

# ARRIS Wireless Solutions

## 5.8GHz Integrated Wireless Modem Interface



### Application

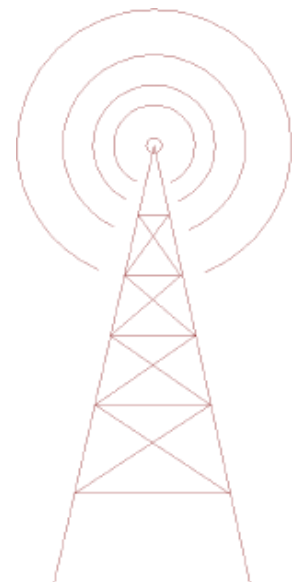
Provides a wireless interface between a DOCSIS® compliant data or voice modem complete with antenna.

### Architectural Overview

The Integrated Wireless Interface is a complete 5.8GHz Transceiver for use in broadband wireless networks. It integrates an up-converter, a power amplifier and antenna 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 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 direct connection. The transceiver also includes an RF mute function to reduce power consumption and broadband noise emissions.



- **Integrated Antenna**
- **+28dBm TX Power QPSK**
- **Audible Installation Alignment Beeper**
- **Embedded Microprocessor Control**
- **Automatic transmit RF Mute**
- **Fully weatherized Enclosure**
- **Allows simple outdoor installation**
- **Aesthetically pleasing**



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### Specifications

**Transmitter:** IF Input Frequency..... 18 to 42 MHz  
 RF Output Frequency ..... 5727 to 5751MHz or  
 ..... 5751 to 5775MHz  
 Linear Output Power ..... +5 dBm QPSK and QAM16  
 Integrated Gain ..... 26 ± 2 dB  
 Gain Flatness ..... ± .5 dB over 6 MHz  
 Gain Stability..... ± 2 dB over temperature  
 Phase Noise ..... <-85 dBc/Hz @ +/- 10 kHz  
 Spectral inversion ..... None  
 Spurious.....-40dBm 9kHz to 21.4GHz  
 IF Level for RF Activation..... +5 dBmv maximum  
 RF Activation/Mute Response Time ..... <2 microseconds

**Receiver:** Frequency..... 5775 to 5799MHz or  
 .....5799 to 5823MHz  
 Gain ..... 53dB ± 2 dB  
 IF Output Frequency..... 516 to 540MHz  
 Gain Flatness..... ± .5 dB over 6MHz  
 Noise Figure ..... <7 dB max  
 Image rejection ..... 90dB min  
 Phase Noise ..... <-85 dBc/Hz @ +/- 10 kHz typical  
 Spurious.....-80dBm 510 to 546MHz  
 .....-50dBm other 5MHz to 860MHz

**RF Output Port:** RF Connector (to modem) ..... F female, 75 ohms  
 RF Return Loss ..... 10dB (transmit and receive RF bands)  
 DC Supply Voltage ..... +18 to +28 VDC (+24V nominal)  
 DC Power Consumption ..... 10W maximum

**Antenna:** Polarity ..... Vertical or Horizontal  
 Beamwidth ..... 9° typical  
 Antenna Gain ..... 23dBi min  
 Cross Polarization Level ..... -20dB max  
 Front to Back Ration ..... -30dB max  
 Wind Speed ..... 200kM Survival

**General:** Frequency Stability ..... ± 15 kHz  
 Long Term Stability..... ± 25 kHz over 10 years  
 Temperature Range.....-30°C to +40°C full specifications  
 .....-45°C to +45°C operational  
 Size..... 12" x 12" x 3" (305 x 305 x 75 mm)  
 Mounting Pole 1" to 2.5" (25mm to 44mm) diameter pole  
 Weight..... 6lbs (2.7 kg)

### Ordering Information

5.8GHz Subscriber Transceiver with Integrated  
 Antenna 5727 to 5751MHz TX .....620266

5.8GHz Subscriber Transceiver with Integrated  
 Antenna 5751 to 5775MHz TX .....620267

### Consult Factory on Correct Ordering Number

Power Adapter and Inserter 115V .....620213  
 Power Adapter and Inserter 220V .....620219

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