

ARRIS Wireless Solutions

2.5GHz Inband MMDS Wireless Modem Interfaces



Application

Provides a wireless interface between a DOCSIS® compliant data or voice modem.

Architectural Overview

The Wireless Interface is a split band MMDS Transceiver for use in broadband wireless networks. It integrates an up-converter, down-converter, and power amplifier along with RF and IF duplexers to provide a single unit solution for two-way wireless RF communications. The circuitry is field hardened over a broad temperature range and is contained in a weatherproof housing. The unit is ready to mount next to and connect directly to an antenna. Connection to the wireless modem is done using standard low cost RG-59 cable. The configuration of the transceiver works with standard DOCSIS® cable modem frequency plans and levels, permitting a direct connection. The transceiver also includes an RF mute function to reduce power consumption and broadband noise emissions. Different models are available to cover operation the various combinations of MMDS, MDS, and WCS frequencies



- **+22dBm Output**
- **High gain and compression**
- **Embedded microprocessor control**
- **Automatic transmit RF mute**
- **Fully weatherized enclosure**



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Specifications

Transmitter:	IF Input Frequency 18 to 42MHz RF Output Frequency 2500 to 2524 MHz Output P1dB (620231) +22 dBm at RF port Spectral Mask FCC CFR 47 Part 27.53 Gain 15 ± 1 dB at 2512MHz and 25°C Gain Flatness ± 1.0 dB Spectral inversion None In-band Spurious -55dBc Out-of-band-spurious -24dBm (30Mhz to 12 GHz) IF Level for RF Activation -43 dBm maximum RF Activation/Mute Response Time <2 microseconds
Receiver:	Frequency (TR2525) 2566 to 2596 MHz (TR2525-1) 2566 to 2666MHz IF Output Frequency (TR2525) 524 to 554MHz (TR2525-1) 524MHz to 624MHz Gain 28 ± 2 dB at 23°C Gain Flatness ± 2 dB full band, ±.5dB per channel Noise Figure 7 dB maximum Input 3 rd Order Intercept -18dBm Image Rejection 85dB Spurious Output -80dBm (over receive band) Phase Noise -90dBc/Hz @10Khz Spectral Inversion None
RF Port:	RF Connector (to antenna) N female, 50 ohms RF Return Loss 2:1 (transmit and receive RF bands) RF Spurious Emissions FCC CFR 47 Part 27
Modem Interface:	Modem Connector RF female, 75 ohms DC Supply Voltage +18 to +28 VDC (+24V nominal) DC Power Consumption 10W maximum Return Loss 2:1 (transmit and receive RF bands)
General:	Frequency Accuracy ±7.5 kHz (over temp) Frequency Stability ± 10 kHz (over ten years) Operating Ambient Temperature -40 to +50°C Size 12" x 12" x .4" (30.5 x 30.5 x 3.5 cm) Mounting Pole75" to 1.75" (19mm to 44mm) diameter Weight 1.5 kg
Regulatory	EMC FCC Part 15 Safety UL

Ordering Information

2.5GHz MMDS TR2525 Transceiver	XXXXXX
2.5GHz MMDS TR2525-1 Transceiver ...	XXXXXX
Power Supply US	620213KN
Power Supply Europe	620213KE

Antennas:

15dB Gain Parabolic MMDS/MDS630235



19dB Gain Parabolic MMDS/MDS630236



24dB Gain Parabolic MMDS/MDS630237



Other antenna models available on request.

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