UltraWAVE

GSM Network-In-A-Box

ADC's GSM Network-In-A-Box (NIB) combines GSM MSC, Base Station Controller and Base Transceiver Station in a single box. It provides the smallest and lowest entry point into the GSM wireless space. ADC's 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. ADC's GSM products provide a compact and cost-effective platform, which help lower the cost of network ownership.

SPEC SHEET

Features

- Compact integrated MSC, BSC and BTS
- Call forwarding (conditional, unconditional), call waiting, call hold, call transfer
- Generates GSM & ASN.1 compliant CDR records
- Available in 850, 900, 1800 and 1900 MHz frequency bands
- General Packet Radio Service (GPRS) support
- MAP-C, MAP-D
- Dynamic power control (uplink and downlink)
- Built in IN Prepaid, SMSC, AuC and EIR
- External alarms for third party equipment are also supported
- Common hardware modules with UltraWAVE X100, BTS and BS Plus products
- Integrated full rack solution available: UltraWAVE NIB integrated with additional on-site equipment such as transmission, battery backup, etc. in one rack

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GSM Network-In-A-Box

ADC's UltraWAVE GSM Network-In-A-Box product offers the ability to support a complete GSM network by integrating a mobile switching center (MSC), a base station controller (BSC) and a base transceiver station (BTS) in a single compact enclosure. The UltraWAVE NIB is designed for rapid deployment, with compactness suitable for many special applications, and the cost-effectiveness for very small capacity networks or network extensions. The UltraWAVE NIB can support either a completely stand-alone GSM network and integrate with existing wireline and wireless network infrastructures or can be deployed as part of an extension of an existing public land mobile network (PLMN). Its usage has ranged from remote small coverage areas often with satellite backhaul to enterprise private GSM networks integrating with private PBXs for military, government and disaster recovery applications. The NIB is also an excellent tool for GSM developers for their laboratory use and solutions testing.

The UltraWAVE NIB provides switching capacity and mobility management functions within its serving area. It supports HLR and VLR switch functionality and integrated value added services (VAS) including IN Prepaid, SMS and authentication center. Additional optional services such as GPRS and voicemail are supported as well.

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FEATURES

Interface Capacity:	90 Erlangs @ 0.1% Grade of Service
Busy Hour Call Attempts:	3600
Total Subscribers:	3600 @ 0.025 Erlang per subscriber
Max Number of Full Rate Simultaneous connections:	Up to 106 (non-blocking)

RADIO

Number of TRXs:	2 internal, 26 total
Number of BTSs:	1 internal; 5 total
Output Power:	Variable up to 50 Watts at antenna port
RF Receiver Sensitivity:	-111 dBm (without diversity) -114 dBm (with diversity)

KEY FEATURES:	Integrated IN Prepaid, SMSC Integrated TRAU function Star or daisy chain configuration Optional audio announcements and voicemail Encryption (A5/0, A5/1) Sectorization supported GPRS supported (CS-1, CS-2, CS-3, CS-4)

INTERFACES

PSTN:	ITU/ANSI ISUP, ITU/ANSI ISDN PRI, R2
MSC/BSC Link:	GSM Compliant A Interface; GSM Spec. 04.08, 08.08; ANSI 1992 CCITT 1988, 1992; BSSMAP, GSM 08.08 DTAP, GSM 04.07, 04.08,SCCP & MTP GSM spec 08.06
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)
BTS Link :	Abis Interface, GSM spec. 04.08, 08.58, 12.21
Transmission:	G7.03 compliant E1 75/120 Ohm; 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, external alarms supported
Access to Equipment:	Front loaded cards and modules
Field Support:	Modules are field replaceable

POWER SUPPLY

Input Voltage:	115/230 VAC; -48 VDC
Redundancy:	Redundant power supply
Alarm:	PSU failure alarm reported OMC

MECHANICAL

Dimensions (HxWxD):	535 x 485 x 410 mm (21 x 19 x 16 inches)
Weight:	57 kg (125 lbs) typical (meets 2 man-lift requirement)

OPERATING ENVIRONMENT

Temperature:	-5° to 45°C (23°F to 113°F)
Humidity (non-condensing):	10% to 90%

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SPEC SHEET

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