



# Expedience® Base Station

High performance  
flexible solution for  
wireless broadband access

Motorola's Expedience Base Station delivers flexible, high-speed connectivity for fixed and nomadic wireless broadband access. Performance in the field and on the bottom line.



Designed for ease of installation in a number of different configurations, the flexible design of Motorola's Expedience Base Transceiver Station (BTS) will keep costs down as your system needs change by supporting a highly scalable system architecture for both rural and metropolitan areas. In conjunction with the Residential Subscriber Unit, Outdoor Subscriber Unit, Mobile Subscriber Unit, and PC Card CPEs, the BTS incorporates automatic adaptive modulation to maximize the capacity of the airlink over a wide variety of configurations and propagation conditions.

The BTS is a fully self-contained, environmentally-hardened unit. It offers maximum flexibility for installation at the tower or rooftop, in an equipment enclosure, or mounted on a pole. Connections to the unit include a single coaxial antenna feed, -48 VDC power, 10base-T, and GPS UTC (Universal Time, Coordinated) timing signal used to synchronize base stations installed in the same geographical area.

The BTS can be used in either sectored or omnidirectional configurations, using standard antennas. Channel setup or changes can be done remotely using the Motorola NetProvision™ Provisioning Management System and requires no hardware changes at the site. Stacking of up to four base stations on a single antenna is easily accomplished using accessory combiner modules.

Maximum output power is 2 watts. An optional 5W configuration is available for the BTS-2500C, requiring the use of an accessory channel filter. The network interface to the Expedience base station is a standard Ethernet 10/100base-T connection, with a special weatherproof connector. Complete management of the base station can be accomplished

through either a local serial port, telnet session, web interface or using the SNMP-based Expedience Network Management System.

A complete on-site installation includes a transient voltage suppressor (TVS) module for each BTS. The TVS module also allows the BTS to be powered by -48V, +48V, or floating 48V power supplies. To power the base station in a cell, a dual redundant 48VDC power package is also available.

## BENEFITS

- Time Division Duplex (TDD) transmission protocol
- Adaptive high-order modulation 4/16/64 QAM
- 2/5 W transmit power options in the 2.5-2.7 GHz band
- Omni, three, four, or six sector cell configuration
- Layer 2 network interface
- IEEE 802.1q (VLAN) support
- Standard-based network management: SNMP, web-based, CLI, and FTP
- Fully integrated indoor or outdoor mountable package including all radio and modem equipment
- Flexible design allowing optional integral mounting of sector antenna to save on tower space
- Non-Line-Of-Sight OFDM radio transmission

**SPECIFICATION SHEET**

**MOTOROLA BASE STATION FOR EXPEDIENCE®**

**MOTOWi4™**

The Motorola Expedience Base Station (BTS) is part of the MOTOWi4 family of broadband wireless access technologies, a comprehensive platform of wireless broadband solutions and services. Designed to complement and complete operator networks, MOTOWi4 solutions address a broad range of applications across operator segments. MOTOWi4 is extending the reach and capabilities of operator networks, from basic connections in unserved regions to high-speed, mobile access in dense metro markets. MOTOWi4 solutions help people access information and share content wherever they might be.

<b>MOTOROLA EXPEDIENCE BASE STATION SPECIFICATIONS</b>	
Channel Bandwidth (2.5 GHz) (3.x GHz)	3/3.5/5/5.5/6 MHz 3/3.5/5/5.5/6/7 MHz
Frequency Band (MHz) BTS-2500 BTS-3300 BTS-3500 BTS-3700	2496-2690 MHz 3300-3400 MHz 3400-3600 MHz 3600-3800 MHz
Modulation	OFDM - 4/16/64/ QAM
Operating Mode	Time Division Duplex (TDD)
RF Output Power	2 Watts (5 Watts with an accessory channel filter - BTS-2500 only)
RF Output Impedance	50 Ohms
RF Sensitivity	-96 dBm (2.6GHz, 6MHz channel, 4 QAM)
RF Input Impedance	50 Ohms
RF Interface	COAX "N" type female connector All ports lightning/ESD protected
Frequency Stability	2.5 ppm at -30°C to +60°C (0.003 ppm when locked to GPS)
Management Interfaces	RS-232 serial interface connector
Data Interface	IEEE 802.3 10base-T / Ethernet
Output Power Variation	±1 dB over 200 MHz band
Power Requirements	36 to 60 VDC
Average Power Consumption	100 Watts
Enclosure	Indoor / outdoor weather sealed
Operational Altitude	up to 12,000 ft (3,658m)
Temperature Range	-40°C to +60°C
Humidity Range	0% to 100%
Dimensions (Excluding antenna)	20.5 in (H) x 8.2 in (W) x 6.3 in (D) 52 cm (H) x 20.8 cm (W) x 15.9 cm (D)
Weight (Excluding antenna)	24.4 lb. (11 kg)
Regulatory Approvals BTS-2500  BTS-2300/BTS-3300 BTS-3500/BTS-3700	FCC part 15 class A; FCC part 27 Industry Canada RSS-193 Type approvals in progress ETSI 

