Mediant™ 1000 MSBG Multi-Service Business Gateway

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, Cable, and Enterprise networks. The company provides a range of innovative, cost-effective products including Media Gateways, Multi-Service Business Gateways, Session Border Controllers (SBCs), Residential Gateways, IP Phones, Media Servers and Value Added Applications. AudioCodes’ underlaying technology, VoPerfekt™, 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 and end user communication experience in Voice communications.

International Headquarters
1 Hagarden Street, Airport City
Lod 70151, Israel
Tel: +972-3-976-4000
Fax: +972-3-976-4040
AudioCodes Inc.
27 World’s Fair Drive,
Somerset, NJ 08873
Tel: +1-732-480-6660
Fax: +1-732-489-2298

About the Mediant 1000 MSBG
The Mediant™ 1000 MSBG is an all-in-one multi-service access solution for Service Providers offering managed services and distributed Enterprises. This multi-service business gateway is designed to provide converged Voice & Data services for business customers at wire speed, while maintaining VLAN parameters for superior voice quality.

The Mediant 1000 MSBG is based on AudioCodes VoPerfekt best-of-breed Media Gateway technology, combined with Enterprise class Session Border Controller, Data & Voice security elements, Data Routing, LAN Switching and WAN Access. These services allow smooth connectivity to cloud services.

Benefits for Providers
- A highly integrated device for VoIP, Data, Security & Access forming a single managed point of demarcation
- SIP Mediation enabling SIP Trunking in a variety of IP-PBX environments
- Simplified management & maintenance using a unified management tool
- Service survivability and high availability
- Quality of Experience (QoE) lifecycle management solution

Benefits for Businesses Customers
- “All-in-one” box removing OpEx 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 and 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
- Solving interoperability and integration “pains” with Media Gateways, Media Servers, SBCs, Routers, etc.
- Built-in SIP-controlled media processing resource for advanced voice applications (Conferencing, Streaming, etc.)
- Embedded SIP mediation and transcoding enabling SIP trunking services
- Enhanced Voice and Data Security

Product Highlights
- A direct evolution of the field-proven and highly interoperable Mediant 1000™ VoIP media gateway
- Enterprise-Class Session Border Controller
- IP-to-IP Protocol normalization and Media transcoding
- Full Data security suite including Firewall, IDS/IPS, VPN & SSL
- Integrated Router
- Advanced Media Processing Module and generic application processor
- Embedded BroadSoft PacketSmart agent for QoE lifecycle management

The Mediant™ 1000 MSBG offers Data Routing capabilities by providing static routing and dynamic routing protocols such as RIPv2/OSPF and BGP. In addition, the MSBG supports a selection of WAN Interfaces providing flexibility in connecting to Service Providers.

SBC (Session Border Controller) and Security Services
AudioCodes’ Mediant 1000 MSBG is designed as a secured VoIP and Data platform. Enhanced Media Gateway security features include SRTP for media, TLS for SIP control, IPSec for management, and other additional features. Data Security functions include integrated Stateful Firewall, IDS/IPS, SLL for remote user access and site to site VPN. A fully featured Enterprise class Session Border Controller provides a secured voice network deployment based on a Back-to-Back User Agent (B2BUA) implementation.

Quality of Service (QoS) and Quality of Experience (QoE)
AudioCodes Mediant 1000 MSBG supports enhanced IP Quality of Service (QoS) enforcement and Quality of Experience (QoE) Monitoring. Leveraging a BroadSoft PacketSmart embedded agent - a SaaS-based lifecycle management solution, the Mediant 1000 MSBG enables service providers and multi-service enterprises to inter connect networks, certify VoIP deployments, and measure, monitor, track, and help optimize the QoE of their VoIP services. The PacketSmart solution is either offered as a public cloud service or within the customer’s data center in a private cloud deployment. AudioCodes’ Mediant 1000 MSBG also supports enhanced IP Quality of Service (QoS), including Ethernet frame tagging (802.1P), IP packet marking (DiffServ), and traffic shaping.

Survivability Services
Customers served by a centralized SIP-based IP-Centrex server or branch offices of distributed enterprises may face a service continuity challenge. The SAS (Stand Alone Survivability) functionality enables internal office communication between SIP clients, along with PSTN fallback, in the case of disconnection from the centralized SIP IP-Centrex server or IP-PBX.

Value Added Services by an Open Platform for 3rd Party Applications
AudioCodes Mediant 1000 MSBG extends the flexibility of the Multi-Service Business Gateway with the built-in Open Session Initiation Network (OSIN) 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 (e.g. IP-PBX, IVR, Call Center, Conferencing, and more). In addition, an advanced, on-board DSP Resource Farm enables the implementation of media processing services, such as announcements, recording, IP conferencing and transcoding, all controlled by standard protocols (e.g., SIP and MGCP). Utilizing AudioCodes dedicated DSP resources, enables a more robust and predictable voice performance, as compared to typical software implementations, based on general purpose CPU’s.

AudioCodes CPE & Access Gateway Products

- Advanced Media Processing Module and generic application processor
- Embedded BroadSoft PacketSmart agent for QoE lifecycle management
- Enhanced Voice and Data Security
- A direct evolution of the field-proven and highly interoperable Mediant 1000™ VoIP media gateway
- Enterprise-Class Session Border Controller
- IP-to-IP Protocol normalization and Media transcoding
- Full Data security suite including Firewall, IDS/IPS, VPN & SSL
- Integrated Router
- Advanced Media Processing Module and generic application processor
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Contact us: www.audiocodes.com/info
Website: www.audiocodes.com
Mediant™ 1000 MSBG Multi-Service Business Gateway

**Mediant 1000 MSBG in Service Provider Networks**

As Enterprises struggle to control their communication operating and equipment costs, outsourcing their VoIP and Data infrastructure to a Service Provider is becoming a more attractive option. The Mediant 1000 MSBG 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, and Telecommunication Standards into a single platform.

**Target Applications**

- Voice over Broadband (VOBB) and MSOs
- SIP Trunking by an Enterprise-class Session Border Controller, providing a suite of services which include secured voice services, Stand Alone Survivability, Data Routing and Security, WAN Access into a branch office’s unified platform, enables a high level of protection, cost-optimization and support for the growing communication needs of the Enterprise.

Additionally, the Mediant 1000 MSBG can be utilized at company headquarters, providing a suite of services which included secured SIP Trunking by an Enterprise-class Session Border Controller, a survivable VoIP media gateway and a cost-effective IP-PBX platform.

**Mediant 1000 MSBG in Distributed Enterprise Networks**

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

**Specifications**

**Interfaces**

**PSN Modularity and Capacity**

PSN Modularity and Capacity: the Mediant 1000 is equipped with 6 Slots for hosting voice processing and PSN termination modules up to 120 TDM VoIP channels per Gateway.

**Digital Module**

1, 2 or 4 E1/T1/J1 spans per module using RJ-48c connectors with an option of PSN Fallback.

**Analog Module**

4 ports FXO or FXS per module using RJ-45 connectors, ground start and loop start modes.

**BRI Module**

4 BRI ports (8 calls) per module, network 4/1 interfaces, NT or TE termination.

**Media Processing Module**

Support Media processing options of up to 60 Conferencing legs (3-way or N-way), play, record to IP or PSTN.

**Networking Interfaces**

- **WAN**
  - 10/100/1000Base-T, 1000Base-X/SX/XX, T1 DSU/CSU, SHDSL, ADSL2+*, E1 DSU/CSU*
  - 3 ports 10/100/1000Base-T
- **LAN**
  - 10/100/1000Base-T
- **OSN Server Platform**
  - Single Chassis Integration
  - Embedded, Partner Application Platform for third party services
  - **CPU**
    - Pentium M 1.4 GHz
  - Memory
    - 256 MB or 1GB RAM
  - **Storage**
    - Single/Dual hard disk drives
  - **Interfaces**
    - 10/100/1000Base-T, USB, VGA, RS-232

**OSN Server Platform**

1U high, 19-inch wide

**Power Requirements**

100-240V, 50-60Hz, 1.5A Max, Single (default) or redundant (optional) power supply configurations

**Environmental Specifications**

- **Temperature**
  - 0°C to 40°C
- **Humidity**
  - 10% to 90% non-condensing

**Regulatory Compliance**

- **Safety and EMC Standards**
  - UL60950-1, FCC 47 CFR part 15 Class B
  - IEC 60950-1, EN60950-1, EN60950-1-2, EN61000-3-3
- **Telecommunication Standards**
  - TIA/EIA-455, ITU-T-TBR-13 and TBR-21
- **Environmental Specifications**
  - ETS 300019-2-1 Storage T1.2, ETS 300019-2-2 Transportation T2.3

**Future Release**

- Tel: Caller ID, polarity reversal, melting times, distinctive ringing, visual message waiting indication, loop start, ground start
- Auto Voice Over Internet Protocol (VoIP) (RFC 3550 and 3551)
- Analog Signaling
  - T.30 for facsimile, G.711 or G.729 for voice
- Analog Modem Transport
  - T.38 compliant (real time fax), Automatic bypass to PCM or ADPCM
- IP Transport
  - VoIP (RTP/RTCP) per IETF RFC 3550 and 3551
- DTMF/MF Tones
  - Packetside or PSTN side detection and generation, RFC 2833 compliant DTMF relay
- Quality Enhancement
  - Dynamic programmable jitter buffer, VAD, CNG
- Echo Cancellation
  - G.165 and G.168-2002, with 32, 64 or 128 tail length
- Media Processing
  - Support Media processing options of up to 60 Conferencing legs (3-way or N-way), play, record to IP or PSTN
- BRI Module
  - 4 BRI ports (8 calls) per module, network 4/1 interfaces, NT or TE termination
- Digital Module
  - 1, 2 or 4 E1/T1/J1 spans per module using RJ-48c connectors with an option of PSN Fallback
- PSTN Modularity and Capacity
  - Voice interface: the Mediant 1000 is equipped with 6 Slots for hosting voice processing and PSN termination modules up to 120 TDM VoIP channels per Gateway.
- Digital Module
  - 1, 2 or 4 E1/T1/J1 spans per module using RJ-48c connectors with an option of PSN Fallback
- Anling Module
  - 4 ports FXO or FXS per module using RJ-45 connectors, ground start and loop start modes.
- BRI Module
  - 4 BRI ports (8 calls) per module, network 4/1 interfaces, NT or TE termination
- Media Processing Module
  - Support Media processing options of up to 60 Conferencing legs (3-way or N-way), play, record to IP or PSTN
- Networking Interfaces
  - **WAN**
    - 10/100/1000Base-T, 1000Base-X/SX/XX, T1 DSU/CSU, SHDSL, ADSL2+*, E1 DSU/CSU*
    - 3 ports 10/100/1000Base-T
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