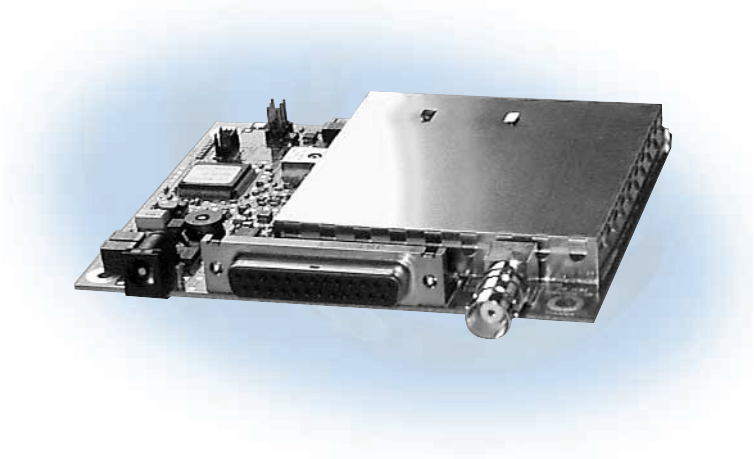
MDS OEM Series™

Utility Communications - Cutting Edge Performance



FEATURES

- MDS quality and performance in a value priced data transceiver
- Worldwide product
- FCC and IC 400 MHz
- ETSI 400 MHz (4800 bps)
- SRRC IDH99FJ0138 200 MHz China
- Small size for internal integration as OEM product
- 9600 bps throughput
- Low current consumption and sleep modes for solar powered applications
- Flash memory software storage for future upgrades
- Keys on data
- Keyline output for keying external devices on receive
- Noise-free squelch
- CD for CSMA applications
- Easy integration into any OEM equipment
- Configures via HHT, MDS Configuration Software or OEM processor

MDS OEM SERIES PRODUCT OVERVIEW

The MDS OEM SERIES product is a complete family of value priced radios for private point-multipoint SCADA and other telemetry applications. They operate at the 132-174 MHz, 220-240 MHz or 380-512 MHz frequency bands. The OEM SERIES are available as a board level product or as a packaged unit. The board level product allows for lowest cost direct integration into an RTU, Electronic Flow Measurement device or Lottery Terminal. The packaged unit comes in a small case that is ready to plug in power, an antenna and your terminal device.

The MDS OEM SERIES transceivers are designed to help you reduce overall communications costs by providing low power consumption, small size and an inexpensive RF connector. When integrated into an Electronic Gas Flow Measurement device using only 8 Vdc, the OEM SERIES is compatible with Class 1, Division 1 intrinsic safety requirements.

All OEM SERIES models are available for private labeling.

MDS OEM SERIES BOARD LEVEL UNITS

The MDS OEM SERIES board level unit is a single board measuring approximately 3.5 x 4.75 inches (8.90 x 12.07cm). It comes complete with RF connector and TTL or RS-232 interface via a header connector or an edge mounted DB-25. An optional piggyback board is available for RS-485/422 applications.

The board level unit is fully type accepted and includes its own RF shielding. It may be inserted into your device as simply an internal radio, or it can be tightly integrated within the product. By using the processor in your RTU to access radio parameters you may provide an integrated diagnostic system that includes set-up and diagnostic capabilities. LEDs provide rapid assessment of operating status.

The available configurations are as follows:

OEM board TTL, 8 Vdc input
OEM board RS-232, 10-30 Vdc input
OEM board TTL and piggybacked RS-485, 10-30 Vdc input

Digital Modems:

9600 bps in 12.5 kHz channel
19.2 kbps in 25 kHz channel

Analog Modes:

Bell 202
External Modem (4 wire audio) with VOX, switchable Pre- and De-emphasis.

MDS OEM SERIES PACKAGED UNITS

OEM SERIES Packaged Units are the board level unit in a small extruded case, and are available in either RS-232 or RS-485 user interfaces and a 10-30 Vdc input voltage.

MDS™
Microwave Data Systems Inc.

MDS OEM SERIES TRANSCEIVER SPECIFICATIONS

DETAILED SPECIFICATIONS

200 and 450 MHz Licensed OEM Board Level

EL7052 - 200-240 MHz &
EL7054 - 330-512

RADIO TYPE

Synthesized, Half Duplex, Channel 12.5 kHz Channel Spacing, Split Freq or Simplex

PRIMARY POWER

Voltage:	10 to 30 Vdc through 5.5 mm pin plug or DB-25
RX Supply Current:	75 ma typical @ 13.8 Vdc
TX Supply Current:	480 ma typical @ 13.8 Vdc with output power set to 2 watts
Circuit Protector:	2 Amp board mounted Fuse, Internal Reverse Polarity Protection: Diode across primary input

DATA INTERFACE

Interface:	RS-232 through DB-25 Connector
Baud Rates Supported at Interface Port:	1200, 2400, 4800, 9600, 19200, 38400 bps
Over-the-Air Data Rate:	9600 bps
Data Latency:	< 15 ms typical

TRANSMITTER

Frequency Ranges (132 MHz):	132 to 174 MHz*
Frequency Ranges (220 MHz):	220 to 240 MHz
Frequency Ranges (450 MHz):	330 to 355 MHz 355 to 380 MHz 380 to 400 MHz 400 to 420 MHz 420 to 450 MHz 450 to 480 MHz 480 to 512 MHz 406 to 430 MHz (Canadian Plan)
Frequency Increments:	6.25 kHz or 5 kHz (Factory Configurable)
Modulation Type:	4 Level CPFSK
Carrier Power:	100 mw, 1 Watt, 2 Watt Programmable (+20dBm, + 30dBm, +33 dBm) Higher power output versions available- contact factory
Duty Cycle:	50% (100% with additional heatsinking)
Output Impedance:	50 Ohms
Frequency Stability:	1.5 ppm, -30° to + 60° C
Channel Spacing:	12.5 kHz / 25 kHz
Spurious and Harmonics:	-65 dBc
Time-out Timer:	1 to 255 Seconds
Transmitter Keying:	On Data
Key-up time:	2 ms

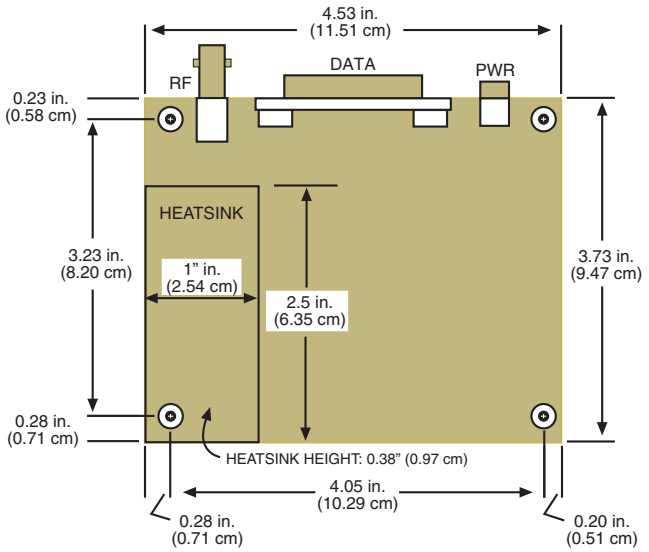
RECEIVER

Frequency Ranges (132 MHz):	132 to 174 MHz
Frequency Ranges (220 MHz):	220 to 240 MHz
Frequency Ranges (450 MHz):	330 to 355 MHz 355 to 380 MHz 380 to 400 MHz 400 to 420 MHz 420 to 450 MHz 450 to 480 MHz 480 to 512 MHz 406 to 430 MHz (Canadian Plan)
Type:	Double Conversion Superhetrodyne (84 MHz and 450 kHz IF)
Frequency Stability:	1.5 ppm, -30 to +60° C
Spurious and Image Rejection:	-70 dB
Sensitivity:	12 dB Sinad @ -116 dBm
Data Performance:	1x10-6 @ -108 dBm
Intermodulation Rejection:	-70 dB Minimum
Selectivity:	55 dB typical at Adjacent Channel (EIA)
Bandwidth:	12.5 kHz / 25 kHz

ENVIRONMENTAL

Temperature Range:	-30 to + 60° C
Humidity:	0 to 95% @ 40° C
Weight:	
Board Product:	4.5 oz (.13 kg)
Enclosed Product:	~1 lb (.45 kg)
Size:	
Board Product:	4.5W x .75H x 3.725D (in) 11W x 1.9H x 9.5D (cm)
Enclosed Product:	~6.5W x 1.75H x 4.75D (in) ~16.5W x 4.4H x 12D (cm)
Enclosure Type:	Aluminum

MOUNTING HOLE LAYOUT BOARD LEVEL PRODUCT :



* for availability of the VHF (132-174) MHz unit contact factory.

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