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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Mediant™ 500 MSBR

Multi-Service Business Router

- An all-in-one device for VoIP, Data, Security and Access
- Integrated router with low-density media gateway
- Clear point of demarcation for managed services
- Consistent performance of Voice and Data driven by dual-core architecture
- Branch survivability, security and QoE for SMEs connected to cloud services
- Ideal as a trunking solution for SMBs with local PBX/KTS
- Multiple WAN connectivity for redundancy and improved SLA
- Wi-Fi access point and LAN switch

AudioCodes Mediant™ 500 MSBR is an all-in-one box solution, designed to provide converged data and voice connectivity for small-to-mid size business (SMB) customers and redundant access to hosted services for small-to-mid size enterprises (SMEs).

Forming a well-managed point of demarcation for the service provider, the Mediant 500 MSBR integrates a variety of communication functions into a single platform, including Router, WAN access, branch survivability, VoIP mediation, voice and data security, and Enterprise Session Border Controller (E-SBC).

Flexible WAN Access Capabilities

AudioCodes Mediant 500 MSBR has a versatile WAN interface supporting copper and optical fiber Gigabit Ethernet 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 range of options enables flexibility and branch resiliency in connecting to service provider networks.

The Mediant 500 MSBR provides redundant WAN connectivity links for continued services in the event of WAN failure. Each device comes with copper Gigabit Ethernet (GE) along with a mix of additional two WAN ports of xDSL or GE (copper or Optical Fiber SFP).

### Quality Voice and Data connectivity for small businesses

With a unique multi-core architecture for separating Data and Voice processing, the Mediant 500 MSBR is designed to meet service providers' stringent demands for providing integrated data and voice services for small sites with predictable and consistent performance.
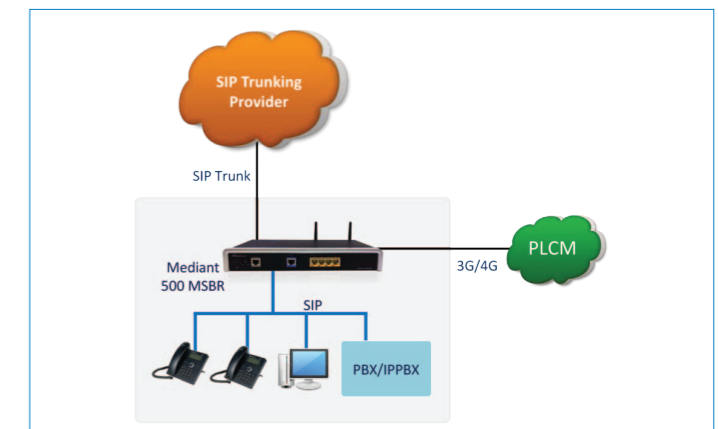

The Mediant 500 is equipped with an integrated Wi-Fi (802.11n) access point, as well as optional dynamic and static routing capabilities. The integral LAN switch supports up to four ports for IP phones or other devices. Customers can utilize up to four TDM voice channels and four PSTN ports with several combinations of analog and digital interfaces.
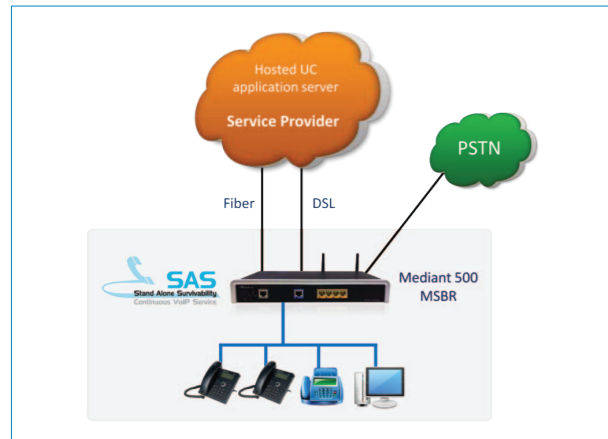
Branch survivability, security and QoE for cloud services

Customers served by a SIP-based IP Centrex or other cloud-based services are challenged with service interruptions due to WAN failure, quality of service and security issues. The Mediant 500 MSBR provides a complete solution to these challenges. By offering multiple redundant WAN links and the integrated Cloud Resilience Package (CRP) and Standalone Survivability (SAS) features, the Mediant 500 MSBR facilitates local internal calling, alternate WAN connectivity or PSTN fallback for making and receiving external calls, along with advanced security features and quality of experience (QoE) tools.
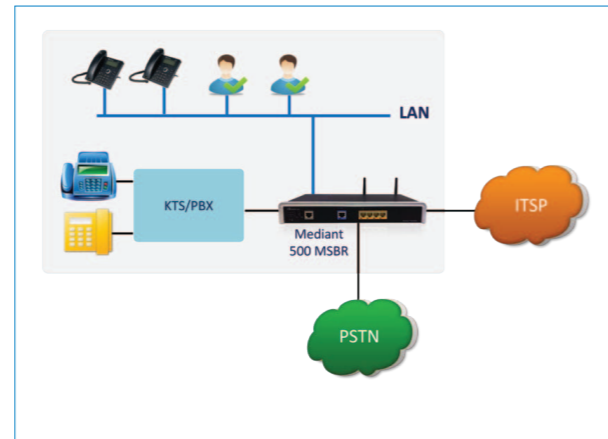
SIP Trunking for small-to-mid enterprises (SMEs)

By upgrading the platform with software E-SBC licenses, the Mediant 500 MSBR protects the enterprise network and provides secure connectivity into SIP Trunking as well as 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.

Specifications

TDM Interfaces*

PSTN Capacity	Up to 2 BRI / 2 FXS, 2 BRI, 4 analog PSTN interfaces or 1 E1/T1 span
Digital Interfaces	1 span E1/T1/J1 using RJ-48c connectors
	2 BRI ports using RJ-48c connectors
Analog Interfaces	4 FXS ports, 3 FXS and 1 FXO using RJ-11 connectors
	FXS Lifeline port in case of power failure
BRI Interfaces	2 BRI ports (4 calls), network S/T interfaces. NT or TE termination

Networking Interfaces

WAN*	WAN interface 10/100/1000 Base-T Copper, Dual-Mode SFP (100Base-X and 1000Base-X)
	Support for T1/E1*, SHDSL, ADSL2+, VDSL
LAN	4 ports 10/100/1000Base-T
WiFi	WiFi Access Point support for 802.11 a/b/g/n dual-band, MIMO 2x2 with two streams

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	E1 signaling: 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 E1 signaling
Analog Signaling	Loop Start FXS/FXO, Caller ID, polarity reversal, distinctive ringing, visual Message Waiting Indication

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-MSCML*, IPv6 Supported
	Cloud Resilience Package (CRP) and Standalone Survivability (SAS) 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
	IDS/IPS:
	- 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: 310mm x 205mm x 43U

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), TBR-4 TBR-13 (E1 interface), AS/ASIF-038, AS/ASIF-016 (E1 Interfasce), AS/ASIF-002 (FXO port0, AS/ASIF003 (FXS port), ANATEL Brazil (specific configurations), KCC (Korea) (specific configuration), ICASA South Africa TEC India (specific configuration)

* Please consult with AudioCodes availability of Mediant 500 MSBR configurations

** Roadmap