

MSR Tuner/Demod Card (MTDC)



The most important thing we build is trust.

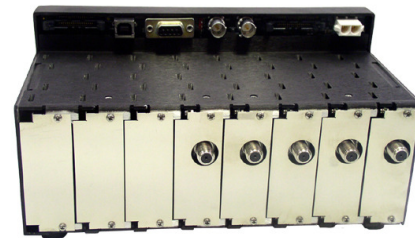
Applications

- Long Distance A/V Mobile Links
- Airborne Surveillance Links
- Electronic News Gathering (ENG)
- Repeaters
- UAV/UGV Applications

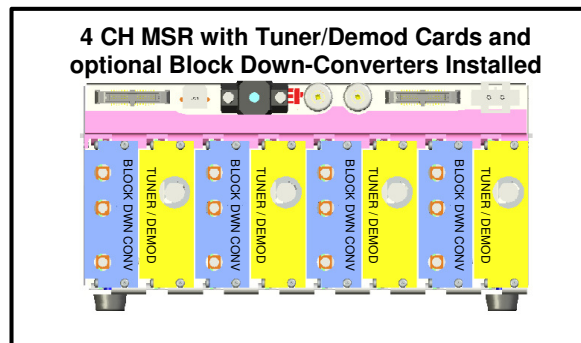
Key Features,

(when used with GMS' MSR Receiver)

- Fully Compliant with DVB-T ETS 300.744
- Supports 2K or 8K COFDM Carriers
- Input Frequency: 49 – 862 MHz (w/BDC up to 7 GHz)
- Frequency Tuning Resolution: <200 KHz
- Bandwidth: Selectable 6, 7, 8 MHz
- Modulation Type: QPSK, 16QAM, 64QAM



GMS' MSR Tuner/Demod Card (MTDC) is used in conjunction with the Messenger Smart Receiver (MSR) System to provide a highly flexible COFDM receiver platform. The MTDC operates over an input frequency range of 49 to 862 MHz and can be used with an external Block Down Converter (BDC) or with an internally mounted MSR Block Down Converter Card (BDCC) to extend the frequency coverage up to 6 GHz. The MSR can support up to six installed MTDCs, each supporting an independent antenna input. When used with internally installed BDCCs, the MSR can support up to four MTDCs as shown below. The MTDC is fully DVB-T compliant and supports selectable COFDM bandwidths of 6, 7 or 8 MHz.



The MTDC is designed to be easily configured and controlled via the MSR's Window-based Software (SW) control Program. This program provides control of the center frequency, COFDM bandwidth and acquisition mode of the channel. All other modulation parameters, including spectral inversion, are automatically detected and set during the signal acquisition process. Once the MTDC has locked on to the received signal, the MSR control SW provides an extensive array of status information to the user.

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Specifications:

Part Number: 710-A0619

RF Inputs:

Frequency Range: 49 to 862 MHz
Number of COFDM Carriers: 2 K or 8 K
Frequency Tuning Resolution: <200 KHz
Frequency Acq and Recovery Range; +/- 350 KHz
Input Impedance: 75 Ohms
Noise Figure: Max<10 dB, Typical <7 dB
System Frequency Accuracy: dependent on both MSR and BDC/BDCC accuracy
Bandwidth: Selectable 6, 7, 8 MHz

Modulation:

Modulation Type: COFDM w/QPSK, 16 QAM or 64 QAM
FEC: 1/2, 2/3, 3/4
Guard Intervals: 1/32, 1/16, 1/8, 1/4
COFDM Carriers: 2 K or 8 K

Threshold*:

Single Input	Dual Input	Quad Input
QPSK 1/2: <-91 dBm	QPSK 1/2: <-93.5 dBm	QPSK 1/2: <-95 dBm
16QAM 1/2: <-85 dBm	16 QAM 1/2: <-87.5 dBm	16 QAM 1/2: <-89 dBm
64QAM 1/2: <-80 dBm	64 QAM 1/2: <-82.5 dBm	64 QAM 1/2: <-84 dBm

* When receiving same signal, Op Mode Dependent

Power:

Voltage: 9 to 16 VDC
Current: 570 mA @12 VDC

Environment

Temperature: -20 to +70 °C
Humidity: 0 to 100% non-condensing

Physical:

Size: 4.06" x 2.56" x 1"
10.32cm x 6.50cm x 2.54cm

Interface/Connectors

RF Input: N-F
MSR Interface: 78-pin Edge Connector