Grid Solutions

TransNET

Long Range, High Speed Serial Communications

Data Acquisition | Compact and Unlicensed

Today's SCADA and Telemetry systems transport large amounts of data at ever-increasing speeds. Additionally, the need for greater packaging flexibility has redefined the "ideal" wireless platform. The MDS TransNET™ utilizes FHSS (Frequency Hopping Spread Spectrum) to provide reliable long range data transportation at up to 115.2 kbps. The TransNET provides transparent data communications for nearly all SCADA, Telemetry, and EFM protocols including Modbus.

Any MDS TransNET may be configured as a repeater to extend the operating range of the network. Multiple repeaters may exist at any level of the network preventing a single radio failure from disabling the entire network.

Key Benefits

- Digital signal processing (DSP) technology with self-equalization, automatic CRC/ARQ and powerful forward error correction
- Quick return on investment with plug-and-play installation
- Unlicensed radio design
- Communicate with any asynchronous protocol without extra software or additional programming
- Excellent performance in the face of interference or difficult signal paths
- Network-wide diagnostics software simplifies tasks and reduces costs

Application Specific Wireless Solution

Oil & Gas

- Remote monitoring of pipeline flow and status signals
- Monitor and transmit wellhead pressure and tank levels collected by RTUs

Water & Wastewater

- Monitor lift stations across multiple sites from control room

Energy

- Remote control of IED and PLC at distribution substations
- Condition monitoring for pole-top circuit breakers and capacitor banks

Heavy Industrial

- Activation of perimeter gates based on detection of vehicle
- Monitor and control remote pumps and compressors

Industrially Hardened

- Operational temperature range from –40°C to 70°C
- CSA Class I, Div. 2 groups A, B, C, D for hazardous locations

Application Flexibility

- Low power consumption sleep mode for solar powered applications
- Long range wireless communication, up to 30 miles
- High speed throughput to 115.2 Kbps

Reliable & Scalable

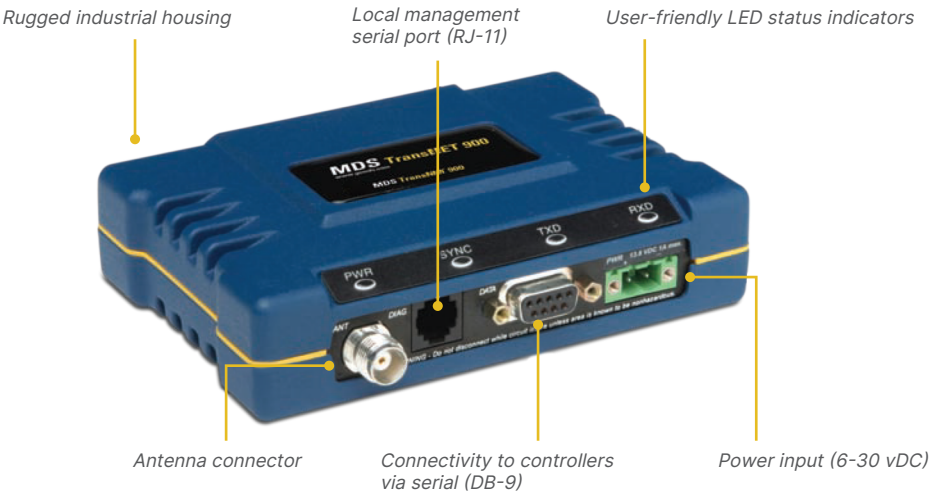
- Point-to-Multipoint, 2-way communication
- High receive sensitivity for noisy environments and long distances
- Compatible with multiple industry protocols including Modbus and DNP3
- Unparalleled robustness with forward error correction and CRC/ARQ multiple re-sends
- Store and forward to extend network range cost-effectively

Secure

- Proprietary hopping algorithm among 128 channels

GE VERNOVA

Remote & Access Point



Specifications

GENERAL

Frequency Band	902-928 MHz ISM band
Dimensions	8.9 D x 12.7 W x 2.5 H cm. (3.5 D x 5 W x 1 H in.)
Input Power	6 to 30 Vdc

Current Drain for AP and Remote

Mode	30 Vdc	13.8 Vdc	6 Vdc
Transmit	236 mA	510 mA	1.18 A
Receive	51 mA	100 mA	155 mA

Sleep Mode	4 mA typical
Temperature	-40°C to +70°C
Range	Up to 30 miles
Humidity	< 95% RH (Non-Condensing)

TRANSMITTER

Power Output	1 Watt (30 dBm) at 6 Vdc to 30 Vdc, user selectable down to 100 mw (+20 dBm)
Modulation	CPFSK

RECEIVER

Sensitivity	-105 dBm (1 × 10-6 BER) typical
Error Detection	CRC16; Resend on Error
Interference Avoidance	64,000 hop patterns selected automatically via network address
	FEC, CRC/ARQ and/or Multiple Packet Transmits
	Excellent Strong Signal (interference) Characteristics
	Band Segmentation for Friendly Coexistence with other services such as LMS

DATA

Interface	RS-232/RS-485 (User Selectable)
Usable Throughput	115.2 kbps
Port Speeds	1.2 to 115.2 kbps

CONNECTORS

Power, User, NMS	2 Pin Phoenix, DB-9, RJ11
RF	TNC

OPERATING MODES

Point-to-Multipoint
- Master
- Remote
- Repeater Extension (store and forward) – Unlimited repeaters, self healing networks

NETWORK MANAGEMENT

Diagnostics
- Centralized network control eliminates site visits
- Create store and forward configurations
- Compatible with other MDS Products
- MDS InSite

AGENCY APPROVALS

FCC	Part 15 Approved
UL/CSA	Class 1 Div. 2 approved (UL 508, UL 1604)
IC	Approved

Ordering

TransNET Remote and Access Point

EL805-MD	*	X	*	A	*	C	*	*	*	N	
Frequency	9										MDS 900-928 MHz long range (up to 30 miles), FCC and IC approved
	2										MDS 2.4 GHz long range (up to 15 miles), not FCC/IC/ETSI approved
Interface								0			RS-232
								1			RS-485
Diagnostics									N		None
									W		Network-wide

Order Code Example
EL805-MD9X1AFCS0WN

- Chassis-enclosed radio
- 902-928 MHz band
- RS-232 interface
- Include network diagnostics

For more information, visit
gevernova.com/grid-solutions

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English
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