XETAWAVE
CUSTOM RF SOLUTIONS

Utility Industry Overview

Today's electric utilities have significant challenges when selecting a path forward for what has become an ever changing "smart grid." At the core of this evolution are the communications which serve as the network of intelligence transporting data in all directions to enable advanced applications that are increasingly available. This environment demands radios that are high speed, long range networking devices that focus intently on providing a "future proof" network that can be leveraged for many years to come. This allows the customer to support a wide variety of bandwidth intensive applications (including Ethernet to the feeder and more) that will be required in the future.

XetaWave simplifies and reduces the cost of implementation and on-going management of a wireless communication network by offering a software defined radio (SDR) that can be configured to meet a diverse range of applications.

Applications

Below is a list of applications for XetaWave radios within Electric Utilities:

- AMI Backhaul
- Grid Sensors
- Distributed Energy
- Distribution Automation
- Substation Automation
- SCADA
- Smart Switches
- Reclosers
- Volt Optimization
- Protection Relays

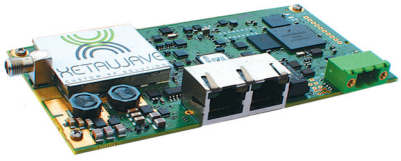
XetaWave's latest generation of Ethernet IP-based radios are developed using the powerful open-embedded Linux Debian Operating System and are the most capable, flexible, high performance software defined radios available within the industry.

XetaWave offers a global frequency platform of licensed and unlicensed radios to meet the application needs of its worldwide customers across a wide variety of industries including electric utility, oil and gas, water and wastewater, precision agriculture, the military, and others.

Product Offering

- Multi-Speed: 9.6 kbps - 5.3 Mbps
- Global frequency range:
  902-960 MHz Dual Band ISM/MAS, 100 MHz, 200 MHz, 400 MHz, 700 MHz, 800-900 MHz, 1.4 GHz & 2.4 GHz
- Licensed & Unlicensed
- Dual-band/frequency
- Board level, enclosed
- Ethernet and Serial IO
- 10mW to 10W power output
- Interoperability with GE MDS TransNET, SD, X710, iNET radios
- Dual Radio Master Station
- Two radios in one small enclosure:
  * Dual band
  * Back-to-back repeaters
  * Full duplex
- AES-256 encryption available; FIPS 140-2 validation in progress
- UL Class 1 Div 2 & c-UL approved; ETSI certified
- Most stringent production testing in the industry (-40°C to +85°C)

Master Station



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Utility Industry Overview, *cont.*

Key Differentiators

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

Dynamic Modulation
Supports multiple modulation schemes and features that selectively switch to achieve optimal data throughput given the available channel size and environmental noise.

MultiSpeed MultiPoint ™
Enables endpoints operating at different over-the-air data transfer rates to communicate with a single access point within the same network.

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 in network design.

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

Compatible Solutions - TransNET, X710, SD & iNET Interoperability
XetaWave offers a Compatibility Mode that enable its Ethernet and serial radios to be direct drop-in replacements for MDS TransNET, X710 (2710, 4710, 9710), SD series, and iNET radios. This enables you to replace inoperable and unsupported radios as needed, not your entire network - greatly reducing costs and saving time. XetaWave radios can be upgraded to higher speeds and Ethernet capability through a simple configuration change.

XetaINS for Legacy Networks
The XetaWave Intelligent Network Synchronizer (XetaINS) enables the simultaneous operation of a legacy **FreeWave** network and XetaWave ISM network providing the ability to replace legacy technology over time. The XetaINS enables existing FreeWave antennas and towers to be shared thereby leveraging existing investment in infrastructure and the increased performance (up to 5.3 Mbps) and capability of XetaWave's new generation of software defined radios.

Superior Customer Service & Support

The team at XetaWave has designed, built and supported over 100,000 radios across multiple industries worldwide. XetaWave is committed to providing unsurpassed customer service and support from 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 are 100% designed, manufactured, tested, and supported at its headquarters in Louisville, Colorado.

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