with Xeta-XX remotes to attain the higher data rate and interference performance or the two data channels can independently communicate with two different remotes at the same time. This can effectively double the polling speed using a single antenna. The two channels can each be set to different bandwidth ranges within XetaWave's proprietary Multipoint MultiSpeed™ protocol allowing low speed/long distance remotes to use one channel while higher data rate remotes use the other.

VLAN Access Link - VLAN1, 2

Video Security

Scada

Coaxial: _____			
Serial: _____	**Xeta-XX Scada & Video Security Network Concept**		
IO: _____	Author: Systems Engineering	Doc Number: XW-GLB-DW-001_01	Revision: 01
Video Ethernet (VLAN1): _____	Customer: Internal	Sales Ref: 0123456789	Date: April 1st 2015
Scada Ethernet (VLAN2): _____			

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