

# 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

## 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, 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.

**MDS**

INDUSTRIAL WIRELESS PERFORMANCE

# 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  $1 \times 10^{-6}$  @ -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  $1 \times 10^{-6}$  @ -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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