



ELECTRONICS

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## Expository Statement

### Outdoor Mini-BTS SCBS-1900M3A

The Outdoor Mini-BTS (**B**ase **S**tation **T**ransceiver) is a 1.9GHz CDMA spread spectrum transceiver providing a radio interface and call processing functions to mobile subscribers, and a metallic T1 interface that flows via various switched into the POTS. The Mini-BTS may be operated in any of three antenna configurations from Omni-sector (single antenna), Dual-sector (two antennas), or Tri-sector (three antennas).

The BTS consists of transmitting/receiving antennas (all antennas provided by customer), transceiver, amplifiers, antenna front-end units, mod/demo circuitry, and a T1 interface which is used for bi-directional phone traffic and control-signals. In addition, the Mini-BTS is equipped with a GPS receiver for network synchronization of the CDMA network.

Power is delivered to the Mini-BTS via customer supplied rectifiers operating on the secondary side at a nominal 27VDC. The Outdoor Mini-BTS provides its own enclosed environment so that it may be installed closer to the antenna in an outdoor setting.

#### Major Functions of BTS

##### 1. Radio Frequency Interface to Mobile Subscriber

The radio transmission characteristics including radio channel interval, modulation method, output power characteristics, spurious emission power, and receiving band emission power shall meet the requirements of JSTD-008, SP-3383, SP-3385 (IS-95 Up-Band CDMA).

##### 2. T1 Metallic Interface

The Mini-BTS to BSC (**B**ase **S**tation **T**ransceiver to **B**ase **S**tation **C**ontroller) bi-directional T1 interface transmits and receives traffic and control packets.

##### 3. BTS Resource Management and Operation/Maintenance Function

BTS provides the following functions for operation and maintenance functions.

- Detects system errors and reports the results to the BSC.
- Collects statistics information related to call processing and reports it to the BSC.
- BTS device self automatic function test
- Forward/backward link performance test

##### 4. GPS Receiving Function

This function receives the time information and clocks of GPS, and generates reference signal, system clock and even\_sec.