

AudioCodes CPE & Access Gateway Products

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 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.

International Headquarters
1 Hayarden 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: +1-732-469-0880
Fax: +1-732-469-2298

Contact us: www.audiocodes.com/info
Website: www.audiocodes.com

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Ref. # LTRM-30044 04/14 V.4



Mediant™ 500 MSBR



- 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).

Multi-Service Business Router

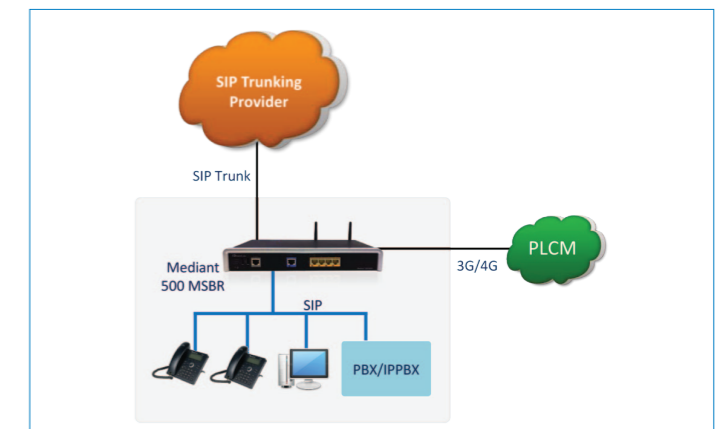
FLEXIBLE WAN ACCESS CAPABILITIES

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

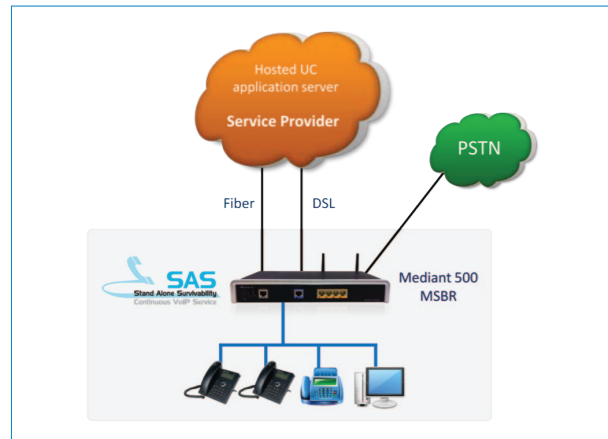
With a unique multi-core architecture for separating Data and Voice processing, the Mediant 500 MSBR is designed to meet service providers' stringent demands for providing integrated data and voice services for small sites with predictable and consistent performance.



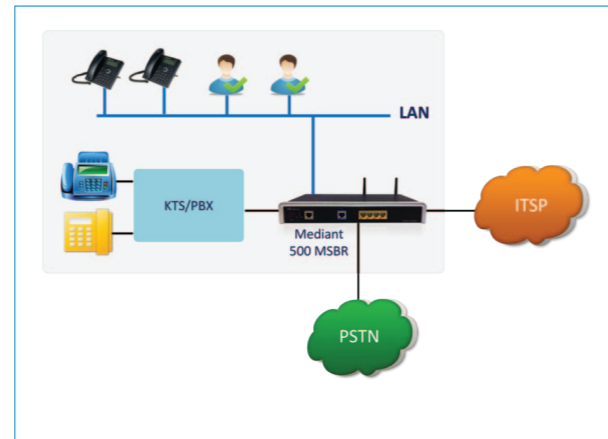
The Mediant 500 is equipped with an integrated Wi-Fi (802.11n) access point, as well as optional dynamic and static routing capabilities. The integral LAN switch supports up to four ports for IP phones or other devices. Customers can utilize up to four TDM voice channels and four PSTN ports with several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



Mediant™ 500 Multi-Service Business Router



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-MSMCL*, 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 Interface), 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