UltraWAVE Micro BTS

GSM Base Transceiver Station

The UltraWAVE Micro BTS is a compact version of the full size UltraWAVE base transceiver station with a maximum capacity of 6 TRXs. Both products share the same hardware and software modules.

UltraWAVE MSC, BSC and BTS work hand-in-hand to reduce the total cost of network ownership, providing a network growth path for existing and future customers, and expand the addressable markets of ADC's GSM products.

Key BTS Features

- Frequency hopping supported
- Sectorization supported
- GPRS supported (CS-1, CS-2, CS-3, CS-4)
- 2-way and 3-way combining options available

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The Micro product line provides a compact and cost-effective platform, which helps lower the cost of network ownership. They are easy to upgrade or repair in the field and provide a range of new monitoring and control functions. The UltraWAVE Micro BTS supports up to six TRXs in one chassis. With a single compact chassis, it can support an S222 site. It has the industry leading power amplifier at 50 Watts when configured for 850 and 900 MHz and at 40 Watts when configured for 1800 and 1900 networks. Micro supports all the key BTS features, such as frequency hopping, sectorization, and GPRS. It provides sufficient capacity for rural and urban coverage (up to S222) and is flexible enough to scale from O1 to S222 supporting the popular BTS configurations, S111 and S222. It increases the BTS coverage with industry leading power output (50W measured at antenna port without combining). Receive sensitivity with antenna diversity is up to -114 dBm. Designed for easy expansion of the BTS capacity, the Micro BTS is field upgradable. Operators can start with a small system and pay as they go to add capacity.

The Micro BTS is designed for low cost maintenance with remote monitoring, external alarms, overheating protection, redundant power supply, field replaceable modules, and easy front access. It can reduce the on-going operation expenses for the operators. An integrated turn-key BTS package option is available with transmission, battery, and other site equipment.

Features:

- Available in 850, 900, 1800 and 1900 MHz frequency bands
- Frequency hopping
- Sectorization
- General Packet Radio Service (GPRS) supported (CS-1, CS-2, CS-3, CS-4)
- Dynamic power control (uplink and downlink)
- Significantly improved BTS sensitivity: -114 dBm (optimal combining diversity) or -111 dBm (no diversity)
- Remote monitoring: Temperature, fan, power supply (PSU), power amp, VSWR can be monitored from central office enabling remote diagnosis and quick recovery
- External alarms for third party equipment
- Optional redundant power supply with PSU failure alarm support
- Integrated full rack solution available: UltraWAVE integrated with additional on-site equipment such as transmission, battery backup, etc. in one rack
- Common hardware modules: single slot TRX, processor card, RF module
- GSM EFR voice codec

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Specifications

BTS Configurations (single cabinet): S111, S222, O4, O6
Frequency Support: GSM 850 MHz, GSM 900 MHz, DCS 1800 MHz, PCS 1900 MHz

CAPACITY
Number of TRXs: 6
Number of Traffic Channels: 44
Traffic Capacity: 34.68 Erlangs @ 2% GoS (O6)
1380 subscribers @ 25mE
Output Power: 50 Watts (antenna port)
RF Receiver Sensitivity: -111 dBm without diversity
-114 dBm with diversity

INTERFACES
RF Interface: GSM Compliant Um Interface; GSM spec. 04.06, 04.08, 05.01- 05.05, 05.08 & 05.10; GSM spec 03.64, 04.60 (Rel 98)
BSC Link: Abis Interface, GSM spec. 04.08, 08.58, 12.21
Transmission: Dual Port G7.03 compliant E1 75/120 Ohm;
Dual Port T1.403 compliant T1 100 Ohm
Ethernet: 10/100 Mbps Ethernet, RJ-45 connector
Serial Port: RS232, RJ-45 connector

OPERATION
Remote Monitoring: Monitor temperature, PA, fan, PSU, VWSR from central office;
External alarms supported
Overtemp Protection: Automatic detection and intervention
Access to Equipment: Front and rear access
Field Support: All modules are field replaceable
Capacity Expansion: Field upgradable
Support of various upgrades

POWER SUPPLY
Input Voltage: 110/220 VAC, -48 VDC
Redundancy: Redundant power supply
Alarm: PSU failure alarm reported to OMC

MECHANICAL
Rack Mount: Versatile mounting options for 19", 23" and 24" racks
Dimensions (HxWxD): 1051 x 560 x 647 mm (41.8 x 22.05 x 25.5 inches)
Weight: 213 kg (470 lbs)

OPERATING ENVIRONMENT
Temperature: -5° to 55° C (23° to 131° F)
Humidity (non-condensing): 10% to 90%