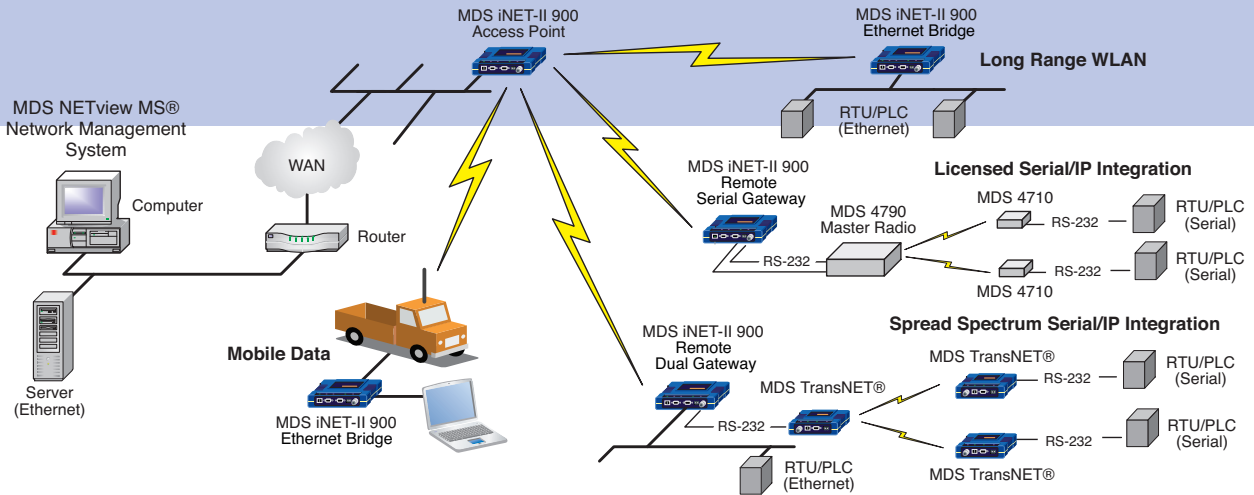


# MDS iNET-II 900™ SPECIFICATIONS



## General

- Data Rate: 1 Mbps/512 Kbps user configured air link
- Frequency band: 902-928 MHz ISM band
- Spreading mode: DTS/FHSS
- Range (512 Kbps)<sup>2</sup>:
  - Typical fixed range: 12 miles
  - Maximum fixed range: 30 miles
  - Typical mobile range (parked): 3 miles
  - Typical mobile range (moving): 1 miles
- Range (1 Mbps)<sup>2</sup>:
  - Typical fixed range: 8 miles
  - Maximum fixed range: 15 miles
- Available configurations:
  - Access point/remote dual gateway - serial and ethernet
  - Remote serial gateway - serial only
  - Remote ethernet bridge - ethernet only

## Radio

- System gain: 139 dB @ 512 Kbps; 134 dB @ 1 Mbps
- Carrier power: 100mW to 1W (20 to 30 dBm)
- Output impedance: 50 Ohms
- Occupied bandwidth: 600 kHz
- Modulation: CPFSK (continuous phase FSK)
- Receiver sensitivity:
  - -97 dBm @ 512 Kbps with 10<sup>-6</sup> BER
  - -92 dBm @ 1 Mbps with 10<sup>-6</sup> BER

<sup>1</sup> 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.

<sup>2</sup> Typical fixed range calculation assumes a 6 dBi gain Omni on a 100 ft tower at the AP, a 10 dBi gain Yagi on a 25 ft mast at the remote with output power decreased to yield maximum allowable EIRP (36 dBm), a 10 dB fade margin, and a mix of agricultural and commercial terrain with line of sight.

Typical mobile range calculation assumes a 6 dBi gain Omni on a 100 ft tower at the AP, a 5 dBi gain Omni with 1 watt output power at 6 ft height, a 10 dB fade margin, and 90% reliability with near line-of-sight in a mix of agricultural and commercial terrain. Maximum range achieved with a clear line-of-sight path, and Fresnel zone clearance. Actual performance is dependent on many factors including antenna height, blocked paths and terrain.

## Physical Interface

- Ethernet: 10baseT, RJ-45
- Serial: COM1: RS-232/V.24, DB-9F, DCE  
COM2: RS-232/V.24, DB-9M, DTE  
1,200-115,200 bps serial ports
- Antenna: TNC connector (female)
- LEDs: Lan, Com1, Com2, Power, Link

## Protocols

- Wireless: CSMA/CA (collision avoidance)
- Ethernet: IEEE 802.3, ethernet II, IEEE 802.1Q (trunk, access, and native), STP, IGMP
- TCP/IP: DHCP, ICMP, UDP, TCP, ARP, Multicast, SNMP, TFTP
- Serial: PPP, encapsulation over IP (tunneling) for serial async multidrop protocols including Modbus, DNP.3, DF1, BSAP
- Optional: Allen-Bradley EtherNet/IP\* - Modbus/TCP

## MDS Cyber Security Suite, Level 4

- Encryption: AES-128 with automatic key rotation. (optional)
- Authentication: 802.1x, RADIUS, EAP/TLS, PKI, PAP, CHAP
- Traffic segregation: 802.1Q VLAN
- Management: SSL, SSH, HTTPS

## Management

- HTTP, HTTPS, SSH, TELNET, local console
- SNMPv1/v2/v3, MIB II, enterprise MIB
- SYSLOG
- MDS NETview MST™

## Environmental

- Temperature: -30°C to +60°C (-22°F to +140°F)
- Humidity: 95% at 40°C (104°F) non-condensing

## Electrical

- Input power: 10.5-30 Vdc
- Current consumption (nominal):
 

Mode	Power	13.8 Vdc	24 Vdc
Transmit	7 W	510 mA	290 mA
Receive	2.8 W	200 mA	120 mA

## 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 tray
- P21 option:
  - Case: steel (rack mountable 2U)
  - Dimensions: 8.9 H x 48.3 W x 35.6 D cm. (3.5 H x 19 W x 14 D in.)
  - Weight: 7.6 kg, (14.7 lbs) with transceivers

## Agency Approvals

- FCC part 15.247 (DTS)
- UL/CSA class 1 Div. 2<sup>1</sup>
- IC

\* Allen-Bradley EtherNet/IP is a copyright of Rockwell Automation, Inc.



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