MDS 1710 Transceiver Series

Fixed Frequency Licensed Solutions

Features

- High Performance – Digital Signal Processing (DSP) Engine
- Flexibility – Single Unit Configurable as Master or Remote Radio

Applications

- Gas/oil production and distribution
- Water, gas and electric utilities
- Lotteries
- Traffic control
- Industrial process control
- Railroad communication systems

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

For more than two decades, GE 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, GE MDS offers both licensed and license-free solutions with applications in SCADA, telemetry, public safety, telecommunications, and online transaction markets.

MDS Transceiver Series Overview

The MDS 1710 Transceiver Series is a price/performance leading solution for licensed radio in the 130-174 MHz frequency range. MDS 1710 is available in the following VHF bands: 130-140 MHz, 140-150 MHz, 150-165 MHz, and 165-174 MHz. These radios provide increased throughput, and longer-range for multiple address systems. Transparent and direct asynchronous communication offers real-time communication.

No extra software or programming is needed to implement communications using standard asynchronous protocols. A general purpose (unconditioned) digital output is available.

The MDS Transceiver Series is field configurable as a master station or remote radio. They can operate as a half-duplex or simplex radio. They support all splits in duplex frequencies. When operating as a master station, full network diagnostics are available. Simplex mode permits peer-to-peer radio communications.

Why Consider a MDS Transceiver Series Solution?

High system performance and data integrity! Through robust construction, digital signal processing technology (DSP) and up to 19.2 kbps data throughput.

Rapid Installation! Quick return on investment due to ease of wireless installation. This licensed radio offers the ability to communicate with any asynchronous protocol without extra software or extra programming.

Performance under the most adverse conditions! Exceptional design provides excellent performance in the face of interference or difficult signal paths.

Network Wide Diagnostics! MDS InSite™ Network Management software simplifies maintenance tasks and reduces the cost of managing the network infrastructure. Provides a non-intrusive means of maintenance and link monitoring.

GE MDS

MDS 1710 Transceiver Series Specifications

General

MDS 1710A

- Frequency Band: 130 to 174 MHz
- Banding (MHz) : 130-140, 140-150, 150-165, 165-174
- Freq. Programmability: 5, 6.25 kHz increments, any MAS channel pair
- 4 Wire Analog
- Data Rate: 9600 bps (rf)
- Port Speed: 110 bps - 38,400 kbps (data)
- Channel Spacing: 12.5, 15 kHz
- Bit Error Rate: BER $1x10^{-6}$ @ -110 dBm typical
- Diagnostics: Network Wide Diagnostic Option
- Agency Approvals: FCC Part 90 (150-174 MHz bands)
- Available Now

MDS 1710C

- Frequency Band: 130 to 174 MHz
- Banding (MHz): 130-140, 140-150, 150-165, 165-174
- Freq. Programmability: 5, 6.25 kHz increments, any MAS channel pair
- 4 Wire Analog
- Data Rate: 19,200 bps (rf)
- Port Speed: 110 bps - 38,400 kbps (data)
- Channel Spacing: 25, 30 kHz
- Bit Error Rate: BER $1x10^{-6}$ @ -105 dBm typical
- Diagnostics: Network Wide Diagnostic Option
- Agency Approvals: FCC Part 90 (150-174 MHz bands)
- Available Now

MDS 1710M

- FCC Part 90.35
- VHF Splinter Channels
- 6 KHz occupied bandwidth
- 4 Wire Analog
- 9,600 bps data @ -106 dBm typical
- Available Now

All Models

- Operational Modes: Async. - Simplex, half-duplex
- Data Interface: RS-232, DB-25 Female Connector
  Supports: TXD, RXD, RTS, CTS, DCD, RUS, AUX POWER, DSR, and GND

Transmitter

- Frequency Stability: +/- 0.00015% 1.5 ppm
- Carrier Power: 0.1 to 5 Watts Programmable
- Carrier Power Accuracy: Normal +/- 1.5 dB
- Duty Cycle: Continuous
- Output Impedance: 50 Ohms

Receiver

- Type: Double Conversion Superheterodyne
- Frequency Stability: +/- 0.00015% (1.5 ppm)
- Adjacent Channel (EIA): 60 dB nominal

Power Supplies

- Primary Power: Voltage 13.8 Vdc nominal
  (10.5 to 16 Vdc operating range)
- Tx Current: 2A Typical at 5 Watts
- Rx Current: <125 mA
- Sleep Mode: 15 mA nominal

Modem / Diagnostics

- Modulation: Digital / CPFSK
- CTS Delay: 0-255 msec programmable in 1 msec increments
- PTT Delay: 0-255 msec programmable in 1 msec increments

Physical

- Case: Rugged Die Cast Aluminum
- Dimensions: 5.08 H x 14.29 W x 18.4 D cm. (2.0 H x 5.625 W x 7.25 D in.)
- Weight: 1 kg. (2.2 lbs.)

Environmental

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

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