

ARRIS Wireless Solutions

3.5GHz Base Station Transceivers



Application

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

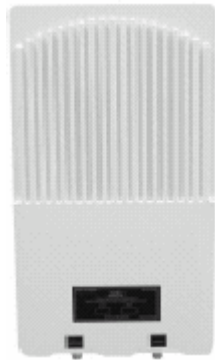
Architectural Overview

The BST3500 series of Base Station interfaces combine a low noise downconverter and high power transmitter in a single unit combined with feature rich integrated management for a 3.5GHz broadband data solution.



BST3500 Indoor Unit

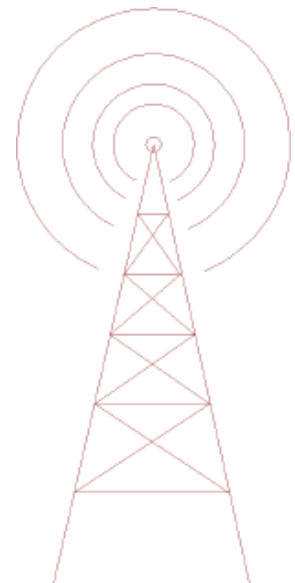
When combined with the WM4040 WMTS controller interface, a full out of band signaling system is available either indoor or outdoor to the BST3500 RF base station transceiver over the connecting coax. Built in power detectors allow for easy input and output level configuration.



BST3500 Outdoor Unit

Product Feature

- **+32dBm RF Output at 64QAM, +37dBm QPSK**
- **Digital Temperature Compensation**
- **Flash Memory for Easy Upgrades**
- **Indoor or Outdoor Model Available**
- **Power and Management over the Single Outdoor Cable**



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Specifications Base Station

Transmitter: Bandwidth Passband 6MHz
 Output Frequency 3400 to 3700 MHz
 (24 MHz sub bands standard)
 Output Power +32 dBm QAM64, +37dBm QPSK
 Power Stability ±1 dB
 Power Control 20dB
 Spectral Mark ETSI EN 301 021 v1.5.1 section 5.5.3,
 Subpart D
 Phase Noise <-95 dBc/Hz at 10 kHz offset
 <-51 dBc double sideband integrated over 10kHz to
 2.5MHz
 Spurious -60 dBc (-70dBc typical)

Receiver: Input Frequency 3400 to 3700 MHz
 (24 MHz sub bands standard)
 IF Output Frequency 18MHz to 42MHz
 Frequency Response (Over any 3 MHz band) ±0.5 dB
 Gain 43dB
 Gain Control Range ±10dB
 Antenna Input Noise Figure <4dB at max gain
 Output Third Order Intercept +9dBm max gain
 Interference Sensitivity per ETSI EN 301 021 when
 connected
 to a CMTS upstream interface
 Phase Noise <-95 dBc/Hz at 10 kHz offset
 <-51 dBc double sideband integrated over 10kHz to
 2.5MHz

Chassis General: Connectors N Female
 IDU-ODU Cable Compensation Range 15dB
 Power Consumption 60 Watts Max
 Operating Temperature Range
 ETS 300 019 Class 4.1 (-30°C to +40°C) full specifications
 ETS 300 019 Class 4.1E (-45°C to +45°C) operational
 Spurious Emissions ETSI EN 301 390
 EMC Compliance ETSI EN 300 385
 Dimensions (indoor chassis) .. 19" (w) x 14.9" (d) x 3.5" (h)
 (48.3x37.9,x8.9cm)
 Mounting (indoor chassis)..... Standard 19" rack - 2U
 Weight (indoor chassis) 28lbs (12.7kg)
 Dimensions (outdoor chassis) .. 18" (w) x 10.4" (d) x 2" (h)
 (47.8x26.5,x5cm)
 Mounting (outdoor chassis) ... Mounting Pole (2.5" to 4.5")

Cable Signaling: Downstream Carrierbetween 366MHz to 594MHz)
 Upstream Carriersbetween 18MHz to 42MHz
 DC Power -48VDC
 Signaling 1MHz signaling channel

Ordering Information

Transmit Interfaces:

Outdoor BST3500 620240
 Indoor BST3500 620249

Base Station Frequency Options

RX RF Frequency Range (MHz)	B/W	TX RF Frequency Range (MHz)
3526 to 3550	24Mhz	3426 to 3450
3410 to 3424	14Mhz	3510 to 3524
3480 to 3496	16Mhz	3580 to 3596
3420 to 3431	11Mhz	3520 to 3531
3524 to 3545	21Mhz	3424 to 3445
3600 to 3624	24Mhz	3500 to 3524
3626 to 3650	24Mhz	3526 to 3550
3417 to 3431	24Mhz	3517 to 3531
3476 to 3500	24Mhz	3576 to 3600
3576 to 3600	24Mhz	3476 to 3500
3417 to 3442	25Mhz	3517 to 3542
3526 to 3550	24Mhz	3626 to 3650
3431 to 3452	21Mhz	3531 to 3552

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