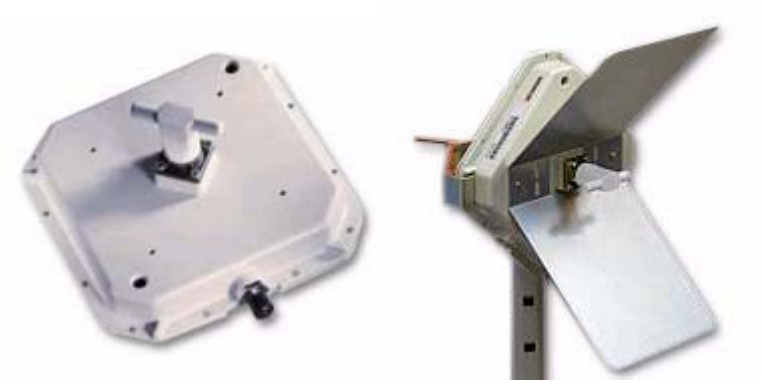
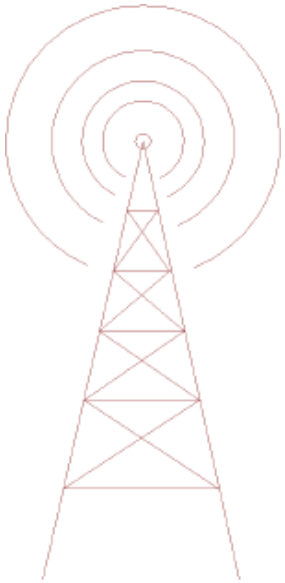
ARRIS Wireless Solutions
2.5GHz Integrated MMDS/MDS Wireless Modem Interface

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

Architectural Overview
The Integrated Wireless Interface is a MMDS/MDS Transceiver for use in broadband wireless networks with a directly attachable antenna. It integrates the up-converter, down-converter, and power amplifier along with RF and IF diplexers 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 directly to the antenna. It is connected to the wireless modem by standard low cost RG-59 cable. The transceiver is configured to work 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. Other models are available to cover operation the various combinations of MMDS, MDS, and WCS frequencies



- **High gain and compression**
- **Automatic transmit RF mute**
- **Fully weatherized enclosure**
- **Tightly integrated with antenna**
- **Choice of antenna gains**



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Specifications

Transmitter:	IF Input Frequency	14.375 to 26.375 MHz
	RF Output Frequency	2150 to 2162 MHz
	Output P1dB (620231)	+25 dBm at RF port
	Spectral Mask	FCC CFR 47 Part 27.53
	Gain	24 ± 2 dB at 23°C
	Gain Flatness	± 1.5 dB
	Spectral inversion	None
	In-band Spurious	-60dBc
	Out-of-band-spurious	-60dBc
	IF Level for RF Activation	-50 dBm maximum
	RF Activation/Mute Response Time	<1.2 microseconds
Receiver:	Frequency	2500 to 2686 MHz
	Modem Frequnecy	222 to 408 MHz
	Gain	28 ± 2 dB at 25°C
	Gain Flatness	± 2 dB full band, ±.3dB per channel
	Noise Figure	<5.5 dB
RF Port:	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	6W maximum
	Return Loss	2.5:1 (transmit and receive RF bands)
General:	Phase Noise Tx/Rx	<-93 dBc/Hz @±10 kHz
		<-98 dBc/Hz @±100kHz
	Frequency Stability	± 10 kHz (over ten years)
	Operating Ambient Temperature	-40 to +60°C
	Size	5.9" x 5.9" x 1.6" (150 x 150 x 40 mm)
	Mounting Pole	1" to 1.75" (25mm to 44mm) diameter
	Weight	0.7 kg
Regulatory	EMC	FCC Part 15
	Safety	UL

Ordering Information

2.5GHz MMDS/MDS Transceiver .....
Power Supply US .....
Power Supply Europe .....

Antennas:
12dB Corner Reflector MMDS/MDS .....
15dB Panel MMDS/MDS .....
18dB Gain Parabolic MMDS/MDS .....
21dB Gain Parabolic MMDS/MDS .....
Other antenna models available on request.