MDS...Global wireless solutions. Industrial Wireless Performance.

For over 15 years, Microwave Data Systems (MDS) has been providing wireless networking solutions with applications in SCADA, telemetry, telecommunications, and online transaction markets. MDS provides licensed and unlicensed solutions, with more than 500,000 radios installed in over 110 countries.

Introducing MDS iNET 900™

The MDS iNET 900™ is a long-range, high-speed, industrial, wireless IP/Ethernet solution. It allows customers to bring business information over Ethernet or a serial gateway and onto IP based networks. This includes mission-critical, revenue-generating data from fixed assets such as oil and gas wells, compressor stations, pipelines, fluid storage tanks and utility meters. It also enables portable network access for vehicle based operation.

MDS iNET 900 is available in three configurations:

- **Access Point/Remote Dual Gateway**, which provides both serial and Ethernet connectivity, and is configurable by the customer as either an access point or a dual gateway.
- **Remote Serial Gateway**, which provides two serial ports and allows serial to IP migration.
- **Remote Ethernet Bridge**, which provides ethernet connectivity - with the ability to drop to multiple devices.

MDS iNET 900 uses advanced 900 MHz FHSS technology for license-free operation in the 902-928 MHz ISM band. It is capable of up to 30 mile range and up to 512 kbps data rate for IP/Ethernet communications. This product is available for use in Class I, Division 2, Groups A, B, C & D hazardous locations.*

Why use an MDS iNET 900 Wireless Networking Solution?

**Longest range** industrial product in its class. Providing lowest cost of ownership.

**Future proof.** We use open standards architecture design, and upgradeable firmware to ensure customer investment protection over the long-term.

**MDS NETview MS™ Network Management System** is based on a platform independent Java application. It is application independent with a centralized SNMP server and integrates with multiple vendor platforms.

**Secure** wireless operation with multiple layers of protection, including 900 MHz FHSS physical layer and data encryption.

**Flexible.** The MDS iNET 900 supports multiple users connecting to multiple applications via multiple protocols on the same MDS iNET 900 or the same network - simultaneously!
MDS iNET 900™ Specifications

**General**
- **Data Rate**: 512/256 Kbps user configurable air link, 1,200–115,200 bps serial ports
- **Frequency Band**: 902-928 MHz ISM band
- **Spreading Mode**: Frequency Hopping Spread Spectrum
- **Coverage Range**: Up to 30 mi. (40 Km.)
- **Configurations**: Access Point/Remote Dual Gateway Configurable by customer as access point or dual gateway (serial and Ethernet/IP connections)
  - Remote Serial Gateway
  - 2 serial port connections
  - Remote Ethernet Bridge
  - 1 Ethernet connection with multidrop capability

**Physical Interface**
- **Ethernet**: 10BaseT, RJ-45
- **Serial**: RS-232/V.24, DB-9F, DCE
  - RS-232/V.24, DB-9M, DTE
- **Antenna**: TNC connector (female)
- **LEDs**: Lan, Com1, Com2, Power, Link

**Protocols**
- **Wireless**: CSMA/CA Wireless Protocol with Collision Avoidance
- **Ethernet**: IEEE 802.3
  - Spanning Tree (Bridging)
  - IP (DHCP, ICMP, UDP, TCP, ARP)
- **Serial**: Clear channel mode for serial async multidrop protocols including Modbus, DNP.3, DF1, BSAP.

**Radio**
- **Carrier Power**: 0.1 to 1 watt (20 to 30 dBm)
- **Output impedance**: 50 Ohms
- **Occupied Bandwidth**: 316.5 kHz
- **Modulation**: CPFSK (Continuous Phase FSK)
- **Receiver Sensitivity**: -92 dBm @ 512 Kbps with 10⁻⁶ BER
  - -100 dBm @ 256 Kbps with 10⁻⁶ BER

**Management**
- **HTTP**: (embedded web server)
- **SNMPv1, MIB II, Enterprise MIB**
- **Text-based menu interface on serial port Telnet**
  - MDS NETview MS™

**Environmental**
- **Temperature**: -30°C to +60°C (-22°F to +140°F)
- **Humidity**: 95% at 40°C (104°F) non-condensing
- **Input Power**: 10.5-30 Vdc (13.8 Vdc nominal)
- **Ext. power supply**: 48 Vdc, 110/220 Vac
- **Current Consumption**:
  - Rx: 2.8 W from 10.5 to 24 Vdc
  - Rx: 3.5 W from 24.5 to 30 Vdc
  - Tx: 8 W from 10.5 to 24 Vdc
  - Tx: 9 W from 24.5 to 30 Vdc

**Mechanical**
- **Case**: Die Cast Aluminum
- **Dimensions**: 3.15 H x 17.2 W x 11.2 D cm
  - (1.25 H x 6.75 W x 4.5 D in.)
- **Weight**: 908 g (2 lb.)
- **Mounting options**: Flat surface mount brackets, DIN rail, 19” rack (1U high)

**Agency Approvals**
- **FCC Part 15 approved**
- **UL Class 1 Div. 2 approved* (UL 508, UL 1604)**
- **IC approved**
- **CSA Pending**

* The transceiver is not acceptable as a stand-alone unit for use in the hazardous locations described above. It must either be mounted within another piece of equipment, which is certified for hazardous locations, or installed within guidelines, or conditions of approval, as set forth by the approving agencies.

MDS products are manufactured under a quality system certified to ISO 9001. MDS reserves the right to make changes to specifications of products described in this data sheet at any time without notice and without obligation to notify any person of such changes.

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