Multi-Service Business Router Family

ABOUT AUDIOCODES

AudioCodes Ltd. (NasdagGS: 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, VolPerfectHD™, 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[™] 500L MSBR



- All-in-One SOHO/SMB Router with Access, Data, Voice and Security
- Perfectly suited for managed data, SIP trunking and hosted PBX services
- Consistent high performance with multi-core architecture
- Multiple and redundant WAN options
- Survivability and resilience for business data and telephony services
- LAN and WiFi interfaces with powerful routing, switching and firewall
- Analog and digital voice interfaces with integrated SBC

AudioCodes Mediant™ 500L Multi-Service Business Router (MSBR) is an all-in-one router combining access, data, voice and security in a single device. It is perfectly suited for managed data, SIP trunking, hosted PBX and cloud services, and allows services providers to deploy flexible and cost-effective solutions and to maximize revenue opportunities while minimizing CAPEX and OPEX.

Designed to meet the needs of SMBs, the Mediant™ 500L MSBR's unique multicore architecture provides consistent high performance across all services, allowing end customers to get most from their broadband connections for both data and voice applications.

ENABLING DATA AND CLOUD SERVICES

Service providers that deploy managed data services need a platform that will allow them to provide their business customers much more than just an internet connection. The AudioCodes Mediant™ 500L MSBR meets the requirements needed to support these services with integrated and powerful routing and security software. In addition, thanks to a unique architecture that ensures consistent high performance, the MSBR is a perfect solution for cloud data services enabling service providers to allay customers' concerns as they move their key business functions to the cloud.

ENABLING VOICE SERVICES

As service providers move to all-IP services, they encourage their SMB customers to replace their TDM trunks with SIP trunks and hosted PBX services and to take advantage of cost savings and a greater variety of collaborative services. AudioCodes Mediant™ 500L MSBR offers the service provider a robust set of voice features including an integrated voice gateway, analog and digital interfaces with various codecs that support analog phones, fax, PBX and PSTN connectivity, and session border controllers (SBC). The integrated SBC, acting as the demarcation point between the business network and the service provider SIP network, provides the interoperability, survivability, security and the quality assurance. The Mediant 500L MSBR supports both SIP trunking and hosted PBX deployments.

BRANCH OFFICES SUPPORT

The Mediant™ 500L MSBR is a perfect solution for small branch offices that need to be connected to larger enterprise networks. Integrated security features such as VPN encryption, firewall while intrusion prevention protect the network and the perimeter, and integrated survivability and resilience features connectivity business continuity in case of loss of connectivity through redundant and backup networks.

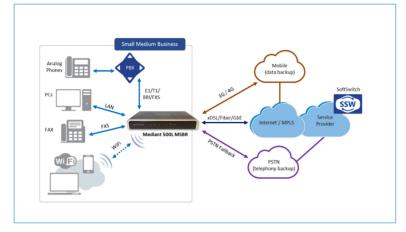




Mediant™ 500L Multi-Service Business Router

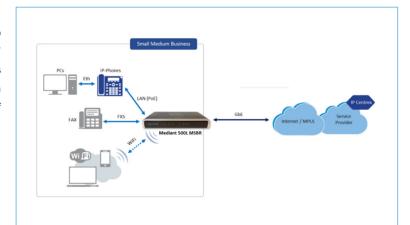
SIP TRUNKING SERVICES

Integrated with AudioCodes SBC software and SIP trunking connectivity features, the Mediant $^{\text{TM}}$ 500L MSBR offers a robust set of high-quality voice features, support for SIP protocols, various codecs, and built-in analog and digital interfaces.



HOSTED PBX SERVICES

The MSBR allows direct and seamless connection of SIP phones to the service provider IP Centrex service. Integrated with AudioCodes' Cloud Resilience Package (CRP), the Mediant™ 500L MSBR ensures uninterrupted communications in the event of lost connection with the cloud provider's control systems and thus alleviates concerns of businesses considering a move to the cloud.



SPECIFICATIONS

TDM Interfaces	
PSTN Capacity	4, 6 or 8* voice channels, PSTN configuration dependent
Digital Interfaces	4 BRI ports (RJ-48c connectors)
Analog Interfaces	Available Configurations: - 4 FXS ports - 3 FXS + 1 FXO - 4 FXS + 4 FXO* - 8 FXS* FXO lifeline port in case of power failure (in 3FXS+1FXO configuration)
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, ADSL2+, VDSL
LAN	4 ports 10/100Base-TX, GbE 1000Base-T* support
WiFi	WiFi Access Point support for 802.11 b/g/n 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
Fax Transport T.38 compliant (real time fax), Automatic bypass to PCM

Voice Signaling

Digital - PSTN Protocols ISDN BRI: Euro ISDN, VN4/6 or QSIG

Analog Signaling Loop Start FXS/FXO, Caller ID, polarity reversal, distinctive ringing

Data Routing

PPP, MLPPP, PPPoE, PPPoA, L2TP, IPoE, IPoA

ATM: Up to 8 PVCs

OAM-F5 (send/receive): loopback, continuity check

Shaping: UBR, VBR-NRT, VBR-RT, CBR

DHCP Client, Relay, server

VLAN

Layer 3 routing and Layer 2 bridging, Jumbo frames

Internal layer 2 switching

Static and dynamic routing (RIP1, RIP2, OSPFv2, BGPv4), Policy-Based Routing

Multicast routing: IGMPv2/3

IPv6, IPv6/IPv4 Dual Stack, ICMPv6, DHCPv6, SLAAC

Security

Control Protocols SIP Header conversion SIP Normalization

Operations & Management Cloud Resiliency Package

IP-to-IP routing translations of various SIP transport types; UDP, TCP, TLS Translation of RTP, SRTP

 $\hbox{Support SIP trunk with multi-ITSP (Registrations to ITSPs is invoked independently) Topology hiding}$

Call Admission Control Call Black/White list

Data Security IPSec, GRE, L2TP

ESP - Tunnel mode Encryption (AES, DES, 3DES)

Authentication Header IKE mode – IPsec VPN Perferct Forward Secrecy

IDS/IPS:

- Fragmented traffic - Malformed Request

- Ping of Death

- Properly formed request from unauthenticated source

- DDoS attack

- SYN flood Stateful packet inspection firewall

M7

DMZ
Port Triggering
Packet Filtering

Application Layer Gateway

Hardware

Power Supply: Single, wall mount, universal 90-260 V AC Physical Dimensions: (HxWxD): 51 x 296 x 165mm

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

lecommunication 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/ASIF-003 (FXS port), ANATEL Brazil (specific configurations), KCC (Korea) (specific configuration), ICASA South Africa TEC India (specific configuration)

^{*} Contact AudioCodes to check availability of Mediant 500L MSBR configurations