

# Mediant™ 5000 VoIP Media Gateway



- IMS ready, carrier-grade medium sized VoIP Media Gateway
- Cost-effective Media Gateway, scalable from 2,016 to 6,048 protected VoIP channels
- Ready for all-IP networks using integrated B2BUA and transcoding applications
- Enables true convergence between multiple carrier networks on a single media gateway platform
- Delivers high voice quality, supporting a wide range of low bit-rate to wideband high-definition vocoders
- Provides rich PSTN interfaces and signaling, supporting all industry standard control protocols
- Offers advanced security suite for enterprise and VoIP carrier networks. Complies with U.S. Department of Defense security requirements
- Deployed globally at Tier 1, 2 and 3 service providers and large enterprise networks by leading OEMs and system integrators

The Mediant™ 5000 VoIP Media Gateway is a scalable, IMS-ready, standards-compliant, medium channel density system for wireline, wireless, cable, broadband access and Fixed-Mobile-Convergence networks.

### Carrier-Grade High Availability

The Mediant 5000 offers robust architecture meeting service providers' stringent requirements for high availability. This high availability architecture is based on cost-effective N+1 redundancy of the processing blades and load sharing of fans and power supplies.

### Multiservice Media Gateway

The Mediant 5000 Media Gateway provides extensive support for regional PSTN interfaces, broad voice vocoder options, Signaling Gateway Interworking, control protocols and advanced security features, enabling multiservice deployment flexibility for a variety of customers (ILECs, IOCs, CLECs, MSOs, large Enterprises and contact centers) and applications.

The Mediant 5000 can be used for backhauling TDM over IP, part of class 4 & 5 TDM switch replacements, IP interconnection, IP service node, IP Centrex Applications and as a PacketCable gateway. In the wireless/cellular space, the Mediant 5000 is ideal for UMA and Femtocell applications. The Mediant 5000 allows Network Equipment Providers (NEPs) and Independent Software Vendors (ISVs) to immediately address opportunities for these services due to its advanced deployment flexibility.

### High Level of Scalability

The Mediant 5000 is a modular platform which can scale up to 6048 protected channels, allowing customers to begin with a low capacity entry point and later extend to a higher capacity by increasing the number of processing blade modules.

### All-IP evolution

With the introduction of Next Generation Networks, there is a growing demand for IP to IP transcoding in peering, access and Fixed-Mobile-Convergence scenarios. The Mediant 5000 has the flexibility to primarily be installed as a classic VoIP Media Gateway, and in parallel accommodate the growing demand of IP peering as PSTN interfaces are gradually being phased out.

### True Network Convergence on a single platform

The Mediant 5000 offers a high voice quality ranging from low-bit rate to wideband coders. This enables true network convergence between mobile/wireless networks and fixed line, cable and broadband networks on a single media gateway platform.

### Broad PSTN Interfaces Options and Protocols

The Mediant 5000 provides the flexibility to be globally deployed, interfacing with all popular PSTN interfaces, including E1, T1, J1, DS3 and OC3/STM1.

### Advanced Security Suite

With the advent of VoIP, security has become a mandatory requirement. The Mediant 5000 addresses service providers and large enterprises security concerns, offering advanced security capabilities which include SRTP for media, IPSec for control and OAM and TLS and PKI for SIP.

# AudioCodes Voice Network Products for Wireline, Wireless, Cable and Converged Applications

## Mediant™ 5000

### Specifications

<b>Capabilities</b>	
Capacity	Up to 6,048 protected VoIP/GSM/UMTS channels
Voice Coders	High Definition Voice Coders: G.722, G.722.2 (Wide Band AMR), G.729.1 <sup>1</sup> (Wideband G.729), EVRC Wireline: G.711, G.722 <sup>1</sup> , G.723.1, G.726/7, G.729A/B, EG.711, MS GSM, iLBC GSM/UMTS: GSM-FR, GSM EFR, AMR, AMR-WB <sup>1</sup> CDMA: EVRC <sup>1</sup> , EVRC-B <sup>1</sup> , QCELP 8k, QCELP 13k Cable: G.711, G.726/7, G.723.1, G.728 <sup>1</sup> , G.729E <sup>1</sup> , G.729A/B, iLBC <sup>1</sup> Independent dynamic coder selection per channel (within each group) Not all coders can be used simultaneously. Some coders will result in channel density degradation
Echo Cancellation	G.165 and G.168 compliant
Fax Support	Fax/Modem Detection Control, T.38 (IP) compliant Group 3 fax relay and fax bypass (automatic fallback to G.711) support
DTMF	Packetside or PSTN side detection and generation, RFC 2833 compliant
Voice Over Packet Capabilities	Call progress tones, VAD, CNG, Dynamic programmable jitter buffer, DTMF detection and generation, E911 CAS support
<b>Signaling</b>	
PSTN	ISDN PRI, SS7/MTP2/3, CAS, MFC-R2, MF-R1, V5.2
SIGTRAN	MISDN-IA/SCTP MSS7-M2UA/SCTP, M3UA/SCTP MSS7
IP Transport	IETF RFC 3550, RFC 3551 RTP/IP Transport, TCP, UDP CDMA: IETF RFC 2658 and RFC 3558 RTP/UDP/IP UMTS: Nb IP User Plane and IPBCP over Mc per 3GPP
Media Gateway Control Protocols	MGCP (RFC 3435), TGCP, MEGACO (H.248, RFC 3015), SIP (RFC 3261) 3GPP: CS Mc - TS 29.232, IMS Mn - TS 29.332
Security	MSRTP MPublic Key Infrastructure Certificate for TLS MIPSec (ESP) with IKE pre-shared key for secure Management with EMS/NMS/OSS and Control with MGC MAES - 128 (Rijndael) cipher algorithm, in CBC mode for Media Security (RTP/RTCP) for packet cable MSSH Protocol Version 2 for secure Telnet and SFTP Server transfers MFirewall - for controlled IP access to Media Gateway Blades
<b>Maintenance</b>	
Management	Element Management System, SNMP v2 over IPSEC/SNMP v3, Command Line Interface (CLI)
Maintainability	All shelf modules are hot swappable, including boards, power supplies, fans
Redundancy Scheme	System Controller and Ethernet Switch blades: 1+1 Power supplies: N+1 Load Shared Media Gateway blades (including PSTN interfaces): N+1 Optical Interfaces (PSTN): 1+1, APS protected
<b>Hardware Specifications</b>	
Interfaces	PSTN: Up to 3 x OC-3/STM-1 Optical ports, each 1+1 APS protected, or up to 9 x T3 (DS-3) Copper Coax ports or up to 96 E1/T1/J1 spans IP: Dual Redundant 100/1000 BASE-T (aggregated) Ethernet ports, with Multi-VLAN Interfaces support (OAM, Control, Media) Clock Synchronization: BITS/SETS (GR-1244 Stratum-3 and G.813 compliant), line synchronization (via STM-1/OC-3 link or DS1 trunk)
Enclosure	10-slot, 5U cPCI chassis
Dimensions (HxWxD)	222 mm x 483 mm x 311 mm (8.7 in. x 19 in. x 12.3 in.)
Weight	Approx. 27 lbs. (12.3 kgs.), unloaded Approx. 50 lbs. (22.6 kgs.), fully loaded
Mounting	Per EIA Standard RS-310-C in 19-inch rack
Midplane	MPICMG 2.16 cPCI Packet Switching Backplane (cPSB) MPICMG 2.1 cPCI hot swap specification MPICMG 2.0 cPCI specification
Power	M1610 system config: -48 V DC Dual Feed, with 3 DC Power modules or 100 - 240 V AC with 3 AC Power modules M6310/8410 system config: -48 V Dual DC Feed, with 3 DC Power modules or 100-240 V AC Dual Feed with 3 AC Power modules
Cooling	Replaceable fan trays & filters
<b>Regulatory Compliance</b>	
Telecommunication Standards	FCC part 68 TBR4 and TBR13 Anatel <sup>2</sup>
Safety and EMC Standards	MUL60950 MFCC part 15 Class A MCE Mark (EN55022 Class A, EN60950, EN55024, EN300 386)
Environmental	NEBS Level 3: GR-63-Core, GR-1089-Core, Type 1 & 3, ETS300 019 <sup>2</sup>

1 Reduced channel capacities 2 Designed to meet - formal approval pending

### About AudioCodes

AudioCodes Ltd. (NasdaqGS: AUCD) 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 leader focused on VoIP communications, applications and networking elements, 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, Residential Gateways, IP Phones, Media Servers, Session Border Controllers (SBC), Security Gateways and Value Added Applications. AudioCodes underlying technology, VoIPerfectHD™, relies primarily 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 emerging Voice networks.



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