

MDS FIVE.8™ & MDS FIVE.3™ WIDEBAND CONSECUTIVE POINT



Features

- Fast Ethernet—Scalable from 25 Mbps to 100 Mbps
- Scalable to up to 16 T1/E1s
- Scalable and Spectrally Efficient
- ISM 5.8 GHz Unlicensed Band
- UNII 5.3 GHz Unlicensed Band
- Adaptive Power Control
- Easily Deployed and Activated
- Ring Architecture Minimizes Interruptions

Applications

- Connect Buildings, Campuses, etc.
- Backhaul/Extend IP Networks, SANs
- Utility Monitoring, Control, Data Network Aggregation
- Eliminate Monthly Leased Line Fees Means Quick ROI

MDS . . . Global Wireless Solutions. Industrial Wireless Performance.

For nearly two decades, Microwave Data Systems (MDS) has been providing highly secure, industrial strength mission critical wireless communications solutions for a broad spectrum of public and private sector clients worldwide. With an installed base approaching 1,000,000 radios in 110 countries, MDS offers both licensed and license-free solutions with applications in SCADA, telemetry, public safety, tele-communications, and online transaction markets.

Introducing MDS FIVE.8™ and MDS FIVE.3™

The MDS FIVE Series consists of an open front/rear Software Defined Indoor Unit (IDU) and Outdoor Unit (ODU). The MDS FIVE Series radios are spectrum and data rate scalable, enabling utilities or other organizations to trade-off system gain with spectral efficiency and channel availability for optimal network connectivity. The MDS FIVE.8™ radio delivers aggregate rates up to 200 Mbps within the 5.7 – 5.8 GHz ISM band for distances of up to 20 miles. The MDS FIVE.3™ is also available supporting the 5.25 – 5.35 GHz UNII band. A common platform supports plug-in 100 Mbps Ethernet.

Why use an MDS FIVE Series Solution?

- Quick return on investment—replaces leased-lines.
- Consecutive point architecture configurable—able to support a ring/consecutive point configuration with special set-up (see diagram on back of data sheet).
- Self-healing redundancy—more reliable than traditional point-to-point networks.
- Automatically adjusts transmit power in response to RF interference, simplifying deployment, network management, and enabling dense deployment.

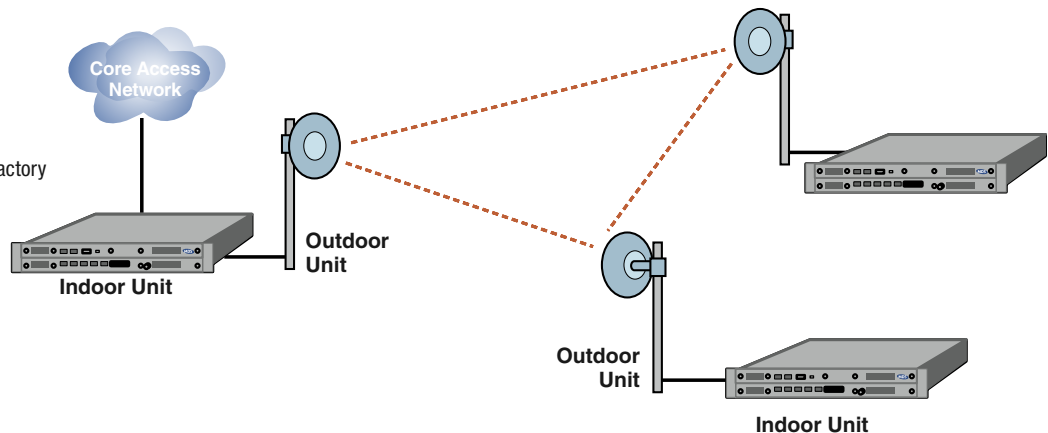
INDUSTRIAL WIRELESS PERFORMANCE

MDS FIVE SERIES SPECIFICATIONS

| MODEL | THROUGHPUT DATA | INTERFACE | WAYSIDE |
|-----------------------|--|-------------|------------|
| MDS FIVE Series – 050 | 100 Mbps Aggregate (50 Mbps full-duplex) | 100 Base TX | Two T1/E1s |
| MDS FIVE Series – 100 | 200 Mbps Aggregate (100 Mbps full-duplex) | 100 Base TX | Two T1/E1s |

| General | FIVE.8 (ISM) | FIVE.3 (UNII) | Data Interface Continued |
|----------------------|--|--------------------|---|
| Frequency Range | 5,725 – 5,850 MHz | 5,250 – 5,350 MHz | Compliance Ethernet: IEEE 802.3 Nx/E1/T1: ITU-T |
| Average Output Power | -8 to 23 dBm RMS | -18 to +13 dbm RMS | Auxiliary Connections Wayside Channels T1/E1 - Interface DSX-1 - Connector RJ-48C Alarm Port - 2 Form C relay alarm outputs, 2 TTL outputs Voice Service Channel - 6 wire, PTT handset |
| Max EIRP | +46 dBm RMS (with integrated antenna) | +30 dbm | Network Management Support - Network management config. tool - SNMP v1, 2, 3, and web-based config. - Built-in Web browser |
| Capacity Options | Ethernet: Spectrum scalable from 25 Mbps to 100 Mbps full duplex +2 T1/E1 Wayside Channels | | Connector RJ-45, 10/100BaseTX |
| Modulation | QPSK, 16-QAM, 32-QAM, 64-QAM | | Environmental Temperature IDU -5° to 55°C (32° to 131°F) ODU -30° to 55°C (-22° to 131°F) |
| FEC | Trellis Coded Modulation concatenated with Reed-Solomon Coding | | Humidity IDU: 0 to 95%, non-condensing ODU: Up to 100% at 45°C (113°F) |
| Receive Sensitivity | 100 Mbps 25 MHz: -67 dBm 50 Mbps 25 MHz (50FE2): -73 dBm 25 Mbps 25 MHz (25FE2): -79 dBm 16 T1 25 MHz: -79 dBm 16 E1 25 MHz: -77 dBm | | Altitude IDU/ODU: 4500 m (14,100 ft.) |
| Antenna Gain | 23 dBi (integrated antenna) | | Mechanical Size IDU: 1RU, ETSI Compliant 17.5 x 9.4 x 1.75 inches (44.5x23.8x4.4mm) rack mount 19 inches, (48.2 cm) ODU: 15.7 x 14.5 x 2.1 inches (39.9x36.8x5.33cm) |
| Antenna Connector | N-Type Female for optional external antenna | | Weight IDU: 7 lbs. (3.17 kg) ODU: 15 lbs. (6.8 kg) |
| Distance | Up to 20 miles (or greater, depending on antenna) | | Agency Approvals FCC approved IC approved |
| Power | -48 volts +/- 10%, <70 watts; Optional 100–240 Volts AC, 47–63 Hz power supply | | |
| Encryption* | Encryption based upon a 128-bit key is available for select markets and is applicable for the MDS FIVE Series -50 and -100 products only | | |
| Protected Option* | Configurable for 1+1, hot standby, hitless switching, spacial diversity (not for diversity combining) | | |
| Data Interface | | | |
| Physical | 100BaseTX Full duplex E1/T1 | | |
| Connector | Ethernet: RJ-45 Nx/E1/T1: 2xRJ-48C, HD60 | | |

FIVE Series Simplified Ring-Architecture Diagram (6 units needed – consult factory for details)



* Release II



Microwave Data Systems Inc.
175 Science Parkway
Rochester, New York 14620, USA
Phone (585) 242-9600
Fax (585) 242-9620
www.microwavedata.com

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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