

# AudioCodes CPE & Access Gateway Products

## Mediant™ 800 MSBR

## Multi-Service Business Router



### ABOUT AUDIOCODES

AudioCodes Ltd. (NasdaqGS: AUDC) designs, develops and sells advanced Voice over IP (VoIP) and converged VoIP and Data networking products and applications to Service Providers and Enterprises. AudioCodes is a VoIP technology market leader focused on converged VoIP & data communications and its products are deployed globally in Broadband, Mobile, Enterprise networks and Cable. The company provides a range of innovative, cost-effective products including Media Gateways, Multi-Service Business Routers, Session Border Controllers (SBC), Residential Gateways, IP Phones, Media Servers and Value Added Applications. AudioCodes' underlying technology, VoIPerfectHD™, relies on AudioCodes' leadership in DSP, voice coding and voice processing technologies. AudioCodes High Definition (HD) VoIP technologies and products provide enhanced intelligibility and a better end user communication experience in Voice communications.

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### BENEFITS FOR SERVICE PROVIDERS

- A highly integrated device for VoIP, Data, Security & Access, forming a single managed point of demarcation
- SIP Mediation that enables secured SIP Trunking in a variety of IP-PBX environments
- Simplified management & maintenance using a unified management tool
- Branch survivability
- Quality of Experience (QoE) lifecycle management solution

### BENEFITS FOR SMB CUSTOMERS

- “All-in-one” box reducing CAPEX and OPEX, simplifying maintenance and management
- Smooth connectivity to cloud services
- Enhanced Voice and Data Security, based on an embedded Enterprise-Class Session Border Controller and Firewall
- SIP mediation for flexible SIP Trunking service
- Multiple service provider connectivity to optimize tariff rates
- Ready for hosting IP-PBX applications and additional office Value Added Services for increased productivity

### BENEFITS FOR OEM AND VALUE ADDED SERVICES DEVELOPERS

- An integrated and compact platform, ready for hosting a variety of business applications
- Relieving interoperability and integration “pains” with Media Gateways, Media Servers, SBCs, Routers, etc.
- Built-in SIP-controlled media processing resources for advanced voice applications (Conferencing, Streaming, etc.)
- Embedded SIP mediation and transcoding, enabling SIP trunking services
- Enhanced Voice and Data Security

**AudioCodes Mediant™ 800 MSBR** is an all-in-one box solution, designed to provide converged voice and data connectivity for small-to-mid size business (SMB) customers, and to form a well-managed point of demarcation for service providers. Based on AudioCodes' VoIPerfectHD technology, the Mediant 800 MSBR integrates a variety of communication functions into a single platform, including VoIP mediation, Enterprise Session Border Controller, Data Routing, WAN access, voice and data security, branch survivability, and an optional server for hosting value added applications.

### INTEGRATED LAN SWITCH AND DATA ROUTING

AudioCodes Mediant 800 MSBR has an integral LAN Switch supporting up to 12 Power-over-Ethernet (PoE) LAN ports for IP Phones and other PoE devices. It is equipped with an integrated WiFi (802.11n) access point, as well as optional dynamic and static data routing capabilities.

### FLEXIBLE WAN ACCESS CAPABILITIES

AudioCodes Mediant 800 MSBR has a versatile WAN interface supporting optical Gigabit Ethernet and Copper, T1 WAN and a selection of DSL protocols such as SHDSL, ADSL2+ and VDSL. It also supports a 4G/3G cellular connection through a USB dongle. This selection of options provides great flexibility in connecting to service provider networks.

### SMALL-TO-MID SIZE BUSINESS CLASS MEDIA GATEWAY

AudioCodes Mediant 800 MSBR is built upon a highly interoperable VoIP Media Gateway that can be delivered in several pre-defined configurations, supporting a single E1/T1/J1 trunk, up to 4 BRI ports (8 calls) or up to 12 analog (FXS/FXO) ports.

### ENTERPRISE SESSION BORDER CONTROLLER (E-SBC)

By upgrading the platform with software E-SBC licenses, the Mediant 800 MSBR protects the enterprise network and provides secured connectivity into SIP Trunking and other service provider applications. The key security features include Call Admission Control (CAC), encryption and authentication, topology hiding, traffic separation and protection against Denial of Service (DoS) attacks.

### BRANCH SURVIVABILITY, SECURITY AND QoE FOR CLOUD SERVICES

With support for the integrated Cloud Resilience Package (CRP) and Standalone Survivability (SAS) features, the Mediant 800 MSBR facilitates local internal calling and PSTN fallback for making and receiving external calls during WAN interruptions, along with advanced security features and quality of experience (QoE) tools.

### OPEN PLATFORM FOR HOSTING VALUE ADDED APPLICATIONS

AudioCodes Mediant 800 MSBR extends the flexibility of the Multi-Service Business Router with a built-in Open Solution Network (OSN) server option based on an Intel processor. Independent software vendors and OEM customers can utilize this integrated, general purpose server to host their own applications such as IP-PBX, IVR, Call Center, Conferencing, and more.

### POWERFUL MEDIA PROCESSING SERVICES

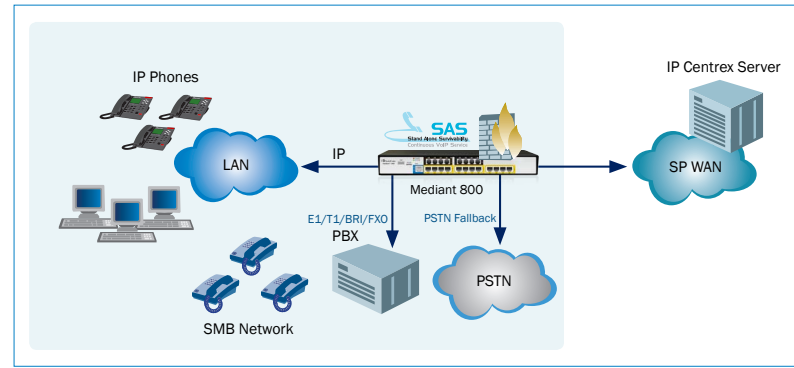
The on-board DSP resource farm enables the implementation of a variety of narrowband and wideband VoIP media processing services, such as recording, integrated voice response (IVR), conferencing and transcoding. Utilizing AudioCodes dedicated DSP resources enables a more robust and predictable voice performance compared to systems that are based on general purpose CPUs.



# Mediant™ 800 Multi-Service Business Router

## MEDIANT 800 MSBR IN SERVICE PROVIDER NETWORKS

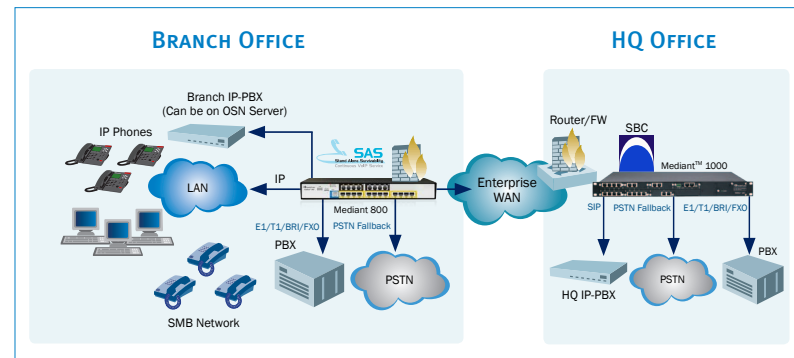
As SMB's strive to control their communication operating and equipment costs, outsourcing a Voice and Data infrastructure to a Service Provider is becoming an attractive option. The Mediant 800 MSBR offers service providers who are delivering hosted and managed communication services, a clear and easy-to-manage demarcation point, combining Data Routing and Security, WAN Access, Secured VoIP and branch survivability. Using the Mediant 800 MSBR, Service Providers' SMB customers can easily and securely consume cloud-based SaaS services.



## MEDIANT 800 MSBR IN DISTRIBUTED ENTERPRISE NETWORKS

Enterprises are motivated to be more productive, efficient, and responsive to their internal users. The convergence of secured voice services, branch survivability, Data Routing, Security and WAN Access into a branch office's unified platform, ensures a high level of investment protection, cost-optimization and support for the growing communication needs of the Enterprise.

The Mediant 800 can be utilized at the company's remote branches, providing a suite of services, which include secured SIP Trunking by an Enterprise-class Session Border Controller, a survivable VoIP media gateway and a cost-effective IP-PBX platform. In addition, the higher density Mediant 1000 MSBR is a well-suited platform for converging VoIP Gateways and a Session Border Controller, thereby improving the enterprise headquarter's service level.



## TARGET APPLICATIONS

- SIP Trunking
- IP Centrex and hosted services
- IP-PBX for SMB/SOHO
- Remote connection to IP-PBX in distributed Enterprise branches
- Unified Communications mobility and Value Added Services for SMB/SOHO

## SPECIFICATIONS

TDM Interfaces	
PSTN Capacity	Voice interfaces: The Mediant 800 is equipped with up to 12 analog PSTN interfaces, 8 BRI and single E1/T1/J1 span, or a combination
Digital Interfaces	Single span E1/T1/ using RJ-48c connectors 4/8 BRI ports using RJ-48c connectors
Analog Interfaces	4/8/12 FXS ports, 4/8/12 FXO ports using RJ-11 connectors Option of 1 FXS Lifeline port in case of power failure
BRI Interfaces	8 BRI ports (16 calls), network S/T interfaces. NT or TE termination
Networking Interfaces	
WAN	WAN interface 10/100/1000 Base-T Copper Support for T1*, SHDSL, ADSL2+, VDSL
LAN	<b>3 configurations:</b> 4 ports 10/100/1000Base-T plus additional 8 10/100Base-TX ports or 2 ports 10/100/1000Base-T or 4 ports 10/100/1000Base-T PoE- Power-Over Ethernet on all ports is optional (Compliant to 802.3af-2003 with auto-detection Up to 15.4W per port), PoE management
WiFi	WiFi Access Point support for 802.11 b/g/n dual-band
OSN Server Platform (Optional)	
Single Chassis Integration	Embedded, open Network Solution Platform for third-party services
CPU	Intel Atom 1.6 GHz, Intel Celeron Dual Core 1.1 GHz
Memory	1G RAM, 2G RAM, 4G RAM
Storage	SATA storage

## Media Processing

Voice Coders	G.711, G.723.1, G.729A, G.722, AMR-WB Independent dynamic vocoder selection per channel
Echo Cancellation	G.165 and G.168-2002, with 32, 64 or 128 msec tail length
Quality Enhancement	Dynamic programmable jitter buffer, VAD, CNG
DTMF/MF Tones	Packet-side or PSTN-side detection and generation, RFC 2833 compliant DTMF relay and Call Progress tones Detection and Generation
IP Transport	VoIP (RTP/RTCP) per IETF RFC 3550 and 3551, IPv6 Supported
Fax Transport	T.38 compliant (real time fax), Automatic bypass to PCM

## Signaling

Digital - PSTN Protocols	CAS: MF-R1: T1 CAS (E&M, loop start, Feature Group-D, E911CAMA), E1 CAS (R2 MFC), R1.5, numerous protocol and country variants ISDN PRI: ETSI/EURO ISDN, ANSI NI2 and other variants (DMS100, 5ESS), VN3, VN4, VN6 ISDN BRI: Euro ISDN, VN4/6 or QSIG
Analog Signaling	Loop Start FXS/FXO, Caller ID, polarity reversal, distinctive ringing, visual Message Waiting Indication, 2/4/6 E&M ports, using R48S connectors

## Data Routing (Optional)

DHCP/PPPoE/L2TP/PPTP client towards WAN  
DHCP server towards LAN  
VLAN  
Layer 3 routing  
Internal layer 2 switching  
Static and dynamic routing (RIP1, RIP2, OSPF, BGP)

## Control and Management

Control Protocols	SIP-TCP, SIP-UDP, SIP-TLS and SIP-MSMCL*, IPv6 Supported Cloud Resilience Package or Standalone Survivability for service continuity
Operations & Management	AudioCodes' Element Management System Embedded HTTP Web Server, SNMP V2/V3, SSH, Telnet, TR-69 Remote configuration and software download via HTTP or HTTPS, RADIUS, Syslog (for events and alarms)

## IP/VoIP Quality of Service

IEEE 802.1P, TOS, DiffServ labeling  
IEEE 802.1Q VLAN tagging  
RTCP-XR\* (Extended Reports per RFC 3611)  
Shaping Policing, Queuing, Bandwidth Reservation (Optional)

## Security

Session Border Controller (SBC)	SIP Header conversion SIP Normalization Survivability IP-to-IP routing translations of various SIP transport types; UDP, TCP, TLS Translation of RTP, SRTP Support SIP trunk with multi-ITSP (Registrations to ITSPs is invoked independently) Topology hiding Call Admission Control Call Black/White list
Data Security	IPsec ESP - Tunnel mode Encryption Authentication IKE mode - IPsec VPN <b>IDS/IPS:</b> - Fragmented traffic - Malformed Request - Ping of Death - Properly formed request from unauthenticated source - DDoS attack - SYN flood Stateful packet inspection firewall DMZ Host Port Triggering Packet Filtering Application Layer Gateway

## Hardware Specifications

Power Supply: Single, universal 90-260 V AC  
Physical Dimensions: 320mm x 345mm x 1U

## Regulatory Compliance

Safety and EMC Standards	UL60950-1, EN60950-1, CB certification including National deviations EN55024, EN55022 Class A, EN61000-3-2, EN61000-3-3, EN300 386, FCC 47 Part 15 Class A
Telecommunication Standards	TIA/EIA-IS-968, ETSI ES 203 021 (FXO interface)

Contact AudioCodes to check the availability of desired interfaces combinations

\*Future Release