

GSX9000™ High-Density Media Gateway

Ribbon HDHP21 Chassis

The Ribbon Communications' HDHP21 chassis is a NEBS-compliant, blade-based chassis that houses hardware and software including pre-loaded management modules (a redundant pair of MNS21 cards) and a configurable mix of up to 14 circuit (CNS), packet (PNS) and signal processing (SPS) cards. The HDHP21 chassis forms the foundation of both the GSX9000 high-density media gateway and the SBC 9000™ session border controller.

Chassis Slots

- 16 blades per chassis
- Two (2) slots required for redundant MNS21 cards
- 14 available slots for circuit, packet and signal processing cards in any combination

Single-Shelf Capacity

- Up to 22,176 simultaneous VoIP calls
- Up to 28,224 DS0s

Mgmt. Module Control Interfaces

- Two (2) x 10/100Base-TX RJ-45 connectors
- RS-232 Serial Asynchronous Management Port
- DB-15 connector for DS1/E1 timing interface

Mgmt. Module Bearer Interface

- Choice of:
 - MNA20: Two (2) x 10/100Base-TX RJ-45 connectors
 - MNA21: One (1) x 1000Base-LX per IEEE 802.3z single-mode, mediumreach 10km fiber LC connector
 - MNA25: One (1) x 1000Base-SX per IEEE 802.3z multi-mode, short-reach 275m (62.5 micron fiber) or 550m (50 micron fiber) LC connector

Redundancy

- 1:1 management modules

Circuit Timing Sources

- Any GSX9000 PSTN I/O interface
- Internal Stratum 3 clock
- Choice of:
 - MTA10: T1 redundant Building Integrated Timing Source (BITS) port per GR-1244-CORE
 - MTA2x: E1 redundant Synchronous Equipment Timing Source (SETS) ports per ITU-T G.813, G.823 and G.704
 - MTA20: E1 120 ohm
 - MTA21: E1 75 ohm



Packet Network Timing

- Network Timing Protocol (NTP) per RFC-1708

Alarm Contacts

- 5 alarm out
- 5 alarm in

Status Indicators

- Management Network Server (MNS)
 - Power Fault
 - Fan Failure
 - Over Temperature
 - Contact Alarm Output
 - Contact Alarm Input
 - MTA Fault
 - MNA Activity
- Management Network Adaptor (MNA)
 - Activity
- Management Timing Adaptor (MTA)
 - Activity
 - Fault

Country Approvals

- CE Mark – European Union
- JATE – Japan
- COFETEL – Mexico
- EMC
 - CFR47 Part 15 Class A – United States
 - EN55022 (CISPR 22 Class A) – European Union
 - VCCI Class A – Japan
 - AS/NZS 3548 Class A – Australia & New Zealand
 - EN300386: v1.3.3 (2005-04) – European Union
- Safety
 - UL 60950-1:2003 – United States
 - CAN/CSA-C22.2 No. 60950 – Canada
 - EN60950-1:2001 – International Standard
 - AS/NZS 3260 – Australia & New Zealand
 - NOM 019 - Mexico
- Telecom
 - FCC Part 68 – United States

Management Capabilities

- Event Log
- Diagnostics
- Configuration
- Performance
- Provisioning

Local Management

- Telnet
- Local Craft Command Line Interface
- Web
- SNMP Agent (SNMP version 2)

Central Office Standards

- SR-3580 NEBS Level 3
- GR-1089 CORE Issue 4, June 2006
- GR-63 CORE Issue 3, March 2006

Dimensions

- 17.42 in. (44.25 cm) width x 27.90 in. (70.87 cm) height x 17.87 in. (45.39 cm) depth

About Ribbon

Ribbon Communications (Nasdaq: RBBN) delivers communications software, IP and optical networking solutions to service providers, enterprises and critical infrastructure sectors globally. We engage deeply with our customers, helping them modernize their networks for improved competitive positioning and business outcomes in today's smart, always-on and data-hungry world. Our innovative, end-to-end solutions portfolio delivers unparalleled scale, performance, and agility, including core to edge software-centric solutions, cloud-native offers, leading-edge security and analytics tools, along with IP and optical networking solutions for 5G. We maintain a keen focus on our commitments to Environmental, Social and Governance (ESG) matters, offering an annual Sustainability Report to our stakeholders. To learn more about Ribbon, please visit rbbn.com.

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