

# ARRIS Wireless Solutions

## 2.5GHz MMDS/MDS Base Station Interface

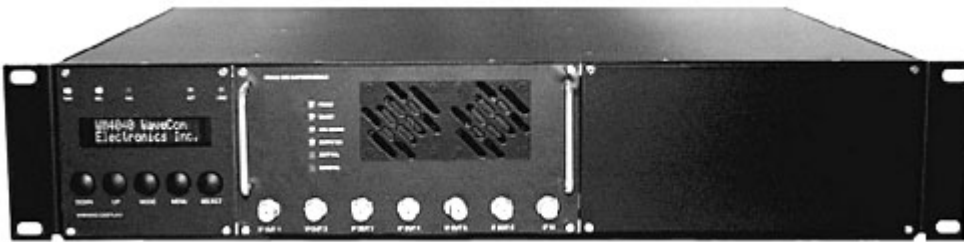


### Application

Provides a complete solution for the transmit and receive side interfaces between a DOCSIS® compliant controller and the antennas.

### Architectural Overview

The Base Station Interface is a MMDS/MDS transmit solution for use in broadband wireless networks. It integrates an up-converter, transmitter, and redundant power supplies in single unit solution for two-way wireless RF communications. The transceiver is configured to work with standard DOCSIS® frequency plans and levels, permitting a direct connection to a wireless modem termination system (WMTS). Different models are available to cover operation the various combinations of MMDS, MDS, and WCS frequencies



The receive antenna downconverter takes the incoming wireless receive signal and immediately down converts it to standard upstream frequencies. It is mounted in an environmentally sealed outdoor enclosure with N connector input to allow connection to the antenna. Locating the unit outdoors with the receive antenna allows for the use of low cost VHF feed cable and improved system noise figure performance

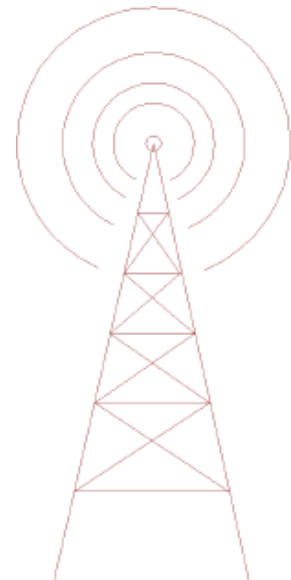


### Transmitter Side

- 4 Watts RF Output at 64QAM
- Local and Remote Control
- High and Low Output Power alarms.
- Reflected Power Alarm
- Two complete transmit interfaces in 4RU

### Receive Side

- Extremely Low Noise Figure
- Cavity filters for superior rejection
- Rugged outdoor enclosure
- Designed for high reliability



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## 2.5GHzMMDS/MDS Base Station Interface



### Specifications Base Station

<b>Transmitter:</b>	Output Frequency ..... 2500 to 2700 MHz (any 100 MHz band available from 2500 to 2700 MHz) Output Power ..... +44dBm P1dB Gain..... 37 dB $\pm$ 2 dB, fixed Gain Stability ..... $\pm$ 0.5dB (10 to 40° C) Gain Flatness ..... $\pm$ 0.3 dB over 6 MHz Mute Level..... -60 dBc Spurious ..... Inband -55 dBc ..... Out of Band -55 dBc Spectral Sideband Regrowth ..... -35 dBc max (64 QAM, 4 W) Input Impedance ..... 50 ohm Output connector..... N female Front Panel Indicators..... ..... DC Power, RF High, RF Low, High Reverse Power
<b>Upconverter:</b>	IF Frequency ..... (center of the band) 44.00 MHz Channel Pass Band ..... 6 MHz IF Input Level ..... 25 to 35 dBmV (total power) Impedance ..... 75 ohm IF AGC ..... enable/disable Output Frequency Range ..... 2500 to 2686 MHz Frequency Step..... Size 62.5 kHz Output Level ..... -15 dBm to 3 dBm (adjustable) Frequency Response..... (Over any 5 MHz band) $\pm$ 0.5 dB Spurious Products..... (2500 to 2686 MHz) -60 dBc Frequency Stability ..... (10° to 40°C) $\pm$ 3 kHz C/N In Band ..... -60 dBc (4 MHz BW) Phase Noise ..... -94 dBc/Hz at 10 kHz offset IF Input Connector ..... F female (75 ohm) Output Return Loss ..... (2500 to 2686 MHz) -20 dB
<b>Chassis General:</b>	Dimensions (chassis) ..... 19" (w) x 13.7" (d) x 7" (h) Mounting (chassis)..... Standard 19" rack - 4U (7.0") Operating Ambient Temperature ..... 10° to +40°C Weight: 620223 chassis with 620232 PS..... 18 lbs. (8.2 kg) 620224 Modulator Card (each)..... 1.2 lbs. (0.6 kg) 620231 Power Amplifier (each) ..... 6.2 lbs. (2.8 kg)
<b>Regulatory</b>	EMC..... FCC Part 15 Safety ..... UL

### Specifications Antenna Down Converter

<b>RF Input:</b>	Frequency..... 2150 to 2162 MHz Gain ..... 32 $\pm$ 2 dB at 23°C Gain Flatness ..... $\pm$ .5 dB full band Noise Figure ..... 2 dB Spectrum Conversion ..... Non-Inverting LO Accuracy ..... $\pm$ 2ppm (-40°C to -60°C)
<b>IF Output:</b>	Output Frequency ..... 14.375 to 26.375 MHz Phase Noise ..... -94 dBc/Hz at 10 kHz offset
<b>General:</b>	Input Connector ..... N female Input return Loss..... 15dB min Surge Protection ..... Internal Output Connector ..... F female Supply Voltage ..... +16 to +24 VDC Supply Current..... 400mA max Size..... 6" x 8" x .9" (15.24 x 20.32 x 2.29 cm) Mounting Pole ..... 1" to 1.75" (25mm to 44mm) diameter Weight ..... 0.7 kg Operating Temperature ..... -40° to +60°C

### Ordering Information

#### Transmit Interfaces:

2.5GHz MMDS/MDS Transmitter .....	620231
IF Upconverter.....	620224
Chassis.....	620223
Power Supply .....	620232
Slot Covers.....	620222

#### Receive Antenna Down Converter Interfaces:

2150MHz to 2162MHz.....	620226
2596MHz to 2620MHz.....	Consult Factory
2348MHz to 2374MHz.....	620300
2500MHz to 2686MHz.....	Consult Factory
Power Supply US .....	620213KN
Power Supply Europe.....	620213KE