UltraWAVE BTS

GSM Base Transceiver Station

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. They serve as the flagship GSM product line for ADC Mobile Network Solutions.

The UltraWAVE 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.

SPEC SHEET

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 UltraWAVE BTS supports up to twelve TRXs in one chassis. With a single compact chassis, it can support a S444 site. It has the industry leading power amplifier at 50 Watts when configured for 850 MHz, 900 MHz, 1800 MHz and 1900 MHz GSM networks. UltraWAVE supports all the key BTS features, such as frequency hopping, sectorization, and GPRS. It provides sufficient capacity for urban high capacity coverage (up to S666) and is flexible enough to scale from S111 to S666 supporting the popular BTS configurations, S222 and S333. 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 UltraWAVE BTS is field upgradable. Operators can start with a small system and pay as they go to add capacity.

The UltraWAVE 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)
- GSM EFR voice codec
- 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 are also supported
- Optional redundant power supply with PSU failure alarm support
- Adaptive AC PSU (110V or 220V)
- -48 VDC is also supported
- 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, ICP, RFU

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Specifications

BTS Configurations (one cabinet):	S111, S222, S333, S444, O4, O6, O12
Frequency Support:	GSM 850 MHz, GSM 900 MHz, DCS 1800 MHz, PCS 1900 MHz
Two Cabinets:	S666
CAPACITY	
Number of TRXs:	12
Number of Traffic Channels:	84
Traffic Capacity:	72.53 Erlangs @ 2% GoS 012 2901 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 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%

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