

# AudioCodes CPE & Access Gateway Products

## AudioCodes Survivable Branch Appliance (SBA) Media Gateways for Microsoft Unified Communications



- Field-upgradable from “Basic Hybrid Gateway” R2-Compliant configurations
- Employs AudioCodes VoIPerfect™ technology for outstanding voice quality
- Scalable “pay-as-you-grow” modular architecture
- Mix and Match rich offering of digital (E1/T1/J1/BRI) and analog (FXS/FXO) interfaces
- Extensive list of safety, EMC and PSTN country homologation
- Wide range of PSTN signaling variants
- Extensive interoperability tested with popular legacy PBXs & business telephony equipment
- IP-to-IP connectivity to IP-PBXs and SIP Trunking Service Providers not yet Microsoft certified for direct SIP connection
- Managed by Microsoft SCOM
- Future-proof AMC or cPCI off-the-shelf servers

AudioCodes offers the enterprise customer a key component in the Microsoft Unified Communications network - the Survivable Branch Appliance - connecting the Microsoft Unified Communications environment to the branch office PBX and/or the PSTN, while providing local UC services and full branch office survivability. As an integrated solution in the Microsoft Unified Communications framework, the AudioCodes Mediant™ Survivable Branch Appliances can be managed by Microsoft System Center Operations Manager (SCOM).

AudioCodes Mediant Survivable Branch Appliance are based on cost-effective AudioCodes media gateways hosting the Microsoft Survivable Branch Appliance software package, while utilizing cutting-edge technology. Intelligently packaged in a stackable 1U chassis they include a combination of a state-of-the-art, market leading Media Gateway technology, and an Intel-based, off-the-shelf, powerful Core2Duo server, which hosts the Microsoft Survivable Branch Appliance software.

### SCALE UP AS YOUR BUSINESS GROWS

AudioCodes Mediant Survivable Branch Appliance support different fixed and modular configurations, enabling the direct connection of the branch office network to the PSTN, to SIP Trunking Service Providers, and to different models of PBXs. These connections support SIP as well as different types of TDM telephony interfaces, including PRI/CAS over E1/T1/J1 spans, BRI interfaces and/or analog ports in various FXO/FXS configurations. The Mediant 1000 and Mediant 2000 R2-compliant “Basic Hybrid” Gateways can be field-upgradable to the Survivable Branch Appliance software.

Both the Mediant 1000 and Mediant 2000 support “Very Large” branch sizes as defined by Microsoft. The modular, mixed-media AudioCodes Mediant 1000 Survivable Branch Appliance can scale up to 120 concurrent PSTN calls and 1000 registered users. Supporting a fixed hardware configuration and software-scalability, AudioCodes Mediant 2000 Survivable Branch Appliance can scale up to 480 concurrent PSTN calls and 1000 registered users.

### MODULAR, OPEN AND STABLE ARCHITECTURE

AudioCodes Mediant Survivable Branch Appliance utilize open and modular architecture. Making use of the same Media Gateway technology and line cards used for the AudioCodes “Basic” and “Basic Hybrid” gateways, they have proven superior stability in the field, and can easily scale up to support future, higher server performance and density requirements.

The compact Mediant 1000 Survivable Branch Appliance is extremely scalable and supports multiples of 1, 2, or 4 E1/T1/J1 spans, 4 to 20 BRI ports or 1 to 24 analog ports in various FXO/FXS configurations. The Mediant 1000 also supports mixed digital/analog configurations, allowing the connectivity to PSTN or digital and analog PBX trunks, as well as analog phones and faxes in the same cost-effective appliance. The use of the AMC-based server module allows for simple field upgrades to higher performance servers in the future.

The Mediant 2000 Survivable Branch Appliance supports fixed configurations of 4, 8 or 16 E1/T1/J1 spans, allowing the connectivity to PSTN or PBX digital trunks. The use of the cPCI-based server module in the Mediant 2000 allows for simple field upgrades to higher performance servers in the future.

### HOW TO ORDER?

AudioCodes’ Mediant Survivable Branch Appliance are available globally and have been tested for interoperability with many legacy PBXs. They have been homologated in over 75 countries worldwide. AudioCodes Survivable Branch Appliance are provided with a 12-month hardware warranty.

A list of worldwide AudioCodes channels, interoperable PBXs, and countries with PSTN homologation is available on the AudioCodes website Microsoft resource page: [www.audiocodes.com/microsoft](http://www.audiocodes.com/microsoft)



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### SPECIFICATIONS

	Mediant™ 1000 Survivable Branch Appliance	Mediant™ 2000 Survivable Branch Appliance
<b>Interfaces</b>		
Modularity and Capacity	6 slots for analog or digital modules Up to maximum of 24 analog ports, 4 digital spans or 20 BRI ports	1, 2, 4, 8 or 16 E1/T1/J1 spans Software Scalability Option
Digital Modules	1, 2 or 4 E1/T1/J1 spans using RJ-48c connectors per module Up to 4 digital modules (maximum 4 spans per gateway) Optional 1+1 or 2+2 fallback spans	16 E1/T1/J1 using dual 50 - pin Telco connectors or up to 8 E1/T1/J1 spans using RJ-48c connectors
Analog FXO and FXS Modules	2 or 4 ports using RJ-11 connectors per module Up to 6 modules per gateway, Ground start and Loop start One lifeline port per FXS module (in case of power failure or network problems)	N/A
BRI Modules	4 BRI ports (8 calls) per module, Up to 5 modules per gateway with S/T interfaces	N/A
CPU Module (Hosting Microsoft Survivable Branch Office Appliance Software)	<b>CPU:</b> Intel Core2 Duo L7400 with Intel 3100 Chipset (64-bit); <b>Memory:</b> 2G/4G DDR2 with ECC; <b>Storage:</b> Single /Dual hard disk drive of 80G SATA; <b>Interfaces:</b> 10/100/1000 Base-TX, USB 2.0, Serial	<b>CPU:</b> Intel Core 2 Duo T7400 2.16 GHz; <b>Memory:</b> 2G RAM; <b>Storage:</b> Single 60 Gbyte hard disk drive; <b>Interfaces:</b> 10/100/1000 Ethernet, USB 2.0, RS-232
Ethernet	Dual Ethernet	Dual Ethernet
RS-232	Maintenance and debugging	Optional on 1/2/4 spans models, with SMDI support
<b>Capacity</b>		
Maximum concurrent PSTN Calls	120	480
Maximum Registered Users	1000	1000
<b>Media Processing</b>		
Voice Coders	G.711, G.726, G.723.1, G.729A, GSM-FR, MS-GSM, Microsoft RTA (in "SBA" Configuration) Independent dynamic vocoder selection per channel	
Echo Cancellation	G.165 and G.168-2002, with 32, 64 or 128 tail length	
Quality Enhancement	Dynamic programmable jitter buffer, VAD, CNG, 802.1p/Q VLAN tagging, DiffServ, voice quality monitoring	
DTMF/MF Transport/Call Progress Tones	Packet side or PSTN side detection and generation, RFC 2833 compliant DTMF relay, Call Progress tone detection and generation	
IP Transport	VoIP (RTP/RTCP) per IETF RFC 3550 and 3551	
Fax and Modem Transport	T.38 compliant (real time fax), Automatic bypass to PCM or ADPCM	
<b>Signaling</b>		
Digital-PSTN Protocols	<b>PSTN protocol termination CAS MF-R1:</b> Wink Start, delay dial, immediate start, FGB, FGD, E911 CAMA <b>MFC/R2</b> numerous country variants; Unique script for each country variant, enabling maximum flexibility of the entire state machine for each CAS protocol <b>ISDN-PRI:</b> ETSI EURO-ISDN, ANSI N12, DMS Switch, 5ESS Switch, Japan INS1500, QSIG Basic Call, Australian Telecom, New Zealand Telecom, Hong Kong Variant, Korean MIC and others, VN 3, 4, 6 (French Variant)	
Analog Signaling	FXS; Caller ID; polarity reversal; metering tones, distinctive ringing, visual message waiting indication	
<b>Management</b>		
Operations & Management	Microsoft System Center Operations Manager (SCOM). AudioCodes Element Management System Embedded HTTP Web Server, Telnet, SNMP V2, V3 Remote configuration and software download via TFTP, HTTP, HTTPS, DHCP and BootP, RADIUS, Syslog (for events, alarms and CDRs)	
Security	IPSEC, HTTPS, TLS (SIPS), SSL, Web access list, RADIUS login, SRTP	
<b>Hardware Specifications</b>		
Power Supply	Single universal 90-260 V AC or redundant AC	Single universal 90-260 V AC or redundant AC or single -48 V DC
Physical	1U high, 19-inch wide rack mount	

### 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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