

ARRIS Wireless Solutions

2.3GHz Base Station Interfaces

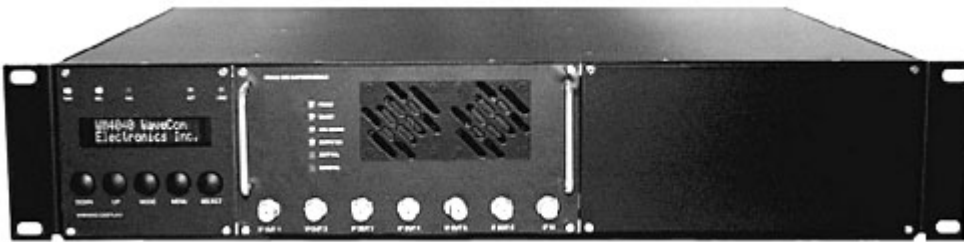


Application

Provides a complete solution for 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

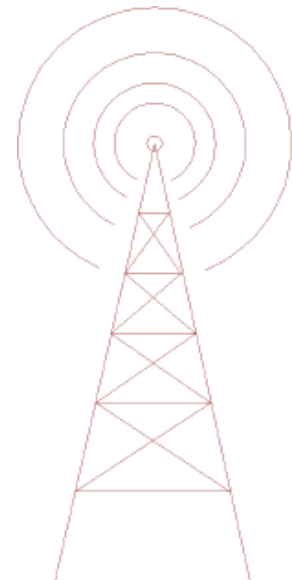


Transmitter Side

- 30 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



Specifications Base Station

Transmitter:	Output Frequency 2200 to 2300 MHz (any 100 MHz band available from 2200 to 2700 MHz) Output Power FCC emission mask approved for 31.5 dBm Gain..... 34 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 Sync Pulse Compression 2 IRE max (analog video, 7 W) Spectral Sideband Regrowth -35 dBc max (64 QAM, 2 W) Input Impedance 50 ohm Output connector..... N female Front Panel Indicators DC Power, RF High, RF Low, High Reverse Power
Upconverter:	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 2200 to 2300 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..... (2260 to 2296 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 (2260 to 2296 MHz) -20 dB
Chassis General:	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)
Regulatory	EMC..... FCC Part 15 Safety UL

Specifications Antenna Down Converter (HDC2348)

RF Input:	Frequency..... 2348 to 2374 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)
IF Output:	Output Frequency 16 to 42 MHz Phase Noise -94 dBc/Hz at 10 kHz offset
General:	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:

2.3GHz MMDS Transmitter	Consult Factory
IF Upconverter.....	Consult Factory
Chassis.....	620223
Power Supply	620232
Slot Covers.....	620222

Receive Antenna Down Converter Interfaces:

2348MHz to 2374MHz.....	620300
Power Supply US	620213
Power Supply Europe.....	620219