

SBCs and Media Gateways

Latest Release (LR) Versions

Version 7.40A.600



Table of Contents

Notice	9
Security Vulnerabilities	9
Customer Support	9
Stay in the Loop with AudioCodes	9
Abbreviations and Terminology	9
Related Documentation	9
Document Revision Record	10
Documentation Feedback	11
1 Introduction	13
1.1 Software Revision Record	13
1.2 Supported Products	14
1.3 Terms Representing Product Groups	15
2 Latest Release (LR) Versions	17
2.1 Version 7.40A.600.231	17
2.1.1 New Features	18
2.1.1.1 Delayed Call Release for Forwarding SIP NOTIFY Requests	18
2.1.1.2 Alternative Routing upon MSRP Signaling Failure	18
2.1.1.3 Client Certificate Verification per HTTP Location	19
2.1.1.4 Client Certificate Verification for TCP/UDP Proxy Servers	19
2.1.2 Resolved Constraints	20
2.2 Version 7.40A.600.221	21
2.2.1 Known Constraints	22
2.2.2 Resolved Constraints	22
2.3 Version 7.40A.600.203	23
2.3.1 New Features	24
2.3.1.1 New Hardware Platform - Mediant 9080C SBC	24
2.3.1.2 Call Preservation Despite Subscription Failures	24
2.3.1.3 Message Session Relay Protocol over IPv6	24
2.3.1.4 SIPREC Session Trigger by SIP 200 OK Responses	25
2.3.1.5 Classification by Users Registration Database per SIP Interface	25
2.3.2 Resolved Constraints	26
2.4 Version 7.40A.600.014	27
2.4.1 New Features	28
2.4.1.1 Upgrade to OpenSSL 3	28
2.4.1.2 Enhanced Handling of SRV Responses to NAPTR Queries	28
2.4.1.3 Configurable Interval for QoE Collection and Reporting	28
2.4.1.4 Performance Monitoring Parameters for SBC Call Failure Rate	28
2.4.1.5 Updated List of Default Bundle of Trusted Root CAs	29
2.4.1.6 Mid-Call SIP Messages Sent to Currently Active Proxy	29
2.4.1.7 TCP/TLS Connection Reuse per Proxy Set	30
2.4.1.8 Blocking ICMP Timestamp Requests	30
2.4.1.9 Numeric Comparison Operators for Message Manipulation Conditions	30
2.4.1.10 Increase in Maximum Sub-Variables for Message Manipulation	31
2.4.1.11 Retry-Interval for Failed OPTIONS with Proxy Configurable through CLI	31
2.4.1.12 Enforce Password History Policy Configurable through CLI	31
2.4.1.13 Call Rerouting upon No RTP during Early Media or Call Connect	31
2.4.1.14 Trunk Group Number Included in Outgoing SIP REGISTER Requests	32
2.4.1.15 Duplicated SIP TLS Performance Monitoring Parameters Removed	32
2.4.2 Resolved Constraints	33

3	Session Capacity	35
3.1	SIP Signaling and Media Capacity	35
3.2	Capacity per Feature	42
3.3	Detailed Capacity.....	44
3.3.1	Mediant 500 E-SBC	44
3.3.1.1	Non-Hybrid (SBC) Capacity.....	44
3.3.1.2	Hybrid (with Gateway) Capacity	44
3.3.2	Mediant 500L Gateway and E-SBC	45
3.3.2.1	Non-Hybrid (SBC) Capacity.....	45
3.3.2.2	Hybrid (with Gateway) Capacity	45
3.3.3	Mediant 800 Gateway & E-SBC.....	46
3.3.3.1	Mediant 800B Gateway & E-SBC	46
3.3.3.2	Mediant 800C Gateway & E-SBC.....	49
3.3.4	Mediant 1000B Gateway & E-SBC	52
3.3.4.1	Analog (FXS/FXO) Interfaces.....	52
3.3.4.2	BRI Interfaces	53
3.3.4.3	E1/T1 Interfaces	54
3.3.4.4	Media Processing Interfaces	55
3.3.5	Mediant 3100 Gateway & E-SBC.....	55
3.3.5.1	Gateway Capacity.....	56
3.3.5.2	Non-Hybrid (SBC) Transcoding Capacity	57
3.3.6	MP-1288 Analog Gateway & E-SBC.....	58
3.3.7	Mediant 2600 E-SBC	59
3.3.8	Mediant 4000 SBC	60
3.3.8.1	Forwarding Session Capacity per Feature without Transcoding.....	61
3.3.9	Mediant 4000B SBC.....	61
3.3.9.1	Forwarding Session Capacity per Feature without Transcoding.....	62
3.3.10	Mediant 9000 SBC	63
3.3.10.1	Forwarding Session Capacity per Feature without Transcoding.....	64
3.3.11	Mediant 9000 Rev. B / 9080 SBC	65
3.3.11.1	Forwarding Session Capacity per Feature without Transcoding.....	66
3.3.12	Mediant 9000 / 9000 Rev. B / 9080 SBC with Media Transcoders	66
3.3.13	Mediant 9080C SBC	68
3.3.13.1	Forwarding Session Capacity per Feature without Transcoding.....	69
3.3.14	Mediant 9030 SBC	70
3.3.14.1	Forwarding Session Capacity per Feature without Transcoding.....	71
3.3.15	Mediant Cloud Edition (CE) SBC	72
3.3.15.1	Mediant CE SBC for AWS EC2	72
3.3.15.2	Mediant CE SBC for Azure	74
3.3.15.3	Mediant CE SBC for VMware	75
3.3.15.4	Mediant CE SBC for GCP	77
3.3.16	Mediant Virtual Edition (VE) SBC	79
3.3.16.1	Mediant VE SBC for Hypervisors with Hyper-Threading.....	79
3.3.16.2	Mediant VE SBC for Amazon AWS EC2	81
3.3.16.3	Mediant VE SBC for Azure	85
3.3.16.4	Mediant VE SBC for GCP	86
3.3.17	Mediant Server Edition (SE) SBC	88
3.3.17.1	Forwarding Session Capacity per Feature without Transcoding.....	89
4	Configuration Table Capacity	90
5	Supported SIP Standards	98
5.1	Supported SIP RFCs	98
5.2	SIP Message Compliancy.....	102
5.2.1	SIP Functions.....	102
5.2.2	SIP Methods.....	102
5.2.3	SIP Headers.....	102
5.2.4	SDP Fields	104

5.2.5	SIP Responses	104
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List of Tables

Table 1-1: Software Revision Record of LR Versions	13
Table 1-2: SBC and Media Gateway Products Supported in Release 7.4	14
Table 1-3: Terms Representing Product Groups.....	15
Table 2-1: Resolved Constraints in Version 7.40A.600.231	20
Table 2-2: Known Constraints in Version 7.40A.600.221	22
Table 2-3: Resolved Constraints in Version 7.40A.600.221	22
Table 2-4: Resolved Constraints in Version 7.40A.600.203	26
Table 2-5: Resolved Constraints in Version 7.40A.600.014	33
Table 3-1: SIP Signaling and Media Capacity per Product	35
Table 3-2: Maximum Capacity per Feature	42
Table 3-3: Mediant 500 E-SBC (Non-Hybrid) - SBC Capacity	44
Table 3-4: Mediant 500 Hybrid E-SBC (with Gateway) - Media & SBC Capacity	44
Table 3-5: Mediant 500L E-SBC (Non-Hybrid) - SBC Capacity	45
Table 3-6: Mediant 500L Hybrid E-SBC (with Gateway) - Media & SBC Capacity	45
Table 3-7: Mediant 800B Gateway & E-SBC - SBC Session Capacity per Capabilities (SBC Only)	46
Table 3-8: Mediant 800B Gateway & E-SBC - Channel Capacity per Capabilities (with Gateway)	47
Table 3-9: Mediant 800C Gateway & E-SBC - SBC Session Capacity per Capabilities (SBC Only)	49
Table 3-10: Mediant 800C Gateway & E-SBC - SBC Session Capacity per Capabilities with Gateway	50
Table 3-11: Mediant 1000B Analog Series - Channel Capacity per DSP Firmware Template	52
Table 3-12: Mediant 1000B BRI Series - Channel Capacity per DSP Firmware Template	53
Table 3-13: Mediant 1000B E1/T1 Series - Channel Capacity per DSP Firmware Templates	54
Table 3-14: Transcoding Sessions Capacity per MPM According to DSP Firmware Template for Mediant 1000B	55
Table 3-15: Mediant 3100 - Gateway Channel Capacity per Capability Profile	56
Table 3-16: Mediant 3100 - SBC Transcoding Capacity per Coder Capability Profile	57
Table 3-17: MP-1288 Gateway - Session Capacity	58
Table 3-18: Mediant 2600 E-SBC - Transcoding Capacity per Coder Capability Profile	59
Table 3-19: Mediant 4000 SBC - Transcoding Capacity per Coder Capability Profile	60
Table 3-20: Mediant 4000 SBC - Forwarding Capacity per Feature	61
Table 3-21: Mediant 4000B SBC - Transcoding Capacity per Coder Capability Profile	61
Table 3-22: Mediant 4000B SBC - Forwarding Capacity per Feature	62
Table 3-23: Mediant 9000 SBC - Transcoding Capacity per Coder Capability Profile	63
Table 3-24: Mediant 9000 SBC - Forwarding Capacity per Feature	64
Table 3-25: Mediant 9000 Rev. B / 9080 - Transcoding Capacity per Coder Capability Profile	65
Table 3-26: Mediant 9000 Rev. B / 9080 SBC - Forwarding Capacity per Feature	66
Table 3-27: Single Media Transcoder (MT) - Transcoding Capacity per Profile	66
Table 3-28: Mediant 9080C SBC - Transcoding Capacity per Coder Capability Profile	68
Table 3-29: Mediant 9080C SBC - Forwarding Capacity per Feature	69
Table 3-30: Mediant 9030 SBC - Transcoding Capacity per Coder Capability Profile	70
Table 3-31: Mediant 9030 SBC - Forwarding Capacity per Feature	71
Table 3-32: Forwarding Capacity per MC Instance Type	72
Table 3-33: Transcoding Capacity per c5.4xlarge MC	72
Table 3-34: Session Capacity per MC	74
Table 3-35: Transcoding Capacity per MC	74
Table 3-36: Forwarding Capacity per MC Instance Type	76
Table 3-37: Mediant CE SBC on VMware with Hyper-Threading - Transcoding Capacity	76
Table 3-38: Session Capacity per MC	77
Table 3-39: Transcoding Sessions per MC	77
Table 3-40: Transcoding Capacity per MC	77
Table 3-41: Mediant VE SBC on Hypervisors with Hyper-Threading - Transcoding Capacity	79
Table 3-42: Mediant VE SBC on m5n.large - Transcoding Capacity	81
Table 3-43: Mediant VE SBC on c5n.2xlarge - Transcoding Capacity	82
Table 3-44: Mediant VE SBC on c5n.9xlarge - Transcoding Capacity	83
Table 3-45: Mediant VE SBC on Amazon EC2 - Forwarding Capacity per Feature	84
Table 3-46: Mediant VE SBC on DS1_v2, D2ds_v5, D4ds_v5, D8ds_v5 - Transcoding Capacity	85
Table 3-47: Mediant VE SBC on GCP - Transcoding Capacity	86

Table 3-48: Mediant SE SBC (DL360 G10) - Transcoding Capacity per Coder Capability Profile	88
Table 3-49: Mediant SE SBC (DL360 G10) - Forwarding Capacity per Feature	89
Table 4-1: Capacity per Configuration Table	90
Table 5-1: Supported RFCs	98
Table 5-2: Supported SIP Functions.....	102
Table 5-3: Supported SIP Methods	102
Table 5-4: Supported SIP Headers.....	103
Table 5-5: Supported SDP Fields	104
Table 5-6: Supported SIP Responses	104

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Notice

Information contained in this document is believed to be accurate and reliable at the time of publishing. However, due to ongoing product improvements and revisions, AudioCodes cannot guarantee accuracy of published material after the Date Published nor can it accept responsibility for errors or omissions. Updates to this document can be downloaded from <https://www.audiocodes.com/library/technical-documents>.

This document is subject to change without notice.

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Security Vulnerabilities

All security vulnerabilities should be reported to vulnerability@audiocodes.com.

Customer Support

Customer technical support and services are provided by AudioCodes or by an authorized AudioCodes Service Partner. For more information on how to buy technical support for AudioCodes products and for contact information, please visit our website at <https://www.audiocodes.com/services-support/maintenance-and-support>.

Stay in the Loop with AudioCodes



Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used.

Throughout this manual, unless otherwise specified, the term *device* refers to the AudioCodes products.

Related Documentation

Document Name
Mediant 500L Gateway and E-SBC Hardware Installation Manual
Mediant 500L Gateway and E-SBC User's Manual
Mediant 500 E-SBC Hardware Installation Manual
Mediant 500 E-SBC User's Manual
Mediant 800 Gateway and E-SBC Hardware Installation Manual
Mediant 800 Gateway and E-SBC User's Manual
Mediant 1000B Gateway and E-SBC Hardware Installation Manual
Mediant 1000B Gateway and E-SBC User's Manual
MP-1288 High-Density Analog Media Gateway Hardware Installation Manual
MP-1288 High-Density Analog Media Gateway User's Manual

Document Name
Mediant 3100 Gateway & E-SBC User's Manual
Mediant 3100 Gateway & E-SBC Hardware Installation Manual
Mediant 2600 E-SBC Hardware Installation Manual
Mediant 2600 E-SBC User's Manual
Mediant 4000 SBC Hardware Installation Manual
Mediant 4000 SBC User's Manual
Mediant 9000 SBC User's Manual
Mediant 9080C SBC Series Hardware Installation Manual
Mediant 9080 / 9030 / 9000 Rev. B SBC Hardware Installation Manual
Mediant Software SBC User's Manual
SBC-Gateway CLI Reference Guide
SBC-Gateway Performance Monitoring Reference Guide
SBC-Gateway SNMP Alarms Reference Guide

Document Revision Record

LTRT	Description
27758	Ver. 7.40A.600.231
27752	Dial Plan Rule table capacity typo for VE/CE; Azure DS1_v2 recommendation to not use; Mediant 3100 T1 capacity.
27748	Ver. 7.40A.600.221
27743	Mediant 9080C added
27736	Ver. 7.40A.600.203
27730	Memory requirement updated for Mediant CE on VMware
27728	V.150.1 removed
27720	Initial document for new LR releases (7.40A.600); Mediant 2600/Mediant 4000 TLS capacity updated; Mediant 800C SRTP capacity updated; Mediant CE Azure capacity updated; Mediant VE Hyper-V registered users capacity updated; Mediant VE GCP registered users capacity updated; MSRP capacity added; Mediant 800C non-hybrid SBC capacity updated
27707	Ver. 7.40A.500.781
27705	Ver. 7.40A.500.775; SRTP capacity updated for GCP n2-standard-4 (Mediant VE)
27691	Ver. 7.40A.500.357; 7.20A.259.* added for 7.2-to-7.4 upgrade; Mediant VE capacity updated for Azure (D2ds_v5, D4ds_v5, and D8ds_v5); Mediant VE note for 5,000 sessions
27686	Ver. 7.40A.500.019
27676	Mediant 3100 gateway capacity updated
27673	Typo - 8-GB RAM for GCP Media Components (Mediant CE)
27670	Ver. 7.40A.500.017

LTRT	Description
27666	Ver. 7.40A.500.010
27665	Version 7.40A.400.067 and 7.40A.260.313
27661	Typo (GCP capacity)
27659	Ver. 7.40A.400.063
27652	Ver. 7.40A.400.042; 7.2-to-7.4 upgrade note updated (7.20A.258.919 removed); feature added to Ver. 7.40A.400.023 for Mediant VE/CE Dds_v5 support; Mediant VE on Azure capacity (D2ds_v5 / D4ds_v5 / D8ds_v5)
27647	Ver. 7.40A.300.021
27644	Ver. 7.40A.400.023; know constraint SBC-42301 added to Ver. 7.40A.260.007
27641	WebRTC capacity note updated.
27637	Ver. 7.40A.260.152.
27635	Ver. 7.40A.300.013.
27627	Ver. 7.40A.300.012; GCP capacity; Access List table and Proxy Sets capacity; trademarks and USA address.
27621	Capacity updated for Forward On Busy Trunk Destination.
27620	Initial LR document release for Version 7.4.

Documentation Feedback

AudioCodes continually strives to produce high quality documentation. If you have any comments (suggestions or errors) regarding this document, please fill out the Documentation Feedback form on our website at <https://online.audiocodes.com/documentation-feedback>.

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1 Introduction

This document describes the Latest Release (LR) versions for Release 7.4 of AudioCodes' Session Border Controllers (SBC) and Media Gateways.

**Note:**

- For Long Term Support (LTS) releases of Version 7.4, refer to the [Release Notes for LTS versions](#).
- Some of the features mentioned in this document are available only if the relevant software License Key has been purchased from AudioCodes and is installed on the device. For a list of available License Keys that can be purchased, please contact your AudioCodes sales representative.
- Open-source software may have been added and/or amended. For further information, contact your AudioCodes sales representative.
- Updates to this document may be made due to significant information discovered after the release or too late in the release cycle to be otherwise included in this release documentation. Click [here](#) to check for an updated document version on AudioCodes website.

1.1 Software Revision Record

The following table lists the LR versions for Release 7.4.



Note: The latest software versions can be downloaded from [AudioCodes' Services Portal](#) (registered Customers only).

Table 1-1: Software Revision Record of LR Versions

LR Version	Released Date
7.40A.600.231 (7.4.600-1.03)	May 15, 2025
7.40A.600.221 (7.4.600-1.02)	February 20, 2025
7.40A.600.203 (7.4.600-1)	September 10, 2024
7.40A.600.014 (7.4.600)	May 6, 2024

1.2 Supported Products

The following table lists the SBC and Media Gateway products supported in this release.



Note:

- Product support and hardware configurations may change without notice. Currently available hardware configurations are listed in AudioCodes Price Book. For further enquiries, please contact your AudioCodes sales representative.
- Figures shown in the tables in this section are maximum values per interface. For available hardware configurations including combinations of supported interfaces, contact your AudioCodes sales representative.

Table 1-2: SBC and Media Gateway Products Supported in Release 7.4

Product	Telephony Interfaces			Ethernet Interfaces	USB	OSN
	FXS/FXO	BRI	E1/T1			
Hybrid SBC and Gateway Series						
Mediant 500 Gateway & E-SBC	-	-	1/1	4 GE	1	-
Mediant 500L Gateway & E-SBC	4/4	4	-	4 GE	1	-
Mediant 800B Gateway & E-SBC	12/12	8	2	4 GE / 8 FE	2	√
Mediant 800C Gateway & E-SBC	12/12	8	4	4 GE / 8 FE	2	√
Mediant 1000B Gateway & E-SBC	24/24	20	6/8	7 GE	-	√
MP-1288 Gateway & E-SBC	288/0	-	-	2 GE	1	-
Mediant 3100 Gateway & E-SBC	-	-	64	8 GE	1	-
SBC Series						
Mediant 2600 E-SBC	-	-	-	8 GE	-	-
Mediant 4000 SBC	-	-	-	8 GE	-	-
Mediant 4000B SBC	-	-	-	8 GE	-	√
Mediant 9030 SBC	-	-	-	12 GE	-	-
Mediant 9080 SBC	-	-	-	12 GE	-	-
Mediant SE SBC	-	-	-	12 GE	-	-
Mediant VE SBC	-	-	-	12 GE	-	-
Mediant CE SBC	-	-	-	12 GE	-	-

1.3 Terms Representing Product Groups

Throughout this document, the following terms are used to refer to groups of AudioCodes products for feature applicability. Where applicability is specific to a product, the name of the product is used.

Table 1-3: Terms Representing Product Groups

Term	Product
<i>Analog</i>	Products with analog interfaces (FXS or FXO): <ul style="list-style-type: none"> ▪ MP-1288 ▪ Mediant 500L Gateway & E-SBC ▪ Mediant 800 Gateway & E-SBC (Rev. B and C) ▪ Mediant 1000B Gateway & E-SBC
<i>Device</i>	All products
<i>Digital</i>	Products with digital PSTN interfaces (ISDN BRI or PRI): <ul style="list-style-type: none"> ▪ Mediant 500 Gateway & E-SBC ▪ Mediant 500L Gateway & E-SBC ▪ Mediant 800 Gateway & E-SBC (Rev. ▪ Mediant 1000B Gateway & E-SBC B and C) ▪ Mediant 3100 Gateway & E-SBC
<i>Mediant 90xx</i>	<ul style="list-style-type: none"> ▪ Mediant 9000 ▪ Mediant 9000 Rev. B ▪ Mediant 9030 ▪ Mediant 9080
<i>Mediant Software</i>	Software-based products: <ul style="list-style-type: none"> ▪ Mediant SE SBC ▪ Mediant VE SBC ▪ Mediant CE SBC

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2 Latest Release (LR) Versions

This chapter describes the LR versions of Release 7.4.

2.1 Version 7.40A.600.231

This version includes new features and resolved constraints.



IMPORTANT NOTICE for MEDIANT 90xx/VE/CE/SE SBCs

Starting with Version 7.40A.250.001, .cmp files are digitally signed. Prior to upgrading the device, please refer to the upgrade prerequisites and instructions in the document [Mediant SW-90xx SBC Signed-CMP Upgrade Procedure Configuration Note](#).



Note: Upgrading from Version 7.2 to a 7.4 version for all devices (hardware and software based):

- Upgrade to Version 7.4 can only be done from the following 7.2 versions:

- ✓ 7.20A.260.*
- ✓ 7.20A.259.*
- ✓ 7.20A.258.*
- ✓ 7.20A.256.*
- ✓ 7.20A.204.878
- ✓ 7.20A.204.549

Therefore, prior to upgrading to Version 7.4, make sure that the device is running one of these 7.2 versions.

- **Mediant 90xx and Mediant VE/CE/SE SBCs:**

Upgrade from Version 7.2 requires the use of a software image or an ISO file. For upgrade instructions, refer to the document [Mediant SW and 90xx SBC Upgrade Procedure from 7.2 to 7.4 Configuration Note](#).



Note:

- **Using this SBC version with AudioCodes One Voice Operations Center (OVOC):**

- ✓ This version is compatible only with OVOC Version 8.2 (8.2.3122) or later, and Version 8.4 (8.4.591) or later.
- ✓ If you plan on using OVOC with this SBC version, first upgrade your OVOC to this compatible OVOC version prior to upgrading your device to this SBC version.

- **Using this SBC version with a centralized license pool:**

Customers using OVOC to manage their centralized license pool (Fixed, Floating, or Flex pool) must first upgrade their OVOC to a compatible version (see above) prior to upgrading the devices in the pool to this SBC version. Failure in doing so removes the 7.4 devices from the centralized license pool.

When using the Floating or Flex license pool for WebRTC and SIPREC sessions, OVOC version 8.0.3000 or later is required.



Note: This SBC version is compatible with Stack Manager Version 3.8.9 or later.



Note: The Media Transcoding Cluster (MTC) feature is supported only on Mediant 9080 SBC.

2.1.1 New Features

This section describes the new features introduced in this version.

2.1.1.1 Delayed Call Release for Forwarding SIP NOTIFY Requests

The device can now be enabled to delay (by 2 seconds) call release upon the completion of a SIP BYE transaction to allow it to forward any received in-dialog NOTIFY requests to the peer UA. Previously (and now default), the device rejects NOTIFY requests received after the BYE message.

This feature is enabled by the following new parameter:

- **CLI:** `configure voip > sbc settings > delay-call-release`
- **ini:** [DelayCallRelease]

Applicable Application: SBC

Applicable Products: All

2.1.1.2 Alternative Routing upon MSRP Signaling Failure

The device can now be configured to route Message Session Relay Protocol (MSRP) calls to an alternative destination upon the detection of a SIP signaling failure. Previously, MSRP calls would trigger alternative routing only if the MSRP media path failed.

This feature is configured by the following new IP Profiles table parameter:

- **Web:** 'Broken Signaling Connection Mode'
- **CLI:** `disconnect-on-broken-signaling-connection`
- **ini:** [DisconnectOnBrokenSignalingConnection]

The feature is enabled by configuring the new parameter to **Reroute** or **Reroute with Original SIP Headers**.

If the MSRP endpoints don't establish an MSRP connection within a user-defined timeout (configured by the existing 'Timeout to Establish MSRP Connection' global parameter), or if the MSRP socket is closed after the call was established, the device ends the session and searches the IP-to-IP Routing table for an alternative route. Explicit alternative routing rules for broken connection scenarios can be configured by setting the existing 'Call Trigger' parameter to **Broken Connection**.

Applicable Application: SBC

Applicable Products: All

2.1.1.3 Client Certificate Verification per HTTP Location

Client TLS certificate verification can now be enabled per HTTP Location within an HTTP Proxy Server. Previously, this could only be enabled per HTTP Proxy Server.

This feature is supported by the following configuration enhancements:

- The 'Verify Client Certificate' in the HTTP Proxy Servers table provides an additional value called **Optional**, which must be selected to allow the associated HTTP Locations to decide whether to verify the client certificate.
- The HTTP Locations table now includes the 'Verify Client Certificate' parameter, with the following values:
 - **Use Parent Settings** – Associated HTTP Proxy Server determines certificate verification (applicable only if HTTP Proxy Server's 'Verify Client Certificate' parameter is **Yes** or **No**)
 - **No** – client certificate verification is disabled for the HTTP Location (applicable only if HTTP Proxy Server's 'Verify Client Certificate' parameter is **Optional**)
 - **Yes** - client certificate verification is enabled for the HTTP Location (applicable only if HTTP Proxy Server's 'Verify Client Certificate' parameter is **Optional**)

Applicable Application: All

Applicable Products: All

2.1.1.4 Client Certificate Verification for TCP/UDP Proxy Servers

Client TLS certificate verification can now be configured for TCP/UDP Proxy Servers.

This feature is supported by the new 'Verify Client Certificate' parameter in the TCP/UDP Proxy Servers table.

Applicable Application: All

Applicable Products: All

2.1.2 Resolved Constraints

This section lists resolved constraints.

Table 2-1: Resolved Constraints in Version 7.40A.600.231

Incident	Description	Impact	Severity	Affected Products	Affected Environments
SBC-56445	The device terminates a subscription if it receives a SIP NOTIFY request after a call disconnects.	Device terminates user subscription	Medium	All	n/a
SBC-56652	The device doesn't reroute call upon an MSRP broken connection when configured with both the DisconnectOnBrokenSignalingConnection and DisconnectOnBrokenConnection parameters.	Call failure	Medium	All	n/a
SBC-56698	The device doesn't send a SIP 4xx failure response when a SIP SUBSCRIBE request isn't answered at the far-end.	Response failure	Medium	All	n/a
SBC-56732	The device stops handling MSRP calls (sends CANCEL and then 404 upon INVITE with MSRP offer in SDP) when the Alternate Routing on MSRP Signaling Failure feature is enabled.	Call failure	High	All	n/a
SBC-57061 SBC-57526	The device doesn't send identical SDP offers for direct media (different incoming SDP offer and outgoing SDP offer).	SDP differences for direct media	Medium	All	n/a
SBC-57256	The device doesn't send the client certificate upon request for NGINX (HTTP Proxy).	Connection failure	Medium	All	n/a
SBC-57573	The device fails to handle SIP UPDATE messages without SDP, and terminates the call.	Call failure	Medium	All	n/a

2.2 Version 7.40A.600.221

This version includes known constraints and resolved constraints only.



IMPORTANT NOTICE for MEDIANT 90xx/VE/CE/SE SBCs

Starting with Version 7.40A.250.001, .cmp files are digitally signed. Prior to upgrading the device, please refer to the upgrade prerequisites and instructions in the document [Mediant SW-90xx SBC Signed-CMP Upgrade Procedure Configuration Note](#).



Note: Upgrading from Version 7.2 to a 7.4 version for all devices (hardware and software based):

- Upgrade to Version 7.4 can only be done from the following 7.2 versions:

- ✓ 7.20A.260.*
- ✓ 7.20A.259.*
- ✓ 7.20A.258.*
- ✓ 7.20A.256.*
- ✓ 7.20A.204.878
- ✓ 7.20A.204.549

Therefore, prior to upgrading to Version 7.4, make sure that the device is running one of these 7.2 versions.

- **Mediant 90xx and Mediant VE/CE/SE SBCs:**

Upgrade from Version 7.2 requires the use of a software image or an ISO file. For upgrade instructions, refer to the document [Mediant SW and 90xx SBC Upgrade Procedure from 7.2 to 7.4 Configuration Note](#).



Note:

- **Using this SBC version with AudioCodes One Voice Operations Center (OVOC):**

- ✓ This version is compatible only with OVOC Version 8.2 (8.2.3122) or later, and Version 8.4 (8.4.591) or later.
- ✓ If you plan on using OVOC with this SBC version, first upgrade your OVOC to this compatible OVOC version prior to upgrading your device to this SBC version.

- **Using this SBC version with a centralized license pool:**

Customers using OVOC to manage their centralized license pool (Fixed, Floating, or Flex pool) must first upgrade their OVOC to a compatible version (see above) prior to upgrading the devices in the pool to this SBC version. Failure in doing so removes the 7.4 devices from the centralized license pool.

When using the Floating or Flex license pool for WebRTC and SIPREC sessions, OVOC version 8.0.3000 or later is required.



Note: This SBC version is compatible with Stack Manager Version 3.7.9 or later.



Note: The Media Transcoding Cluster (MTC) feature is supported only on Mediant 9080 SBC.

2.2.1 Known Constraints

This section lists known constraints.

Table 2-2: Known Constraints in Version 7.40A.600.221

Incident	Description	Impact	Severity	Affected Products	Affected Environments
SBC-56450	After upgrading the Mediant CE Signaling Component (SC) from Version 7.4.600 / 7.4.600-1 to 7.4.600-1.02 or later, new DTLS calls fail during the upgrade of the Media Components (MC). (Upgrade from other versions earlier than 7.4.600 / 7.4.600-1 doesn't cause call failure.)	DTLS call failure	High	Mediant CE	Elastic Media Cluster

2.2.2 Resolved Constraints

This section lists resolved constraints.

Table 2-3: Resolved Constraints in Version 7.40A.600.221

Incident	Description	Impact	Severity	Affected Products	Affected Environments
SBC-55577	The device doesn't enforce the CAC 'Limit per user' of 1 concurrent call per user when the user registers with multiple AORs.	CAC failure	Medium	All	n/a
SBC-56319	The device disconnects the call in ringing state after receiving TCP Reset (RST).	Call failure	Medium	All	n/a
SBC-56460	When the [EnableMicrosoftEXT] parameter is configured to 1, the device fails to include the 'ext=' parameter in the Request-URI, rejecting the request (for example, SIP NOTIFY) with a 404 response.	Call failure	Medium	MP-1288	n/a

2.3 Version 7.40A.600.203

This version includes new features and resolved constraints only.



IMPORTANT NOTICE for MEDIANT 90xx/VE/CE/SE SBCs

Starting with Version 7.40A.250.001, .cmp files are digitally signed. Prior to upgrading the device, please refer to the upgrade prerequisites and instructions in the document [Mediant SW-90xx SBC Signed-CMP Upgrade Procedure Configuration Note](#).



Note: Upgrading from Version 7.2 to a 7.4 version for all devices (hardware and software based):

- Upgrade to Version 7.4 can only be done from the following 7.2 versions:
 - ✓ 7.20A.260.*
 - ✓ 7.20A.259.*
 - ✓ 7.20A.258.*
 - ✓ 7.20A.256.*
 - ✓ 7.20A.204.878
 - ✓ 7.20A.204.549

Therefore, prior to upgrading to Version 7.4, make sure that the device is running one of these 7.2 versions.

- **Mediant 90xx and Mediant VE/CE/SE SBCs:**

Upgrade from Version 7.2 requires the use of a software image or an ISO file. For upgrade instructions, refer to the document [Mediant SW and 90xx SBC Upgrade Procedure from 7.2 to 7.4 Configuration Note](#).



Note:

- **Using this SBC version with AudioCodes One Voice Operations Center (OVOC):**

- ✓ This version is compatible only with OVOC Version 8.2.3122 or later.
- ✓ If you plan on using OVOC with this SBC version, first upgrade your OVOC to this compatible OVOC version prior to upgrading your device to this SBC version.

- **Using this SBC version with a centralized license pool:**

Customers using OVOC to manage their centralized license pool (Fixed, Floating, or Flex pool) must first upgrade their OVOC to a compatible version (see above) prior to upgrading the devices in the pool to this SBC version. Failure in doing so removes the 7.4 devices from the centralized license pool.

When using the Floating or Flex license pool for WebRTC and SIPREC sessions, OVOC version 8.0.3000 or later is required.



Note: This SBC version is compatible with Stack Manager Version 3.5.5 or later.



Note: The Media Transcoding Cluster (MTC) feature is supported only on Mediant 9080 SBC.

2.3.1 New Features

This section describes the new features introduced in this version.

2.3.1.1 New Hardware Platform - Mediant 9080C SBC

The Mediant 9080C Session Border Controller (SBC) is built on a cutting-edge hardware platform, delivering enhanced performance and reliability.

- **Increased Capacity:** This new model supports up to 100,000 concurrent call sessions, significantly boosting capacity to meet the demands of large-scale deployments.
- **Software Compatibility:** Supported by Version 7.40A.600 and later, the Mediant 9080C ensures seamless integration with existing systems and supports the full feature set of the Mediant SBC product line.
- **High Availability (HA) Deployments:** For HA deployments, it's mandatory to use two Mediant 9080C devices. Mixing different Mediant 90xx models (for example, using a 9080B and a 9080C) isn't supported by HA configurations.

Note that Mediant 9080C doesn't support Media Transcoding Cluster (MTC) deployments.

- **Key Benefits:**

- High Performance - optimized for superior processing power and efficiency.
- Scalability - ideal for growing networks and high-traffic environments.
- Reliability - robust design, ensuring consistent and dependable operation.

Applicable Application: SBC

Applicable Products: Mediant 9080C

2.3.1.2 Call Preservation Despite Subscription Failures

The device can now be configured to maintain an active call even if a subscription request (SIP SUBSCRIBE) sent during the call (in-dialog) fails. By default, the device disconnects the call upon a subscription failure (per RFC 3261). Maintaining calls if a subscription failure occurs is useful, for example, to preserve active 911 emergency calls.

This feature is configured by the new IP Profile parameter 'Disconnect In-Dialog Subscribe Failure'.

Note: The feature applies to the IP Group that initiated the in-dialog subscription request (regardless of whether it's the inbound or outbound leg).

Applicable Application: SBC

Applicable Products: All

2.3.1.3 Message Session Relay Protocol over IPv6

The device now supports Message Session Relay Protocol (MSRP) over IPv6. Previously, only MSRP over IPv4 was supported.

Applicable Application: SBC

Applicable Products: All

2.3.1.4 SIPREC Session Trigger by SIP 200 OK Responses

The device can now be triggered to start a SIPREC session for a call upon the receipt of a SIP 200 OK in response to the initial INVITE request. This is achieved using AudioCodes proprietary X-AC-Action header set to the value 'start-siprec' (X-AC-Action: start-siprec) in the 200 OK response. Previously, triggering SIPREC by SIP messages was supported only by SIP INFO messages (with the X-AC-Action header).

Once triggered by a 200 OK response, the SIPREC session can be paused, resumed, and stopped, using the X-AC-Action header in INFO messages (as previously supported).

Applicable Application: SBC

Applicable Products: All

2.3.1.5 Classification by Users Registration Database per SIP Interface

Classification to IP Groups of incoming SIP dialog-initiating requests (e.g., INVITE) by the device's users registration database can now be enabled or disabled per SIP Interface. Previously, classification by the users registration database was enabled for all SIP Interfaces (and couldn't be disabled).

This feature is configured by the new SIP Interfaces table parameter, 'Classify by Registration DB' parameter. By default, classification by users registration database is enabled.

Applicable Application: SBC

Applicable Products: All

2.3.2 Resolved Constraints

This section lists resolved constraints.

Table 2-4: Resolved Constraints in Version 7.40A.600.203

Incident	Description	Impact	Severity	Affected Products	Affected Environments
SBC-50669	The IP Group remains offline even though the proxy server replies to the device's SIP OPTIONS keep-alive messages.	IP Group erroneously considered offline	Medium	All	n/a
SBC-51145	The device fails to send syslog messages to the Kafka syslog server.	Device doesn't send syslog messages	Medium	Mediant VE / CE	Cloud
SBC-52487	The device sends a SIP BYE message to the incorrect proxy server (IP address) upon an alternative routing call when the parameter 'In-Call Route Mode' is enabled.	Call doesn't disconnect	Medium	All	n/a
SBC-52489	The device doesn't have a configuration option to ignore a No-RTP packets scenario (IP Profile parameter 'No RTP Mode').	Device ends emergency calls upon no RTP detection	Medium	All	n/a
SBC-54232	The device sends syslog warning messages ("BD Ring Internal Control: No free buffer").	Random syslog warning messages sent	Low	Mediant Software	n/a

2.4 Version 7.40A.600.014

This version includes new features and resolved constraints only.



IMPORTANT NOTICE for MEDIANT 90xx/VE/CE/SE SBCs

Starting with Version 7.40A.250.001, .cmp files are digitally signed. Prior to upgrading the device, please refer to the upgrade prerequisites and instructions in the document [Mediant SW-90xx SBC Signed-CMP Upgrade Procedure Configuration Note](#).



Note: Upgrading from Version 7.2 to a 7.4 version for all devices (hardware and software based):

- Upgrade to Version 7.4 can only be done from the following 7.2 versions:

- ✓ 7.20A.260.*
- ✓ 7.20A.259.*
- ✓ 7.20A.258.*
- ✓ 7.20A.256.*
- ✓ 7.20A.204.878
- ✓ 7.20A.204.549

Therefore, prior to upgrading to Version 7.4, make sure that the device is running one of these 7.2 versions.

- **Mediant 90xx and Mediant VE/CE/SE SBCs:**

Upgrade from Version 7.2 requires the use of a software image or an ISO file. For upgrade instructions, refer to the document [Mediant SW and 90xx SBC Upgrade Procedure from 7.2 to 7.4 Configuration Note](#).



Note:

- **Using this SBC version with AudioCodes One Voice Operations Center (OVOC):**

- ✓ This version is compatible only with OVOC Version 8.2.3122 or later.
- ✓ If you plan on using OVOC with this SBC version, first upgrade your OVOC to this compatible OVOC version prior to upgrading your device to this SBC version.

- **Using this SBC version with a centralized license pool:**

Customers using OVOC to manage their centralized license pool (Fixed, Floating, or Flex pool) must first upgrade their OVOC to a compatible version (see above) prior to upgrading the devices in the pool to this SBC version. Failure in doing so removes the 7.4 devices from the centralized license pool.

When using the Floating or Flex license pool for WebRTC and SIPREC sessions, OVOC version 8.0.3000 or later is required.



Note: This SBC version is compatible with Stack Manager Version 3.3.9 or later.



Note: The Media Transcoding Cluster (MTC) feature is supported only on Mediant 9080 SBC.

2.4.1 New Features

This section describes the new features introduced in this version.

2.4.1.1 Upgrade to OpenSSL 3

The device has now been upgraded to OpenSSL 3, ensuring secure communication.

Applicable Application: All

Applicable Products: All

2.4.1.2 Enhanced Handling of SRV Responses to NAPTR Queries

The device's handling of SRV responses to NAPTR queries has been enhanced to evaluate all responses (in priority order according to DNS server). Previously, when multiple SRV responses were received, the device considered only the first SRV response (and ignored the rest). This feature is relevant when the Proxy Set's 'DNS Resolve Method' parameter is configured to **NAPTR**.

Applicable Application: All

Applicable Products: All

2.4.1.3 Configurable Interval for QoE Collection and Reporting

The interval for collecting and sending aggregated Quality of Experience (QoE) call statistics is now configurable. The device's QoE reports are based on voice metrics obtained from RTCP / RTCP-XR packets that it generates or receives. These packets are typically sent and received every 5 seconds. By default, the device creates a QoE report based on a 30-second interval, reflecting the average quality over that period (i.e., multiple packet samplings of 5-second intervals).

This new feature allows the user to fine-tune how often the device gathers and reports on call quality. For example, shortening the interval results in more reports, offering the following benefits:

- Faster initial reports - first QoE report is available sooner after a call starts, providing valuable insights even for short calls.
- Capturing call fluctuations - subtle changes can be observed in call quality throughout the entire call duration.

This feature is configured by the new [QOEMediaStatisticTimer] ini file parameter (0 and 65,535 milliseconds (msec); default 30 seconds). Note that a device restart is required for changes to this parameter to take effect.

Applicable Application: SBC

Applicable Products: MP-1288; Mediant 500; Mediant 500L; Mediant 800; Mediant 2600; Mediant 4000; Mediant 3100; Mediant 90xx; Mediant Software

2.4.1.4 Performance Monitoring Parameters for SBC Call Failure Rate

The device now provides performance monitoring parameters (KPIs) for SBC call failure rate. This is given in percentage (%), which is calculated by the number of failed calls divided by the total calls multiplied by 100. These performance monitoring parameters are generated globally, per IP Group, and per SRD:

- Global:
 - acKpiSbcCallStatsCurrentGlobalFailedCallsInRatio
 - acKpiSbcCallStatsCurrentGlobalFailedCallsOutRatio
 - acKpiSbcCallStatsIntervalGlobalFailedCallsOutRatioAvg
 - acKpiSbcCallStatsIntervalGlobalFailedCallsInRatioAvg
- Per IP Group:
 - acKpiSbcCallStatsCurrentIpGroupFailedCallsOutRatio
 - acKpiSbcCallStatsCurrentIpGroupFailedCallsInRatio
 - acKpiSbcCallStatsIntervalIpGroupFailedCallsInRatioAvg
 - acKpiSbcCallStatsIntervalIpGroupFailedCallsOutRatioAvg
- Per SRD:
 - acKpiSbcCallStatsCurrentSrdFailedCallsOutRatio
 - acKpiSbcCallStatsCurrentSrdFailedCallsInRatio
 - acKpiSbcCallStatsIntervalSrdFailedCallsInRatioAvg
 - acKpiSbcCallStatsIntervalSrdFailedCallsOutRatioAvg

Applicable Application: SBC

Applicable Products: All

2.4.1.5 Updated List of Default Bundle of Trusted Root CAs

The device's default list of trusted root certificate authorities (CA) for TLS Contexts has been updated according to [Mozilla CA Certificate Program's list](#) (January 1, 2024). For example, it now includes DigiCert G5 as well as AudioCodes RootCA certificate. This list (now also sorted in ascending order) is displayed in the existing Web interface's existing CA Bundle page.

Applicable Application: All

Applicable Products: MP-1288; Mediant 500Li; Mediant 800C; Mediant 3100; Mediant 2600; Mediant 4000; Mediant 9000; Mediant Software

2.4.1.6 Mid-Call SIP Messages Sent to Currently Active Proxy

When a Proxy Set is configured with multiple proxies (IP addresses), the device can now send in-call SIP messages (e.g., re-INVITE and BYE) to the currently active proxy if the proxy to which the dialog-initiating INVITE message was sent is currently offline. This occurs even if the currently active proxy was offline when the call was established.

This feature is enabled (by default, disabled) by the following new Proxy Sets table parameter: 'In-Call Route Mode' / `configure voip > proxy-set > in-call-route-mode / [InCallRouteMode]`

Note:

- For this functionality, all proxies in the Proxy Set must have the same transport type (e.g., all TCP); otherwise, unexpected behavior may occur (e.g., call failure).
- The device's CDR displays only the proxy that was used for the dialog-initiating INVITE message.

Applicable Application: All

Applicable Products: All

2.4.1.7 TCP/TLS Connection Reuse per Proxy Set

The TCP/TLS Connection Reuse feature can now be configured per SIP server (Proxy Set). Previously, it could only be configured globally (all calls), using the [EnableTCPConnectionReuse] parameter. The TCP/TLS Connection Reuse feature allows the device to use the initially established TCP/TLS connection with the proxy for all subsequent SIP requests to that proxy.

This feature is configured by the following new Proxy Sets table parameter: 'TCP/TLS Connection Reuse' / `configure voip > proxy-set > connection-reuse / [ConnectionReuse]`. The default is according to the global parameter.

Applicable Application: All

Applicable Products: All

2.4.1.8 Blocking ICMP Timestamp Requests

The device can now be configured to block incoming ICMP timestamp requests. This prevents it from replying to such requests.

The ICMP protocol allows for network timing measurements, by sending an ICMP timestamp request to a remote peer and receiving an ICMP timestamp in reply. However, sending ICMP timestamp replies may expose the device to certain security vulnerabilities.

This feature is configured by the new ini file parameter [BlockIcmpTimeStamp]. By default, the device accepts ICMP timestamps and replies accordingly.

Applicable Application: SBC

Applicable Products: Mediant Software

2.4.1.9 Numeric Comparison Operators for Message Manipulation Conditions

Up until now, for Message Manipulation rules whose condition compared SIP header elements that were strings, the operators '>', '<', and '=' evaluated the expression using lexicographical (alphanumeric) comparison only.

Now, the Message Manipulation rule can be configured to compare only the numerical values in header elements. This is done using the new manipulation keyword "num" (e.g., num>, num<, num=, and num>=). For example, if the To header in a SIP message is "To: sip:100@10.33.40.88;user=phone" and there are two rules with the following conditions:

- Rule 1: `Header.to.url.user > '20'`
- Rule 2: `Header.to.url.user num> '20'`

Then:

- Rule 1 doesn't match because '100' is not lexicographically greater than '20' (i.e., 1 is less than 2).
- Rule 2 matches because '100' is **numerically** greater than '20'.

Applicable Application: All

Applicable Products: All

2.4.1.10 Increase in Maximum Sub-Variables for Message Manipulation

The maximum number of sub-variables that can be used in a Message Manipulation rule (e.g., Var.Session, Var.Global, and Var.Call) has been increased from 10 to 15 (Var.Session.var-1, Var.Session.var-2, ... Var.Session.var-15).

Applicable Application: SBC

Applicable Products: Mediant Software (8 GB and higher)

2.4.1.11 Retry-Interval for Failed OPTIONS with Proxy Configurable through CLI

Configuring the timeout before the device sends a SIP OPTIONS keep-alive message to an offline proxy server is now configurable through CLI:

```
configure voip > sip-definition proxy-and-registration > failed-  
options-retry-time
```

Previously, this functionality could only be configured through ini file (FailedOptionsRetryTime).

Applicable Application: All

Applicable Products: All

2.4.1.12 Enforce Password History Policy Configurable through CLI

Enforcing the password history policy (previous four passwords can't be used for changed password) is now configurable through CLI:

```
configure system > web > check-password-history
```

Previously, this functionality could only be configured through ini file (CheckPasswordHistory).

Applicable Application: All

Applicable Products: All

2.4.1.13 Call Rerouting upon No RTP during Early Media or Call Connect

When a timeout for no RTP traffic is configured (by the existing [NoRTPDetectionTimeout] parameter) and no RTP is detected during early media or upon call connect (i.e., call never had RTP), the device can now reroute the call (or disconnect it), according to the new parameters below. Previously, upon such a scenario of no RTP, the device could only disconnect the call (no reroute option).

This feature is configured by the new global parameter or IP Profile parameter, 'No RTP Mode' / `no-rtp-mode` / [NoRTPMode].

Note that detection of a cease in RTP in a call that was already established with RTP is still supported. This is configured by the existing parameters, [DisconnectOnBrokenConnection] and [BrokenConnectionEventTimeout].

Applicable Application: SBC

Applicable Products: All

2.4.1.14 Trunk Group Number Included in Outgoing SIP REGISTER Requests

The device can now be configured to include the Trunk Group number to which the call belongs in outgoing SIP REGISTER requests. The Trunk Group number is added using the SIP 'tgrp' parameter in the SIP Contact header. The device also adds the 'trunk-context' and 'user=phone' parameters to this header.

To configure this feature, the following new optional values have been added to the existing global parameter 'Use SIP tgrp Information' (UseSIPTgrp):

- **Send Only Including Register** - adds the SIP 'tgrp' parameter to outgoing INVITE and REGISTER requests.
- **Send & Receive Including Register** - adds the SIP 'tgrp' parameter to outgoing INVITE and REGISTER requests and uses them if present in the Request-URI of incoming INVITE requests.

This feature is useful, for example, when two FXS endpoints register with the same phone number. The 'tgrp' parameter allows the device to distinguish between these endpoints when routing their calls.

Applicable Application: Gateway

Applicable Products: MP-1288; Mediant 500; Mediant 500L; Mediant 800; Mediant 1000; Mediant 3100

2.4.1.15 Duplicated SIP TLS Performance Monitoring Parameters Removed

The following duplicated SIP TLS performance monitoring (KPI) parameters under network.ddosStats.global have been removed (and now only appear under network.tlsStats.sipTlsStats):

- acKpiDdosStatsCurrentGlobalRejectedSipTlsConnTotal
- acKpiDdosStatsCurrentGlobalAttemptedSipTlsConnTotal
- acKpiDdosStatsCurrentGlobalActiveSipTlsConn
- acKpiDdosStatsIntervalGlobalRejectedSipTlsConn
- acKpiDdosStatsIntervalGlobalAttemptedSipTlsConn
- acKpiDdosStatsIntervalGlobalActiveSipTlsConnAvg
- acKpiDdosStatsIntervalGlobalActiveSipTlsConnMax

Applicable Application: All

Applicable Products: All

2.4.2 Resolved Constraints

This section lists resolved constraints.

Table 2-5: Resolved Constraints in Version 7.40A.600.014

Incident	Description	Impact	Severity	Affected Products	Affected Environments
SBC-49648	The device fails to allocate virtual CID resources, causing call failure (SIP 488 response).	Call failure	High	All	n/a
SBC-49961	The device fails to load a TLS certificate (incomplete client certificate).	Security	Medium	All	n/a
SBC-50139	The device sends a SIP INVITE message with a corrupted P-Called-Party-ID header (name part), causing the INVITE to be rejected by the recipient.	Call failure	Medium	All	n/a
SBC-50150	The device resets the connection to OVOC because of a miscalculation of the network interface for the listening sockets in the nginx config file.	OVOC connection reset	Medium	All	n/a
SBC-50195	The device's Web interface displays "Unable to Apply Changes" when the Registration Status page is opened.	Web interface display issue	Low	All	n/a
SBC-50196	An IP Group remains online even though all associated proxy servers are down, when the Proxy Set configuration includes 'Proxy Keep-Alive' as Using OPTIONS on Active Server and 'Redundancy Mode' as Parking .	Incorrect device behavior	Low	All	n/a
SBC-50434	The device can't be accessed through HTTPS redirection.	Device is inaccessible	Medium	All	n/a
SBC-50615	The device's SNMP trap destination stops functioning when the OAMP IP address is changed.	Device stops sending SNMP traps	Medium	All	n/a
SBC-50620	Typo in the Message Manipulation editor ("suggestion").	Typo in Web interface	Low	All	n/a

Incident	Description	Impact	Severity	Affected Products	Affected Environments
SBC-50698 SBC-51346	The device sends a SIP re-INVITE message for media synchronization without incrementing the SDP version ('o=' line).	Device sends SDP offer with incorrect SDP version	Medium	All	n/a
SBC-50706	WebRTC-to-WebRTC call experiences a video freeze because of 'ssrc-group' SDP attribute mishandling.	Video freezes	Medium	All	n/a
SBC-50721	The device fails to re-open the channel when moving from SRTP tunneling with RTP forwarding, to mediation, causing a loss of audio.	No audio after SIP re-INVITE	Medium	All	n/a
SBC-50758	The device fails to recover from a restart and remains inaccessible (no ping, Telnet, SSH, or Web) because it fails to upload the Configuration Package file from SNMP/OVOC.	Device inaccessible after restart	Medium	Mediant 800C	n/a
SBC-51100 SBC-51278	The device restarts with the error message "Board Was Crashed: Signal 11, Task SPMR" because of an internal buffer overrun.	Device restart	Medium	All	n/a

3 Session Capacity

This section provides capacity for the Gateway and SBC products.

3.1 SIP Signaling and Media Capacity

The following table lists the maximum, concurrent SIP signaling sessions, concurrent media sessions, and registered users per product.

Table 3-1: SIP Signaling and Media Capacity per Product

Product		Signaling Capacity		Media Sessions			
		SIP Sessions	Registered Users	Session Type	RTP	SRTP	Detailed Media Capabilities
Mediant 500		250	1,500	Hybrid	250	200	Transcoding: n/a GW: Table 3-4
				GW-Only	30	30	
Mediant 500L		60	200	Hybrid	60	60	Transcoding: n/a GW: Table 3-6
				GW-Only	8	8	
Mediant 800B		250	1,500	Hybrid	250	250	GW & Transcoding: Table 3-8 SBC Only: Table 3-7
				GW-Only	64	64	
Mediant 800C		400	2,000	Hybrid	400	250	GW & Transcoding: Table 3-10
				GW-Only	124	124	
Mediant 1000B		150	600	Hybrid	150	120	Transcoding: Table 3-14 GW: Tables Table 3-11, Table 3-12, Table 3-13
				GW-Only	192	140	
Mediant 3100		5,000	20,000	Hybrid	5,000	5,000	Transcoding: Table 3-16 GW: Table 3-15
		960	20,000	GW-Only	960	960	
MP-1288		588	350	Hybrid	588	438	Transcoding: n/a GW: Table 3-17
				SBC-Only	300	300	
				GW-Only	288	288	
Mediant 2600		600	8,000	SBC-Only	600	600	Transcoding: Table 3-18
Mediant 4000		5,000	20,000	SBC-Only	5,000	3,000	Transcoding: Table 3-19
Mediant 4000B		5,000	20,000	SBC-Only	5,000	5,000	Transcoding: Table 3-21
Mediant 9000	SIP Performance Profile (HT Enabled)	30,000	300,000	SBC-Only	30,000	16,000	Transcoding: n/a
		55,000	0	SBC-Only	55,000	18,000	Transcoding: n/a
	DSP Performance Profile (HT Enabled)	50,000	0	SBC-Only	50,000	18,000	Transcoding: Table 3-23
	SRTP Performance Profile (HT Enabled)	50,000	0	SBC-Only	50,000	40,000	Transcoding: n/a
Mediant 9000 Rev. B	SIP Performance Profile	50,000	500,000	SBC-Only	50,000	30,000	Transcoding: n/a
		70,000	0	SBC-Only	70,000	30,000	Transcoding: n/a
	DSP Performance Profile	50,000	0	SBC-Only	50,000	28,000	Transcoding: Table 3-25
	SRTP Performance Profile	70,000	0	SBC-Only	70,000	40,000	Transcoding: n/a

Product			Signaling Capacity		Media Sessions			
			SIP Sessions	Registered Users	Session Type	RTP	SRTP	Detailed Media Capabilities
Mediant 9030	SIP Performance Profile		30,000	200,000	SBC-Only	30,000	30,000	Transcoding: n/a
	DSP Performance Profile		30,000	200,000	SBC-Only	30,000	15,000	Transcoding: Table 3-30
Mediant 9080	SIP Performance Profile		50,000	500,000	SBC-Only	50,000	30,000	Transcoding: n/a
			70,000	0	SBC-Only	70,000	30,000	Transcoding: n/a
	DSP Performance Profile		50,000	0	SBC-Only	50,000	28,000	Transcoding: Table 3-25
	SRTP Performance Profile		70,000	0	SBC-Only	70,000	40,000	Transcoding: n/a
Mediant 9080C	SIP Performance Profile		80,000	500,000	SBC-Only	80,000	75,000	Transcoding: n/a
			100,000	0	SBC-Only	100,000	90,000	Transcoding: n/a
	DSP Performance Profile		50,000	0	SBC-Only	50,000	27,000	Transcoding: Table 3-28
	SRTP Performance Profile		100,000	0	SBC-Only	100,000	100,000	Transcoding: n/a
Mediant 9000 with Media Transcoders (MT-type)			24,000	180,000	SBC-Only	24,000	16,000	Transcoding: Table 3-27
Mediant 9000 Rev. B with Media Transcoders (MT-type)			60,000	200,000	SBC-Only	60,000	40,000	Transcoding: Table 3-27
Mediant 9080 with Media Transcoders (MT-type)			60,000	200,000	SBC-Only	60,000	40,000	Transcoding: Table 3-27
Mediant CE	AWS / EC2		50,000	100,000	SBC-Only	50,000	50,000	Forwarding: Table 3-32 Transcoding: Table 3-33
	Azure		50,000	100,000	SBC-Only	50,000	50,000	Forwarding: Table 3-34 Transcoding: Table 3-35
	VMware		12,000	100,000	SBC-Only	12,000	12,000	Forwarding: Table 3-36 Transcoding: Table 3-37
	GCP		50,000	100,000	SBC-Only	50,000	40,000	Forwarding: Table 3-38 Transcoding: Table 3-40
Mediant VE	VMware	1 vCPU 2-GB RAM (HT)	250	1,000	SBC-Only	250	250	Transcoding: n/a
		1 vCPU 8-GB RAM (HT)	4000	15,000	SBC-Only	4,000	2,600	Transcoding: n/a
		4 vCPU 16-GB RAM (HT)	10,000	75,000	SBC-Only	10,000	8,000	Transcoding: n/a
		2 vCPUs 8-GB RAM (HT)	4,000	15,000	SBC-Only	2,200	1,900	Transcoding: Table 3-41
		4 vCPU 8-GB RAM (HT)	4,000	15,000	SBC-Only	1,800	1,600	Transcoding: Table 3-41
		8 vCPU 16-GB RAM (HT)	9,000	75,000	SBC-Only	6,000	5,000	Transcoding: Table 3-41
		16 vCPU 16-GB RAM (HT)	9,000	75,000	SBC-Only	6,500	5,000	Transcoding: Table 3-41
	KVM / OpenStack	1 vCPU 2-GB RAM (HT)	250	1,000	SBC-Only	250	250	Transcoding: n/a
		1 vCPU 8-GB RAM (HT)	2,500	15,000	SBC-Only	2,500	1,700	Transcoding: n/a
		4 vCPU 16-GB RAM (HT)	4,500	75,000	SBC-Only	4,500	3,500	Transcoding: n/a

Product			Signaling Capacity		Media Sessions			
			SIP Sessions	Registered Users	Session Type	RTP	SRTP	Detailed Media Capabilities
		2 vCPUs 8-GB RAM (HT)	1,900	15,000	SBC-Only	1,900	1,400	Transcoding: Table 3-41
		8 vCPU 16-GB RAM (HT)	5,800	75,000	SBC-Only	5,800	4,800	Transcoding: Table 3-41
		16 vCPU 16-GB RAM (HT)	3,800	75,000	SBC-Only	3,800	2,800	Transcoding: Table 3-41
		8 vCPU 32-GB RAM SR-IOV Intel NICs (non-HT)	24,000	75,000	SBC-Only	24,000	10,000	Transcoding: n/a
	Hyper-V	1 vCPU 2-GB RAM (HT)	250	1,000	SBC-Only	250	250	Transcoding: n/a
		1 vCPU 8-GB RAM (HT)	1,500	15,000	SBC-Only	1,500	1,200	Transcoding: n/a
		4 vCPU 8-GB RAM (HT)	2,500	15,000	SBC-Only	2,500	2,300	Transcoding: n/a
		2 vCPUs 8-GB RAM (HT)	1,900	15,000	SBC-Only	1,900	1,400	Transcoding: Table 3-41
		8 vCPU 16-GB RAM (HT)	2,500	75,000	SBC-Only	2,500	2,300	Transcoding: Table 3-41
	AWS / EC2	m5n.large	3,200	30,000	SBC-Only	3,200	3,200	Transcoding: n/a
			2,500	20,000	SBC-Only	2,500	1,500	Transcoding: Table 3-42
		c5n.2xlarge	5,500	75,000	SBC-Only	5,500	5,000	Transcoding: n/a
			4,500	75,000	SBC-Only	4,500	2,400	Transcoding: Table 3-43
		c5n.9xlarge	7,000	75,000	SBC-Only	7,000	6,000	Transcoding: n/a
			7,000	75,000	SBC-Only	7,000	4,500	Transcoding: Table 3-44
	Azure	DS1_v2	600	1,000	SBC-Only	600	500	Transcoding: n/a
			300	1,000	SBC-Only	300	300	Transcoding: Table 3-46
		D2ds_v5	3,200	15,000	SBC-Only	3,200	2,700	Transcoding: n/a
			2,500	15,000	SBC-Only	2,500	1,600	Transcoding: Table 3-46
		D4ds_v5	7,000	50,000	SBC-Only	7,000	6,000	Transcoding: n/a
			4,800	50,000	SBC-Only	4,800	3,200	Transcoding: Table 3-46
		D8ds_v5	12,000	75,000	SBC-Only	12,000	9,000	Transcoding: n/a
			4,600	75,000	SBC-Only	4,600	3,000	Transcoding: Table 3-46
	GCP	n2-standard-2	3,500	15,000	SBC-Only	3,500	2,400	Transcoding: n/a
			1,500	15,000	SBC-Only	1,500	1,100	Transcoding: Table 3-47
		n2-standard-4	4,000	75,000	SBC-Only	4,000	3,000	Transcoding: n/a
			2,400	75,000	SBC-Only	2,400	1,800	Transcoding: Table 3-47
		n2-standard-8	2,400	75,000	SBC-Only	2,400	1,800	Transcoding: Table 3-47
		n2-highcpu-32	3,600	75,000	SBC-Only	3,600	3,400	Transcoding: Table 3-47

Product			Signaling Capacity		Media Sessions			
			SIP Sessions	Registered Users	Session Type	RTP	SRTP	Detailed Media Capabilities
Mediant SE	DL360p Gen8 or DL360 Gen9		24,000	120,000	SBC-Only	16,000	14,000	Transcoding: n/a
			24,000	0	SBC-Only	24,000	14,000	Transcoding: n/a
	DL360 Gen10	SIP Performance Profile	50,000	500,000	SBC-Only	50,000	30,000	Transcoding: n/a
			70,000	0	SBC-Only	70,000	30,000	Transcoding: n/a
		DSP Performance Profile	50,000	0	SBC-Only	50,000	28,000	Transcoding: Table 3-48
			SRTP Performance Profile	70,000	0	SBC-Only	70,000	40,000


Note:

- The listed capacities are accurate at the time of publication of this document. However, they may change due to a later software update. For the latest capacities, please contact your AudioCodes sales representative.
- **GW** refers to Gateway functionality.
- **SIP Sessions** refers to the maximum concurrent signaling sessions for both SBC and Gateway (when applicable). Whenever signaling sessions is greater than the maximum media sessions, the remaining signaling sessions can be used for Direct Media.
- **Session Type** refers to Gateway-only sessions, SBC-only sessions, or Hybrid sessions which is any mixture of SBC and Gateway sessions under the limitations of Gateway-only or SBC-only maximum values.
- **RTP Sessions** refers to the maximum concurrent RTP sessions when all sessions are RTP-RTP (SBC sessions) or TDM-RTP (Gateway sessions).
- **SRTP Sessions** refers to the maximum concurrent SRTP sessions when all sessions are RTP-SRTP (for SBC sessions) or TDM-SRTP (for Gateway sessions).
- **Registered Users** refers to the maximum number of users that can be registered with the device. This applies to the supported application (SBC or CRP).
- Regarding signaling, media, and transcoding session resources:
 - ✓ A signaling session is a SIP dialog session between two SIP entities, traversing the device and using one signaling session resource.
 - ✓ A media session is an audio (RTP or SRTP), fax (T.38), or video session between two SIP entities, traversing the device and using one media session resource.
 - ✓ A gateway session (TDM-RTP or TDM-SRTP) is considered as a media session for the calculation of media sessions. In other words, the maximum media sessions shown in the table refer to the sum of Gateway and SBC sessions.
 - ✓ For direct media (i.e., anti-tromboning or non-media anchoring) where only SIP signaling traverses the device and media flows directly between the SIP entities, only a signaling session resource is used. Thus, for products with a greater signaling session capacity than media, even when media session resources have been exhausted, additional signaling sessions can still be handled for direct-media calls.
 - ✓ For call sessions requiring transcoding, one transcoding session resource is also used. For example, for a non-direct media call in which one leg uses G.711 and the other G.729, one signaling, one media, and one transcoding session resources are used.

- Cloud Resilience Package (CRP) application capacity appears under **Registered Users**.
- Lync Analog Device (LAD) application capacity appears under **Media Sessions**.

**Note for MP-1288:**

- The maximum number of media and signaling sessions is the sum of the maximum 300 RTP-to-RTP (SBC) sessions and the maximum 288 TDM-RTP (Gateway) sessions.
- The maximum number of SRTP sessions is the sum of the maximum 150 RTP-to-SRTP (SBC) sessions and the maximum 288 TDM-SRTP (Gateway) sessions.

**Note for Mediant 90xx SBC:**

- Mediant 90xx SBC with Media Transcoders limitations:
 - ✓ To allow DSP capabilities (such as transcoding), the 'Performance Profile' parameter must be configured to the DSP profile. Each transcoding session is weighted as two RTP-RTP sessions without transcoding. Therefore, the number of sessions without transcoding plus the doubled number of sessions with transcoding must be less than the maximum RTP-RTP figure specified in the table. As a result, if all sessions involve transcoding, the maximum number of sessions is half the maximum RTP-RTP sessions without transcoding specified in the table.
 - ✓ The maximum number of SRTP-RTP sessions is also affected by the above limitations. For example, if sessions involve transcoding, the maximum number of SRTP-RTP sessions is also limited by half of the maximum SRTP-RTP sessions without transcoding.
- The Media Transcoding Cluster (MTC) feature is supported only on Mediant 9080 SBC.



Note for Mediant VE SBC:

- **Mediant VE SBC on VMware:** Capacity was measured with ESXi Version 7.0.3 and a host of CPU Xeon 6226R with Hyper-Threading enabled. For example, a 4-vCPU virtual machine allocates only 2 physical cores. For minimum requirements, see Section 3.3.16.1 on page 79.
- **Mediant VE SBC on KVM:** Capacity for virtual machine instance with SR-IOV was done with Intel 82599 NIC.
- **Mediant VE SBC on Azure:**
 - ✓ Azure DS_v2 virtual machine series in general and DS1_v2 virtual machine size in particular are scheduled for retirement in May 2028. Therefore, it's recommended not to use them for new deployments, and to migrate existing deployments to the Dds_v5 (D2ds_v5, D4ds_v5, or D8ds_v5) virtual machine series.
 - ✓ Capacity for virtual machine instances D2ds_v5, D4ds_v5, D8ds_v5 is with Accelerated Networking enabled.
 - ✓ When operating in HA mode, it's not recommended to exceed 5,000 sessions because of the duration required for processing a failover.
- **Mediant VE SBC on AWS:**
 - ✓ Network performance on AWS cloud is subject to network conditions, which may depend on time and region.
 - ✓ Capacity shown in the table are based on lowest capacities found during performance testing.
 - ✓ It's recommended to use the m5n and c5n instance types as they provide more stable network characteristics. However, the m5 and c5 instance types are still supported.

**Note for Mediant CE SBC:**

Mediant CE SBC is based on the following instances:

- **AWS:**

- ✓ Signaling Components (SC): m5.2xlarge
- ✓ Media Components (MC) - forwarding only: m5n.large
- ✓ MC - forwarding and transcoding: c5.4xlarge

- **Azure:**

- ✓ SC: D4ds_v5 (up to 10,000 sessions and 50,000 users) or D8ds_v5 (up to 50,000 sessions and 100,000 users)
- ✓ MC - forwarding only: D2ds_v5, D4ds_v5, and D8ds_v5
- ✓ MC - forwarding and transcoding: D2ds_v5, D4ds_v5, and D8ds_v5

It's not recommended to exceed 5,000 sessions per MC because of the duration required for processing an MC failover.

- **VMware:**

- ✓ SC: 4 vCPU (Hyper-Threading), 16-GB RAM (if more than 50,000 registered users, or more than 6,000 TLS connections are required, memory should be increased to 32GB).
- ✓ MC - forwarding only: 2 vCPU (Hyper-Threading), 8-GB RAM
- ✓ MC - forwarding and transcoding: 8 vCPU (Hyper-Threading), 8-GB RAM

- **GCP:**

- ✓ SC: n2-standard-8 (8 vCPU, 32-GB RAM)
- ✓ MC - forwarding only: n2-standard-2 (2 vCPU, 8-GB RAM)
- ✓ MC - forwarding and transcoding: n2-standard-2 (2 vCPU, 8-GB RAM), n2_highcpu-8 (8 vCPU, 8-GB RAM)



Note for Mediant SE SBC: For new deployments, it's highly recommended to use the DL360 G10 server. For exact specifications and BIOS settings, please contact your AudioCodes sales representative.

3.2 Capacity per Feature

The table below lists maximum capacity per feature.

Table 3-2: Maximum Capacity per Feature

Product	Concurrent WebRTC Sessions (see note #3)		One-Voice Resiliency (OVR) Users	Concurrent SIPREC Sessions (see note #4)	Concurrent TLS Connections	Concurrent MSRP Sessions
	Click-to-Call	Registered Agents				
MP-1288	-	-	-	150	350	100
Mediant 500	-	-	-	125	300	100
Mediant 500L	-	-	-	30	100	100
Mediant 800B	100	100	100	200	300	100
Mediant 800C	100	100	150	200	450	100
Mediant 1000B	-	-	50	-	300	100
Mediant 3100	1,000	1,000	-	2,500	6,000	100
Mediant 2600	600	600	-	300	2,500	100
Mediant 4000/B	1,000	1,000	-	2,500	2,500	100
Mediant 9000	5,000	16,000	-	<ul style="list-style-type: none"> Hyper-Threading: 20,000 No Hyper-Threading: 12,000 	25,000	100
Mediant 9030	5,000	16,000	-	15,000	16,000	100
Mediant 9080	8,000	25,000	-	20,000	25,000	100
Mediant 9080C	8,000	25,000	-	20,000	25,000	100
Mediant SE (see Note #1)	5,000	25,000	-	12,000	25,000	100
Mediant VE (see Note #2)	5,000	5,000	2,000	12,000	<ul style="list-style-type: none"> 2 GB: 100 3 GB: 500 4 GB: 5,000 8-16 GB: 6,000 32 GB: 16,000 64 GB: 25,000 	100
Mediant CE (see note #2)	5,000	<ul style="list-style-type: none"> SC with 8 vCPUs: 16,000 SC with 4 vCPUs: 5,000 	-	20,000	<ul style="list-style-type: none"> 2 GB: 100 3 GB: 500 4 GB: 5,000 8-16 GB: 6,000 32 GB: 16,000 64 GB: 25,000 	100

**Note:**

1. Using the approved Mediant SE server specifications with an Intel Xeon Gold 6126 processor. For specifications, please contact AudioCodes.
2. WebRTC sessions:
 - ✓ The maximum number of concurrent WebRTC sessions can't be greater than the maximum number of concurrent SRTP sessions (specified in Table 3-1). Therefore, the actual maximum number of concurrent WebRTC sessions per deployment environment will be the lower of these numbers.
 - ✓ The maximum number of concurrent WebRTC sessions can't be greater than the maximum number of concurrent TLS connections.
3. Capacity assumes TLS key size of 2048-bit is used for WebSocket and DTLS negotiation,
4. SIPREC capacity assumes that there are no other concurrent, regular (non-SIPREC) voice sessions. SIPREC sessions are counted as part of the SBC session capacity. The maximum number of SIPREC sessions cannot be higher than the number of RTP sessions, as indicated in Table 3-1. Therefore, the actual maximum number of SIPREC sessions per deployment environment will be the lower of these numbers.
5. For TLS connections capacity, each registered user is assigned a TLS connection, even if there are no ongoing SIP dialogs or transactions using the same connection.

3.3 Detailed Capacity

This section provides detailed capacity figures.

3.3.1 Mediant 500 E-SBC

The SBC session capacity and DSP channel capacity for Mediant 500 E-SBC are shown in the tables below.

3.3.1.1 Non-Hybrid (SBC) Capacity

Table 3-3: Mediant 500 E-SBC (Non-Hybrid) - SBC Capacity

Hardware Configuration	TDM-RTP Sessions				Max. SBC Sessions (RTP-RTP)
	DSP Channels Allocated for PSTN	Wideband Coders			
		G.722	AMR-WB (G.722.2)	SILK-WB	
SBC	n/a	n/a	n/a	n/a	250

3.3.1.2 Hybrid (with Gateway) Capacity

Table 3-4: Mediant 500 Hybrid E-SBC (with Gateway) - Media & SBC Capacity

Hardware Configuration	TDM-RTP Sessions				Max. SBC Sessions (RTP-RTP)
	DSP Channels Allocated for PSTN	Wideband Coders			
		G.722	AMR-WB (G.722.2)	SILK-WB	
1 x E1/T1	30 (full E1)	√	-	-	220
	24 (full T1)				226
	26 (partial E1)	√	√	-	224
	24 (full T1)	√	√	-	226
	26 (partial E1)	√	√	√	224
	24 (full T1)	√	√	√	226

3.3.2 Mediant 500L Gateway and E-SBC

The SBC session capacity and DSP channel capacity for Mediant 500L Gateway and E-SBC is shown in the tables below.

3.3.2.1 Non-Hybrid (SBC) Capacity

Table 3-5: Mediant 500L E-SBC (Non-Hybrid) - SBC Capacity

Hardware Configuration	TDM-RTP Sessions			Max. SBC Sessions (RTP-RTP)
	DSP Channels Allocated for PSTN	Wideband Coders		
		G.722	AMR-WB (G.722.2)	
SBC	n/a	n/a	n/a	60

3.3.2.2 Hybrid (with Gateway) Capacity

Table 3-6: Mediant 500L Hybrid E-SBC (with Gateway) - Media & SBC Capacity

Hardware Configuration	DSP Channels Allocated for PSTN	Additional Coders				Max. SBC Sessions
		Narrowband	Wideband			
		Opus-NB	G.722	AMR-WB (G.722.2)	Opus-WB	
2 x BRI / 4 x BRI	4/8	-	-	-	-	56/52
	4/8	-	√	-	-	56/52
	4/6	√	-	√	-	56/54
	4	-	-	-	√	56

3.3.3 Mediant 800 Gateway & E-SBC

This section describes capacity for Mediant 800 Gateway & E-SBC.

3.3.3.1 Mediant 800B Gateway & E-SBC

The DSP channel capacity and SBC session capacity for Mediant 800B Gateway & E-SBC are shown in the tables below.

3.3.3.1.1 Non-Hybrid (SBC) Capacity

Table 3-7: Mediant 800B Gateway & E-SBC - SBC Session Capacity per Capabilities (SBC Only)

H/W Configuration	DSP Channels for PSTN	SBC Transcoding Sessions								Max. SBC Sessions
		From Profile 2 with Additional Advanced DSP Capabilities						To Profile 1	To Profile 2	
		AMR-NB / G.722	AMR-WB (G.722.2)	SILK-NB / iLBC	SILK-WB	Opus-NB	Opus-WB			
SBC	n/a	-	-	-	-	-	-	57	48	250
	n/a	√	-	-	-	-	-	51	42	250
	n/a	-	-	√	-	-	-	39	33	250
	n/a	-	√	-	-	-	-	36	30	250
	n/a	-	-	-	√	-	-	27	24	250
	n/a	-	-	-	-	√	-	27	24	250
	n/a	-	-	-	-	-	√	21	21	250



Note: "Max. SBC Sessions" applies to scenarios without registered users. When registered users are used, "Max. SBC Sessions" is reduced according to the main capacity table (see Section 3.1).

3.3.3.1.2 Hybrid (with Gateway) Capacity

Table 3-8: Mediant 800B Gateway & E-SBC - Channel Capacity per Capabilities (with Gateway)

Telephony Interface Assembly	DSP Channels Allocated for PSTN	SBC Transcoding Sessions								Conf. Participants	Max. SBC Sessions
		From Profile 2 with Additional Advanced DSP Capabilities						To Profile 1	To Profile 2		
		AMR-NB / G.722	AMR-WB (G.722.2)	SILK-NB	SILK-WB	Opus-NB	Opus-WB				
2 x E1/T1	60/48	-	-	-	-	-	-	3/15	2/13	-	190/202
2 x T1	48	-	-	-	-	-	-	11	9	-	202
1 x E1/T1 8 x FXS/FXO	38/32	-	-	-	-	-	-	22/28	18/22	-	212/218
	38/32	-	-	√	-	-	-	8/12	7/11	-	212/218
1 x E1/T1	30/24	-	-	√	-	-	-	14/18	12/16	-	220/226
1 x E1 4 x BRI	38	-	-	-	-	-	-	22	18	-	212
1 x E1 4 x FXS	34	-	-	-	-	-	-	26	21	-	216
2 x E1 4 x FXS	64	-	-	-	-	-	-	0	0	-	186
4 x BRI 4 x FXS 4 x FXO	16	-	-	-	-	-	-	5	4	-	234
8 x BRI 4 x FXS	20	-	-	-	-	-	-	1	1	-	230
8 x BRI	16	-	-	-	-	-	-	5	4	-	234
12 x FXS	12	-	-	√	-	-	-	3	3	-	238
4 x FXS 8 x FXO	12	-	-	√	-	-	-	3	3	-	238
8 x FXS 4 x FXO	12	-	-	√	-	-	-	3	3	-	238
4 x BRI 4 x FXS	12	-	-	√	-	-	-	3	3	-	238
4 x FXS 4 x FXO	8	-	-	-	-	-	-	7	5	6	242
	8	-	-	√	-	-	-	6	6	-	242
4 x BRI	8	-	-	-	-	-	-	7	5	6	242
	8	-	-	√	-	-	-	6	6	-	242

Telephony Interface Assembly	DSP Channels Allocated for PSTN	SBC Transcoding Sessions								Conf. Participants	Max. SBC Sessions
		From Profile 2 with Additional Advanced DSP Capabilities						To Profile 1	To Profile 2		
		AMR-NB / G.722	AMR-WB (G.722.2)	SILK-NB	SILK-WB	Opus-NB	Opus-WB				
1/2/3 x BRI	2/4/6	-	-	-	-	-	-	17/15 /14	14/13 /11	-	248/246/ 244
	2/4/6	-	-	√	-	-	-	11/10 /8	10/8/ 7	-	248/246/ 244
4 x FXS or 4 x FXO	4	-	-	√	-	-	-	10	8	-	246
	4	√	-	-	-	-	-	12	10	4	246
	4	-	-	√	-	-	-	6	6	4	246
	4	-	√	√	-	-	-	4	4	4	246
	4	-	√	√	√	-	-	3	3	4	246
	4	-	-	-	-	√	-	1	0	4	246
	4	-	-	-	-	-	√	0	0	3	246
FXS, FXO, and/or BRI, but not in use	0	-	-	-	-	-	-	19	16	-	250

Notes:

- "Max. SBC Sessions" for Mediant 800B applies to scenarios without registered users. When registered users are used, "Max. SBC Sessions" is reduced according to the main capacity table (see Section 3.1).
- *Profile 1*: G.711 at 20ms only, with In-band signaling (in voice channel), DTMF transcoding (RFC 2833 to in-band signaling), and Silence Suppression (no fax detection or T.38 support).
- *Profile 2*: G.711, G.726, G.729 (A / AB), and G.723.1, T.38 with fax detection, In-band signaling (in voice channel), and Silence Compression.
- All hardware assemblies also support the following DSP channel capabilities: echo cancellation (EC), CID (caller ID), RTCP XR reporting, and SRTP.
- SBC enhancements (e.g., Acoustic Echo Suppressor, Noise Reduction) are also available for these configurations. For more information, please contact your AudioCodes sales representative.
- Automatic Gain Control (AGC) and Answer Detector / Answer Machine Detector (AD/AMD) are also available for these configurations. For more information, please contact your AudioCodes sales representative.
- *Transcoding Sessions* represents part of the total SBC sessions.
- *Conference Participants* represents the number of concurrent analog ports in a three-way conference call.
- For availability of the telephony assemblies listed in the table above, please contact your AudioCodes sales representative.



3.3.3.2 Mediant 800C Gateway & E-SBC

The DSP channel capacity and SBC session capacity for Mediant 800C Gateway & E-SBC are shown in the tables below.

3.3.3.2.1 Non-Hybrid (SBC) Capacity

Table 3-9: Mediant 800C Gateway & E-SBC - SBC Session Capacity per Capabilities (SBC Only)

H/W Configuration	SBC Transcoding Sessions								Max. SBC Sessions
	From Profile 2 with Additional Advanced DSP Capabilities						To Profile 1	To Profile 2	
	AMR-NB / G.722	AMR-WB (G.722.2)	SILK-NB / iLBC	SILK-WB	Opus-NB	Opus-WB			
SBC	-	-	-	-	-	-	120	96	400
	✓	-	-	-	-	-	108	84	400
	-	-	✓	-	-	-	78	66	400
	-	✓	-	-	-	-	72	60	400
	-	-	-	✓	-	-	54	48	400
	-	-	-	-	✓	-	54	48	400
	-	-	-	-	-	✓	42	42	400
	From Profile 1						156	120	400

Note:

- Max. SBC Sessions applies to scenarios without registered users. When registered users are used, "Max. SBC Sessions" is reduced according to the main capacity table (see Section 3.1).
- *Profile 1*: G.711 at 20ms only, with In-band signaling (in voice channel), DTMF transcoding (RFC 2833 to in-band signaling), and Silence Suppression (no fax detection or T.38 support).
- *Profile 2*: G.711, G.726, G.729 (A / AB), and G.723.1, T.38 with fax detection, In-band signaling (in voice channel), and Silence Compression.
- The maximum SBC sessions with DTMF transcoding (Profile 1 in-band DTMF to Profile 1 RFC 2833) is 156 sessions (RTP-RTP or RTP-SRTP).



3.3.3.2.2 Hybrid (with Gateway) Capacity

Table 3-10: Mediant 800C Gateway & E-SBC - SBC Session Capacity per Capabilities with Gateway

Telephony Interface Assembly	DSP Channels Allocated for PSTN	SBC Transcoding Sessions							Max SBC Sessions
		From Profile 2	From Profile 2 with SILK-NB / iLBC	From Profile 2 with SILK-WB	From Profile 2 with OPUS-NB	From Profile 2 with OPUS-WB	To Profile 1	To Profile 2	
4 x E1/T1 4 x FXS	124/100	√	-	-	-	-	2/23	2/18	276/300
	102/100	-	√	-	-	-	0	0	298/300
	78	-	-	√	-	-	0	0	322
	72	-	-	-	√	-	0	0	328
	54	-	-	-	-	√	0	0	346
1 x E1/T1 4 x FXS	35/29	√	-	-	-	-	25/30	20/25	365/371
	35/29	-	√	-	-	-	10/15	9/13	365/371
	35/29	-	-	√	-	-	1/5	1/5	365/371
	35/29	-	-	-	√	-	0/4	0/3	365/371
	27	-	-	-	-	√	0	0	373
8 x BRI 4 x FXS	20	√	-	-	-	-	38	31	380
	20	-	√	-	-	-	22	19	380
	20	-	-	√	-	-	12	11	380
	20	-	-	-	√	-	11	9	380
	20	-	-	-	-	√	4	3	380
Not in use	-	√	-	-	-	-	114	96	400
	-	-	√	-	-	-	78	66	400
	-	-	-	√	-	-	54	48	400
	-	-	-	-	√	-	54	48	400
	-	-	-	-	-	√	42	42	400

**Notes:**

- "Max. SBC Sessions" applies to scenarios without registered users. When registered users are used, "Max. SBC Sessions" is reduced according to the main capacity table (see Section 3.1).
- *Profile 1*: G.711 at 20ms only, with In-band signaling (in voice channel), DTMF transcoding (RFC 2833 to in-band signaling), and Silence Suppression (no fax detection or T.38 support).
- *Profile 2*: G.711, G.726, G.729 (A / AB), and G.723.1, T.38 with fax detection, In-band signaling (in voice channel), and Silence Compression.
- All hardware assemblies also support the following DSP channel capabilities: echo cancellation (EC), CID (caller ID), RTCP XR reporting, and SRTP.
- SBC enhancements (e.g., Acoustic Echo Suppressor, Noise Reduction) are also available for these configurations. For more information, please contact your AudioCodes sales representative.
- Automatic Gain Control (AGC) and Answer Detector / Answer Machine Detector (AD/AMD) are also available for these configurations. For more information, please contact your AudioCodes sales representative.
- *Transcoding Sessions* represents part of the total SBC sessions.
- *Conference Participants* represents the number of concurrent analog ports in a three-way conference call.
- For availability of the telephony assemblies listed in the table above, please contact your AudioCodes sales representative.

3.3.4 Mediant 1000B Gateway & E-SBC

This section lists the channel capacity and DSP templates for Mediant 1000B Gateway & E-SBC DSP.



Notes:

- The maximum number of channels on any form of analog, digital, and MPM module assembly is 192. When the device handles both SBC and Gateway call sessions, the maximum number of total sessions is 150. When the device handles SRTP, the maximum capacity is reduced to 120.
- Installation and use of voice coders is subject to obtaining the appropriate license and royalty payments.
- For additional DSP templates, contact your AudioCodes sales representative.

3.3.4.1 Analog (FXS/FXO) Interfaces

The channel capacity per DSP firmware template for analog interfaces is shown in the table below.

Table 3-11: Mediant 1000B Analog Series - Channel Capacity per DSP Firmware Template

	DSP Template	
	0, 1, 2, 4, 5, 6	10, 11, 12, 14, 15, 16
	Number of Channels	
	4	3
Voice Coder		
G.711 A/Mu-law PCM	√	√
G.726 ADPCM	√	√
G.723.1	√	√
G.729 (A / AB)	√	√
G.722	-	√

3.3.4.2 BRI Interfaces

The channel capacity per DSP firmware template for BRI interfaces is shown in the table below.

Table 3-12: Mediant 1000B BRI Series - Channel Capacity per DSP Firmware Template

	DSP Template					
	0, 1, 2, 4, 5, 6			10, 11, 12, 14, 15, 16		
	Number of BRI Spans					
	4	8	20	4	8	20
	Number of Channels					
	8	16	40	6	12	30
Voice Coder						
G.711 A/Mu-law PCM	√			√		
G.726 ADPCM	√			√		
G.723.1	√			√		
G.729 (A / AB)	√			√		
G.722	-			√		

3.3.4.3 E1/T1 Interfaces

The channel capacity per DSP firmware template for E1/T1 interfaces is shown in the table below.

Table 3-13: Mediant 1000B E1/T1 Series - Channel Capacity per DSP Firmware Templates

	DSP Template																								
	0 or 10					1 or 11					2 or 12					5 or 15					6 or 16				
	Number of Spans																								
	1	2	4	6	8	1	2	4	6	8	1	2	4	6	8	1	2	4	6	8	1	2	4	6	8
	Number of Channels																								
Default Settings	31	62	120	182	192	31	48	80	128	160	24	36	60	96	120	24	36	60	96	120	31	60	100	160	192
With 128-ms Echo Cancellation	31	60	100	160	192	31	48	80	128	160	24	36	60	96	120	24	36	60	96	120	31	60	100	160	192
With IPM Features	31	60	100	160	192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	60	100	160	192
Voice Coder																									
G.711 A-Law/M-Law PCM	✓					✓					✓					✓					✓				
G.726 ADPCM	✓					✓					✓					✓					-				
G.723.1	✓					-					-					-					-				
G.729 (A / AB)	✓					✓					✓					✓					✓				
GSM FR	✓					✓					-					-					-				
MS GSM	✓					✓					-					-					-				
iLBC	-					-					-					✓					-				
EVRC	-					-					✓					-					-				
QCELP	-					-					✓					-					-				
AMR	-					✓					-					-					-				
GSM EFR	-					✓					-					-					-				
G.722	-					-					-					-					✓				
Transparent	✓					✓					✓					✓					✓				



Note: "IPM Features" refers to Automatic Gain Control (AGC), Answer Machine Detection (AMD) and Answer Detection (AD).

3.3.4.4 Media Processing Interfaces

The transcoding session capacity according to DSP firmware template (per MPM module) is shown in the table below.


Notes:

- The device can be housed with up to four MPM modules.
- The MPM modules can only be housed in slots 1 through 5.

Table 3-14: Transcoding Sessions Capacity per MPM According to DSP Firmware Template for Mediant 1000B

	DSP Template				
	0 or 10	1 or 11	2 or 12	5 or 15	6 or 16
IPM Detectors Automatic Gain Control (AGC), Answer Machine Detection (AMD) and Answer Detection (AD)	Number of Transcoding Sessions per MPM Module				
-	24	16	12	12	20
✓	20	-	-	-	20
Voice Coder					
G.711 A-law / M _μ -law PCM	✓	✓	✓	✓	✓
G.726 ADPCM	✓	✓	✓	✓	-
G.723.1	✓	-	-	-	-
G.729 (A / AB)	✓	✓	✓	✓	✓
GSM FR	✓	✓	-	-	-
MS GSM	✓	✓	-	-	-
iLBC	-	-	-	✓	-
EVRC	-	-	✓	-	-
QCELP	-	-	✓	-	-
AMR	-	✓	-	-	-
GSM EFR	-	✓	-	-	-
G.722	-	-	-	-	✓
Transparent	✓	✓	✓	✓	✓

3.3.5 Mediant 3100 Gateway & E-SBC

This section describes the capacity of Mediant 3100 Gateway & E-SBC.

3.3.5.1 Gateway Capacity

The following table shows the maximum number of Gateway sessions when there are no SBC transcoding sessions.

Table 3-15: Mediant 3100 - Gateway Channel Capacity per Capability Profile

Profile	Hardware Assembly							
	E1				T1			
	8 x E1	16 x E1	32 x E1	64 x E1	8 x T1	16 x T1	32 x T1	64 x T1
Profile 1	240	480	960	1920	192	384	768	1536
Profile 2	240	480	960	1920	192	384	768	1536
Profile 2 + G.722 / AMR-NB	240	480	960	1920	192	384	768	1536
Profile 2 + AMR-WB	240	480	960	1920	192	384	768	1536
Profile 2 + SILK-NB	240	480	960	1920	192	384	768	1536
Profile 2 + SILK-WB	208	416	832	1664	192	384	768	1536
Profile 2 + Opus-NB	240	480	960	1920	192	384	768	1536
Profile 2 + Opus-WB	240	480	960	1920	192	384	768	1536



Notes:

- *Profile 1:* G.711 at 20ms only, with in-band signaling (in voice channel), DTMF transcoding (RFC 2833 to in-band signaling), and Silence Suppression (no fax detection or T.38 support).
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38 with fax detection, in-band signaling (in voice channel), and Silence Compression.
- Acoustic Echo Suppressor reduces performance. For more information, contact your AudioCodes sales representative.

3.3.5.2 Non-Hybrid (SBC) Transcoding Capacity

The following table shows the maximum number of SBC transcoding sessions when there are no Gateway sessions.

Table 3-16: Mediant 3100 - SBC Transcoding Capacity per Coder Capability Profile

Transcoding Session Coders		8 x E1/T1	16 x E1/T1	32 x E1/T1	64 x E1/T1
From Coder	To Coder				
Profile 1	Profile 1	460	925	1,855	3,700
Profile 1	Profile 2	400	800	1,600	3,200
Profile 2	Profile 2	350	700	1,405	2,800
Profile 1	Profile 2 + G.722 / AMR-NB	400	800	1,600	3,200
Profile 2	Profile 2 + G.722 / AMR-NB	350	700	1,405	2,800
Profile 1	Profile 2 + AMR-WB	255	510	1,020	2,025
Profile 2	Profile 2 + AMR-WB	240	480	960	1,900
Profile 1	Profile 2 + SILK-NB	260	525	1,055	2,100
Profile 2	Profile 2 + SILK-NB	245	495	990	1,975
Profile 1	Profile 2 + SILK-WB	180	365	735	1,450
Profile 2	Profile 2 + SILK-WB	175	350	700	1,400
Profile 1	Profile 2 + Opus-NB	220	445	895	1,775
Profile 2	Profile 2 + Opus-NB	205	415	830	1,650
Profile 1	Profile 2 + Opus-WB	205	415	830	1,650
Profile 2	Profile 2 + Opus-WB	190	380	765	1,525



Notes:

- *Profile 1:* G.711 at 20ms only, with in-band signaling (in voice channel), DTMF transcoding (RFC 2833 to in-band signaling), and Silence Suppression (no fax detection or T.38 support).
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38 with fax detection, in-band signaling (in voice channel), and Silence Compression.
- Acoustic Echo Suppressor reduces performance. For more information, contact your AudioCodes sales representative.

3.3.6 MP-1288 Analog Gateway & E-SBC

Session capacity includes Gateway sessions as well as SBC sessions without transcoding capabilities. The maximum capacity of Gateway sessions for MP-1288 Gateway & E-SBC is shown in the table below.

Table 3-17: MP-1288 Gateway - Session Capacity

Coder	Gateway Sessions Capacity	
	Single FXS Blade	Fully Populated (4 x FXS Blades)
Basic: G.711, G.729 (A / AB), G.723.1, G.726 / G.727 ADPCM	72	288
G.722	72	288
AMR-NB	72	288
Opus-NB	60	240



Note:

- Quality Monitoring and Noise Reduction are not supported.
- SRTP is supported on all configurations.

3.3.7 Mediant 2600 E-SBC

The maximum number of supported SBC sessions is shown in Section 3.1 on page 35. These SBC sessions also support SRTP and RTCP XR. When DSP capabilities are required, the number of sessions that can use DSP capabilities is reduced, as shown in the table below:

Table 3-18: Mediant 2600 E-SBC - Transcoding Capacity per Coder Capability Profile

Session Coders		Max. Sessions	
From Coder Profile	To Coder Profile	Without MPM4	With MPM4
Profile 1	Profile 1	400	600
Profile 2	Profile 1	300	600
Profile 2	Profile 2	250	600
Profile 1	Profile 2 + AMR-NB / G.722	275	600
Profile 2	Profile 2 + AMR-NB / G.722	225	600
Profile 1	Profile 2 + iLBC	175	575
Profile 2	Profile 2 + iLBC	150	500
Profile 1	Profile 2 + AMR-WB (G.722.2)	200	600
Profile 2	Profile 2 + AMR-WB (G.722.2)	175	525
Profile 1	Profile 2 + SILK-NB	200	600
Profile 2	Profile 2 + SILK-NB	175	525
Profile 1	Profile 2 + SILK-WB	100	350
Profile 2	Profile 2 + SILK-WB	100	350
Profile 1	Profile 2 + Opus-NB	125	425
Profile 2	Profile 2 + Opus-NB	125	375
Profile 1	Profile 2 + Opus-WB	100	300
Profile 2	Profile 2 + Opus-WB	75	275



Notes:

- *Profile 1:* G.711 at 20ms only, with in-band signaling (in voice channel), DTMF transcoding (RFC 2833 to in-band signaling), and Silence Suppression (no fax detection or T.38 support).
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38 with fax detection, in-band signaling (in voice channel), and Silence Compression.
- Acoustic Echo Suppressor reduces performance. For more information, contact your AudioCodes sales representative.
- MPM is the optional, Media Processing Module that provides additional DSPs, allowing greater capacity.

3.3.8 Mediant 4000 SBC

The maximum number of supported SBC sessions is listed in Section 3.1 on page 35. These SBC sessions also support SRTP and RTCP XR. When DSP capabilities are required, the number of sessions that can use DSP capabilities is reduced, as shown in the table below.

Table 3-19: Mediant 4000 SBC - Transcoding Capacity per Coder Capability Profile

Session Coders		Max. Sessions	
From Coder Profile	To Coder Profile	Without MPM8	With MPM8
Profile 1	Profile 1	800	2,400
Profile 2	Profile 1	600	1,850
Profile 2	Profile 2	500	1,550
Profile 1	Profile 2 + AMR-NB / G.722	550	1,650
Profile 2	Profile 2 + AMR-NB / G.722	450	1,350
Profile 1	Profile 2 + iLBC	350	1,150
Profile 2	Profile 2 + iLBC	300	1,000
Profile 1	Profile 2 + AMR-WB (G.722.2)	400	1,200
Profile 2	Profile 2 + AMR-WB (G.722.2)	350	1,050
Profile 1	Profile 2 + SILK-NB	400	1,200
Profile 2	Profile 2 + SILK-NB	350	1,050
Profile 1	Profile 2 + SILK-WB	200	700
Profile 2	Profile 2 + SILK-WB	200	700
Profile 1	Profile 2 + Opus-NB	250	850
Profile 2	Profile 2 + Opus-NB	250	750
Profile 1	Profile 2 + Opus-WB	200	600
Profile 2	Profile 2 + Opus-WB	150	550

Notes:

- *Profile 1:* G.711 at 20ms only, with in-band signaling (in voice channel), DTMF transcoding (RFC 2833 to in-band signaling), and Silence Suppression (no fax detection or T.38 support).
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38 with fax detection, in-band signaling (in voice channel), and Silence Compression.
- Acoustic Echo Suppressor reduces performance. For more information, contact your AudioCodes sales representative.
- MPM is the optional, Media Processing Module that provides additional DSPs, allowing greater capacity.



3.3.8.1 Forwarding Session Capacity per Feature without Transcoding

The table below lists the maximum number of concurrent forwarding sessions per feature without using transcoding.

Table 3-20: Mediant 4000 SBC - Forwarding Capacity per Feature

Feature	Max. Sessions
Fax Detection	5,000
AD/AMD/Beep Detection	5,000
CP Detection	5,000
Jitter Buffer	5,000



Notes:

- All figures were calculated for call duration of 100 seconds.
- For fax detection, figures are based on the following assumptions:
 - ✓ Timeout for fax detection is 10 seconds (default)
 - ✓ Fax detection is required on both legs of the call
- Figures for Call Progress (CP), AD, AMD, and Beep detection assume that detection is only on one leg of the call (if not, figures will be reduced).

3.3.9 Mediant 4000B SBC

The maximum number of supported SBC sessions is listed in Section 3.1 on page 35. These SBC sessions also support SRTP and RTCP XR. When DSP capabilities are required, the number of sessions that can use DSP capabilities is reduced, as shown in the table below.

Table 3-21: Mediant 4000B SBC - Transcoding Capacity per Coder Capability Profile

Session Coders		Max. Sessions				
From Coder Profile	To Coder Profile	Without MPM	1 x MPM8B	1 x MPM12B	2 x MPM12B	3 x MPM12B
Profile 1	Profile 1	800	2,400	3,250	5,000	5,000
Profile 2	Profile 1	600	1,850	2,450	4,350	5,000
Profile 2	Profile 2	500	1,550	2,100	3,650	5,000
Profile 1	Profile 2 + AMR-NB / G.722	550	1,650	2,200	3,850	5,000
Profile 2	Profile 2 + AMR-NB / G.722	450	1,350	1,800	3,150	4,550
Profile 1	Profile 2 + iLBC	400	1,200	1,600	2,850	4,050
Profile 2	Profile 2 + iLBC	350	1,050	1,400	2,500	3,600
Profile 1	Profile 2 + AMR-WB (G.722.2)	400	1,200	1,600	2,850	4,050
Profile 2	Profile 2 + AMR-WB (G.722.2)	350	1,050	1,400	2,500	3,600
Profile 1	Profile 2 + SILK-NB	400	1,200	1,600	2,850	4,050

Session Coders		Max. Sessions				
From Coder Profile	To Coder Profile	Without MPM	1 x MPM8B	1 x MPM12B	2 x MPM12B	3 x MPM12B
Profile 2	Profile 2 + SILK-NB	350	1,050	1,400	2,500	3,600
Profile 1	Profile 2 + SILK-WB	200	700	950	1,650	2,400
Profile 2	Profile 2 + SILK-WB	200	700	950	1,650	2,400
Profile 1	Profile 2 + Opus-NB	250	850	1,150	2,000	2,850
Profile 2	Profile 2 + Opus-NB	250	750	1,050	1,800	2,600
Profile 1	Profile 2 + Opus-WB	200	600	850	1,500	2,150
Profile 2	Profile 2 + Opus-WB	150	550	750	1,300	1,900

Notes:

- *Profile 1:* G.711 at 20ms only, with In-band signaling (in voice channel), DTMF transcoding (RFC 2833 to in-band signaling), and Silence Suppression (no fax detection or T.38 support).
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, AMR-NB, T.38 with fax detection, In-band signaling (in voice channel), and Silence Compression.
- Acoustic Echo Suppressor reduces performance by about 30%. For more information, contact your AudioCodes sales representative.
- MPMB is the optional, Media Processing Module that provides additional DSPs, allowing greater capacity.



3.3.9.1 Forwarding Session Capacity per Feature without Transcoding

The table below lists the maximum number of concurrent forwarding sessions per feature without using transcoding.

Table 3-22: Mediant 4000B SBC - Forwarding Capacity per Feature

Feature	Max. Sessions
Fax Detection	5,000
AD/AMD/Beep Detection	5,000
CP Detection	5,000
Jitter Buffer	5,000

Notes:

- All figures were calculated for call duration of 100 seconds.
- For fax detection, figures are based on the following assumptions:
 - ✓ Timeout for fax detection is 10 seconds (default)
 - ✓ Fax detection is required on both legs of the call
- Figures for Call Progress (CP), AD, AMD, and Beep detection assume that detection is only on one leg of the call (if not, figures will be reduced).



3.3.10 Mediant 9000 SBC

The maximum number of supported SBC sessions is listed in Section 3.1 on page 35. These SBC sessions also support SRTP and RTCP XR. When DSP capabilities are required, the number of sessions that can use DSP capabilities is reduced, as shown in the table below.

Table 3-23: Mediant 9000 SBC - Transcoding Capacity per Coder Capability Profile

Session Coders		Max. Sessions			
From Coder Profile	To Coder Profile	Without Hyper-Threading		With Hyper-Threading	
		Basic	Extended	Basic	Extended
Profile 1	Profile 1	3,025	2,525	6,575	3,875
Profile 2	Profile 1	1,500	1,325	2,125	1,700
Profile 2	Profile 2	1,000	900	1,275	1,100
Profile 1	Profile 2 + AMR-NB / G.722	1,500	1,300	2,075	1,625
Profile 2	Profile 2 + AMR-NB / G.722	1,000	900	1,225	1,050
Profile 1	Profile 2 + AMR-WB (G.722.2)	500	475	600	575
Profile 2	Profile 2 + AMR-WB	425	400	500	475
Profile 1	Profile 2 + SILK-NB	1,300	1,175	1,700	1,450
Profile 2	Profile 2 + SILK-NB	900	825	1,100	975
Profile 1	Profile 2 + SILK-WB	775	750	1,000	950
Profile 2	Profile 2 + SILK-WB	625	600	750	725
Profile 1	Profile 2 + Opus-NB	825	750	1,050	900
Profile 2	Profile 2 + Opus-NB	650	600	775	700
Profile 1	Profile 2 + Opus-WB	625	575	800	700
Profile 2	Profile 2 + Opus-WB	525	475	625	575

Notes:

- *Profile 1*: G.711 at 20ms only, without T.38 support.
- *Profile 2*: G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic*: Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended*: Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.
- For transcoding capabilities, the 'SBC Performance Profile' (SBCPerformanceProfile) parameter must be configured to **Optimized for Transcoding (2)**.



3.3.10.1 Forwarding Session Capacity per Feature without Transcoding

The table below lists the maximum number of concurrent forwarding sessions per feature without using transcoding.

Table 3-24: Mediant 9000 SBC - Forwarding Capacity per Feature

Feature	Max. Sessions	
	Without Hyper-Threading	With Hyper-Threading
Fax Detection	24,000	40,000
AD/AMD/Beep Detection	24,000	39,000
CP Detection	24,000	44,000
Jitter Buffer	2,225	5,000



Notes:

- All figures were calculated for call duration of 100 seconds.
- For fax detection, figures are based on the following assumptions:
 - ✓ Timeout for fax detection is 10 seconds (default)
 - ✓ Fax detection is required on both legs of the call
- Figures for Call Progress (CP), AD, AMD, and Beep detection assume that detection is only on one leg of the call (if not, figures will be reduced).

3.3.11 Mediant 9000 Rev. B / 9080 SBC

The maximum number of supported SBC sessions is listed in Section 3.1 on page 35. These SBC sessions also support SRTP and RTCP XR. When DSP capabilities are required, the number of sessions that can use DSP capabilities is reduced, as shown in the table below.

Table 3-25: Mediant 9000 Rev. B / 9080 - Transcoding Capacity per Coder Capability Profile

Session Coders		Max. Sessions	
From Coder Profile	To Coder Profile		
		Basic	Extended
Profile 1	Profile 1	9,600	6,625
Profile 2	Profile 1	4,400	3,625
Profile 2	Profile 2	2,875	2,500
Profile 1	Profile 2 + AMR-NB / G.722	2,925	2,600
Profile 2	Profile 2 + AMR-NB / G.722	2,150	1,950
Profile 1	Profile 2 + AMR-WB (G.722.2)	950	925
Profile 2	Profile 2 + AMR-WB	850	825
Profile 1	Profile 2 + SILK-NB	2,750	2,500
Profile 2	Profile 2 + SILK-NB	2,050	1,900
Profile 1	Profile 2 + SILK-WB	1,575	1,475
Profile 2	Profile 2 + SILK-WB	1,300	1,250
Profile 1	Profile 2 + Opus-NB	1,700	1,450
Profile 2	Profile 2 + Opus-NB	1,375	1,200
Profile 1	Profile 2 + Opus-WB	1,375	1,200
Profile 2	Profile 2 + Opus-WB	1,175	1,025

Notes:

- *Profile 1*: G.711 at 20ms only, without T.38 support.
- *Profile 2*: G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic*: Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended*: Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.
- For transcoding capabilities, the 'SBC Performance Profile' (SBCPerformanceProfile) parameter must be configured to **Optimized for Transcoding (2)**.



3.3.11.1 Forwarding Session Capacity per Feature without Transcoding

The table below lists the maximum number of concurrent forwarding sessions per feature without using transcoding.

Table 3-26: Mediant 9000 Rev. B / 9080 SBC - Forwarding Capacity per Feature

Feature	Max. Sessions
Fax Detection	45,000
AD, AMD, and Beep Detection	45,000
CP Detection	45,000
Jitter Buffer	6,000



Notes:

- All figures were calculated for call duration of 100 seconds.
- For fax detection, figures are based on the following assumptions:
 - ✓ Timeout for fax detection is 10 seconds (default)
 - ✓ Fax detection is required on both legs of the call
- Figures for Call Progress (CP), AD, AMD, and Beep detection assume that detection is only on one leg of the call (if not, figures will be reduced).

3.3.12 Mediant 9000 / 9000 Rev. B / 9080 SBC with Media Transcoders

Mediant 9000, Mediant 9000 Rev. B, or Mediant 9080 SBC with Media Transcoders allows increasing the number of transcoding sessions by using Media Transcoders. The maximum number of transcoding sessions depends on the following:

- Number of Media Transcoders in the media transcoding cluster. (The cluster can have up to eight Media Transcoders.)
- Cluster operation mode (Best-Effort or Full-HA mode).
- Maximum transcoding sessions. Each transcoding session is weighted as two RTP-RTP sessions without transcoding. Therefore, the number of sessions without transcoding plus the doubled number of sessions with transcoding must be less than the maximum RTP-RTP value specified in the table. As a result, if all sessions are with transcoding, the maximum number of sessions is half the maximum RTP-RTP sessions without transcoding as specified in Table 3-1.

The following table lists maximum transcoding sessions capacity of a single Media Transcoder.

Table 3-27: Single Media Transcoder (MT) - Transcoding Capacity per Profile

Session Coders		Max. Sessions		
From Coder Profile	To Coder Profile	1 x MPM12B	2 x MPM12B	3 x MPM12B
Profile 1	Profile 1	2,875	5,000	5,000
Profile 2	Profile 1	2,300	4,025	5,000
Profile 2	Profile 2	1,800	3,175	4,550

Session Coders		Max. Sessions		
From Coder Profile	To Coder Profile	1 x MPM12B	2 x MPM12B	3 x MPM12B
Profile 1	Profile 2 + AMR-NB / G.722	2,000	3,525	5,000
Profile 2	Profile 2 + AMR-NB / G.722	1,625	2,850	4,075
Profile 1	Profile 2 + AMR-WB (G.722.2)	1,425	2,500	3,600
Profile 2	Profile 2 + AMR-WB (G.722.2)	1,225	2,175	3,100
Profile 1	Profile 2 + SILK-NB	1,425	2,500	3,600
Profile 2	Profile 2 + SILK-NB	1,225	2,175	3,100
Profile 1	Profile 2 + SILK-WB	850	1,500	2,150
Profile 2	Profile 2 + SILK-WB	850	1,500	2,150
Profile 1	Profile 2 + Opus-NB	1,050	1,825	2,625
Profile 2	Profile 2 + Opus-NB	950	1,675	2,400
Profile 1	Profile 2 + Opus-WB	750	1,325	1,900
Profile 2	Profile 2 + Opus-WB	650	1,175	1,675

**Notes:**

- *Profile 1*: G.711 at 20ms only, with In-band signaling (in voice channel) and Silence Suppression (no fax detection or T.38 support).
- *Profile 2*: G.711, G.726, G.729 (A / AB), G.723.1, AMR-NB, T.38 with fax detection, In-band signaling (in voice channel), and Silence Compression.
- Acoustic Echo Suppressor reduces performance by about 30%. For more information, contact your AudioCodes sales representative.
- MPM12B is a Media Processing Module in the Media Transcoder that provides additional DSPs, allowing higher capacity.
- For best cluster efficiency, all Media Transcoders in the Cluster should populate the same number of MPM12Bs.
- The SBC employs load balancing of transcoding sessions among all Media Transcoders in the Cluster. Each Media Transcoder can handle up to 200 calls (transcoded sessions) per second (CPS).

3.3.13 Mediant 9080C SBC

The maximum number of supported SBC sessions is listed in Section 3.1 on page 35. These SBC sessions also support SRTP and RTCP XR. When DSP capabilities are required, the number of sessions that can use DSP capabilities is reduced, as shown in the table below.

Table 3-28: Mediant 9080C SBC - Transcoding Capacity per Coder Capability Profile

Session Coders		Max. Sessions	
From Coder Profile	To Coder Profile	Basic	Extended
Profile 1	Profile 1	10000	10000
Profile 2	Profile 1	5950	5750
Profile 2	Profile 2	3850	3850
Profile 1	Profile 2 + AMR-NB / G.722	4950	4825
Profile 2	Profile 2 + AMR-NB / G.722	3400	3400
Profile 1	Profile 2 + AMR-WB (G.722.2)	2250	2225
Profile 2	Profile 2 + AMR-WB (G.722.2)	1850	1850
Profile 1	Profile 2 + SILK-NB	4950	4825
Profile 2	Profile 2 + SILK-NB	3400	3400
Profile 1	Profile 2 + SILK-WB	2875	2825
Profile 2	Profile 2 + SILK-WB	2250	2250
Profile 1	Profile 2 + Opus-NB	3125	3050
Profile 2	Profile 2 + Opus-NB	2425	2425
Profile 1	Profile 2 + Opus-WB	2700	2675
Profile 2	Profile 2 + Opus-WB	2175	2175

Notes:

- *Profile 1*: G.711 at 20ms only, without T.38 support.
- *Profile 2*: G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic*: Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended*: Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.
- For transcoding capabilities, the 'SBC Performance Profile' (SBCPerformanceProfile) parameter must be configured to **Optimized for Transcoding (2)**.



3.3.13.1 Forwarding Session Capacity per Feature without Transcoding

The table below lists the maximum number of concurrent forwarding sessions per feature without using transcoding.

Table 3-29: Mediant 9080C SBC - Forwarding Capacity per Feature

Feature	Max. Sessions
Fax Detection	87,500
AD, AMD, and Beep Detection	89,100
CP Detection	87,200
Jitter Buffer	12,900



Notes:

- All figures were calculated for call duration of 100 seconds.
- For fax detection, figures are based on the following assumptions:
 - ✓ Timeout for fax detection is 10 seconds (default)
 - ✓ Fax detection is required on both legs of the call
- Figures for Call Progress (CP), AD, AMD, and Beep detection assume that detection is only on one leg of the call (if not, figures will be reduced).

3.3.14 Mediant 9030 SBC

The maximum number of supported SBC sessions is listed in Section 3.1 on page 35. These SBC sessions also support SRTP and RTCP XR. When DSP capabilities are required, the number of sessions that can use DSP capabilities is reduced, as shown in the table below.

Table 3-30: Mediant 9030 SBC - Transcoding Capacity per Coder Capability Profile

Session Coders		Max. Sessions	
From Coder Profile	To Coder Profile	Basic	Extended
Profile 1	Profile 1	4,025	2,775
Profile 2	Profile 1	1,825	1,525
Profile 2	Profile 2	1,200	1,050
Profile 1	Profile 2 + AMR-NB / G.722	1,200	1,075
Profile 2	Profile 2 + AMR-NB / G.722	875	825
Profile 1	Profile 2 + AMR-WB (G.722.2)	400	375
Profile 2	Profile 2 + AMR-WB	350	350
Profile 1	Profile 2 + SILK-NB	1,150	1,050
Profile 2	Profile 2 + SILK-NB	850	775
Profile 1	Profile 2 + SILK-WB	650	625
Profile 2	Profile 2 + SILK-WB	525	525
Profile 1	Profile 2 + Opus-NB	700	600
Profile 2	Profile 2 + Opus-NB	575	500
Profile 1	Profile 2 + Opus-WB	575	500
Profile 2	Profile 2 + Opus-WB	475	425



Notes:

- *Profile 1*: G.711 at 20ms only, without T.38 support.
- *Profile 2*: G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic*: Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended*: Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.
- For transcoding capabilities, the 'SBC Performance Profile' (SBCPerformanceProfile) parameter must be configured to **Optimized for Transcoding (2)**.

3.3.14.1 Forwarding Session Capacity per Feature without Transcoding

The table below lists the maximum number of concurrent forwarding sessions per feature without using transcoding.

Table 3-31: Mediant 9030 SBC - Forwarding Capacity per Feature

Feature	Max. Sessions
Fax Detection	23,000
AD/AMD/Beep Detection	23,000
CP Detection	23,000
Jitter Buffer	3,000



Notes:

- All figures were calculated for call duration of 100 seconds.
- For fax detection, figures are based on the following assumptions:
 - ✓ Timeout for fax detection is 10 seconds (default)
 - ✓ Fax detection is required on both legs of the call
- Figures for Call Progress (CP), AD, AMD, and Beep detection assume that detection is only on one leg of the call (if not, figures will be reduced).

3.3.15 Mediant Cloud Edition (CE) SBC

The Media Components (MC) in the media cluster of the Mediant CE must all be of the same instance type: either forwarding-only, or forwarding and transcoding. A maximum of 21 MCs can be used.

3.3.15.1 Mediant CE SBC for AWS EC2

3.3.15.1.1 Forwarding Sessions

The number of concurrent forwarding sessions per MC is shown in the following table.

Table 3-32: Forwarding Capacity per MC Instance Type

MC Instance Type	Max. Forwarding Sessions
m5n.large	3,200
c5.4xlarge	4,000



Note: Forwarding performance was tested in AWS Ireland Region.

3.3.15.1.2 Transcoding Sessions

For transcoding capabilities, the Media Component (MC) must be of the AWS instance type c5.4xlarge. The number of supported transcoding sessions per MC is shown in the following table.

Table 3-33: Transcoding Capacity per c5.4xlarge MC

Session Coders		Max. Sessions	
From Coder Profile	To Coder Profile	Basic	Extended
Profile 1	Profile 1	3,500	2,825
Profile 2	Profile 1	2,375	1,900
Profile 2	Profile 2	1,625	1,425
Profile 1	Profile 2 + AMR-NB / G.722	1,500	1,300
Profile 2	Profile 2 + AMR-NB / G.722	1,150	1,050
Profile 1	Profile 2 + AMR-WB (G.722.2)	475	475
Profile 2	Profile 2 + AMR-WB	425	425
Profile 1	Profile 2 + SILK-NB	1,400	1,250
Profile 2	Profile 2 + SILK-NB	1,100	1,025
Profile 1	Profile 2 + SILK-WB	775	750
Profile 2	Profile 2 + SILK-WB	675	675
Profile 1	Profile 2 + Opus-NB	850	725
Profile 2	Profile 2 + Opus-NB	725	650

Session Coders		Max. Sessions	
From Coder Profile	To Coder Profile	Basic	Extended
Profile 1	Profile 2 + Opus-WB	700	600
Profile 2	Profile 2 + Opus-WB	625	550

**Notes:**

- *Profile 1:* G.711 at 20ms only, without T.38 support.
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic:* Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended:* Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.

3.3.15.2 Mediant CE SBC for Azure

3.3.15.2.1 Forwarding Sessions

The number of concurrent forwarding sessions per Media Component (MC) is shown in the following table.

Table 3-34: Session Capacity per MC

MC VM Size	Max. Forwarding-Only Sessions	Max. Forwarding & Transcoding Sessions
D2ds_v5	3,000	3,000
D4ds_v5	6,500	5,500
D8ds_v5	12,000	6,000



Note: It's not recommended to exceed 5,000 sessions per MC because of the duration required for processing an MC failover.

3.3.15.2.2 Transcoding Sessions

For transcoding capabilities, the Media Component (MC) must be Azure virtual machine size D2ds_v5, D4ds_v5, or D8ds_v5. The number of supported transcoding sessions per MC is shown in the following table.

Table 3-35: Transcoding Capacity per MC

Session Coders		D2ds_v5		D4ds_v5		D8ds_v5	
From Coder Profile	To Coder Profile	Basic	Extended	Basic	Extended	Basic	Extended
Profile 1	Profile 1	275	175	575	350	1,725	1,100
Profile 2	Profile 1	150	125	300	250	925	750
Profile 2	Profile 2	100	75	200	175	625	550
Profile 1	Profile 2 + AMR-NB / G.722	75	75	175	150	575	500
Profile 2	Profile 2 + AMR-NB / G.722	75	50	150	125	450	400
Profile 1	Profile 2 + AMR-WB (G.722.2)	25	25	50	50	175	175
Profile 2	Profile 2 + AMR-WB	25	25	50	50	175	175
Profile 1	Profile 2 + SILK-NB	75	75	175	150	550	500
Profile 2	Profile 2 + SILK-NB	50	50	125	125	425	400
Profile 1	Profile 2 + SILK-WB	50	50	100	100	300	300
Profile 2	Profile 2 + SILK-WB	25	25	75	75	275	250
Profile 1	Profile 2 + Opus-NB	50	25	100	75	325	275
Profile 2	Profile 2 + Opus-NB	25	25	75	75	275	250

Session Coders		D2ds_v5		D4ds_v5		D8ds_v5	
From Coder Profile	To Coder Profile	Basic	Extended	Basic	Extended	Basic	Extended
Profile 1	Profile 2 + Opus-WB	25	25	75	75	275	225
Profile 2	Profile 2 + Opus-WB	25	25	75	50	250	200

**Notes:**

- *Profile 1*: G.711 at 20ms only, without T.38 support.
- *Profile 2*: G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic*: Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended*: Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.

3.3.15.3 Mediant CE SBC for VMware

The following tables list maximum forwarding and transcoding capacities for Mediant CE SBC running on VMware hypervisor with Hyper-Threading.

Each vCPU refers to a single thread of a physical core. For example, a 4-vCPU virtual machine is allocated by only two physical cores.

**Note:**

- The profiles below require the following minimum requirements:
 - ✓ Intel Xeon Scalable Processors or later. The capacity listed in the following table refers to 3.3 GHz all-core Turbo speed. When using different all-core Turbo speed, capacity is increased or decreased accordingly.
 - ✓ Hyper-Threading is enabled on host.
 - ✓ VMware ESXi 6.7 or later.
 - ✓ CPUOverrideHT ini file parameter is configured to 1.
- CPU Affinity is recommended. For more information, refer to the *Installation Manual*.
- For Server Failure redundancy, the maximum active media sessions (before failure) on each server must not exceed 4,000 media sessions.

3.3.15.3.1 Forwarding Sessions

The number of concurrent forwarding sessions per Media Component (MC) is shown in the following table.

Table 3-36: Forwarding Capacity per MC Instance Type

MC Instance Type	Max. Sessions
2 vCPUs, 8GB	4,000 (Forwarding Only)
8 vCPUs, 8GB	4,000 (Forwarding and Transcoding)

3.3.15.3.2 Transcoding Sessions

For transcoding capabilities, the Media Component (MC) must be a virtual machine of 8 vCPUs and 8 GB. The number of supported transcoding sessions per MC is shown in the following table.



Note: For transcoding capabilities, the 'Media Component Profile' parameter on all Media Components must be configured to **Transcoding Enabled** (MCProfile = 1).

Table 3-37: Mediant CE SBC on VMware with Hyper-Threading - Transcoding Capacity

Session Coders		Max. Sessions 8 vCPU 8-GB RAM	
From Coder Profile	To Coder Profile	Basic	Extended
Profile 1	Profile 1	1,800	1,175
Profile 1	Profile 2	975	775
Profile 2	Profile 2	675	575
Profile 1	Profile 2 + G.722 / AMR-NB	600	525
Profile 2	Profile 2 + G.722 / AMR-NB	475	425
Profile 1	Profile 2 + AMR-WB	200	175
Profile 2	Profile 2 + AMR-WB	175	175
Profile 1	Profile 2 + SILK-NB	575	525
Profile 2	Profile 2 + SILK-NB	450	425
Profile 1	Profile 2 + SILK-WB	325	300
Profile 2	Profile 2 + SILK-WB	275	275
Profile 1	Profile 2 + Opus-NB	350	300
Profile 2	Profile 2 + Opus-NB	300	275
Profile 1	Profile 2 + Opus-WB	300	250
Profile 2	Profile 2 + Opus-WB	250	225

**Notes:**

- *Profile 1:* G.711 at 20ms only, without T.38 support.
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic:* Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended:* Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.

3.3.15.4 Mediant CE SBC for GCP

3.3.15.4.1 Forwarding Sessions

The number of concurrent forwarding sessions (RTP-RTP) per Media Component (MC) is shown in the following table.

Table 3-38: Session Capacity per MC

MC VM Size	Max. Forwarding-Only Sessions
n2-standard-2	3,500

3.3.15.4.2 Transcoding Sessions

For transcoding capabilities, the MC should be of the n2-standard-2 or n2_highcpu-8 instance types.

When the transcoding session is at maximum, the total sessions is reduced as shown in the following table.

Table 3-39: Transcoding Sessions per MC

MC VM Size	Max. Forwarding and Transcoding Sessions
n2-standard-2	1,500 (up to 300 transcoding sessions)
n2-highcpu-8	1,600 (up to 1,500 transcoding sessions)

The number of supported transcoding sessions per MC is shown in the following table.

Table 3-40: Transcoding Capacity per MC

Session Coders		n2-standard-2		n2-highcpu-8	
From Coder Profile	To Coder Profile	Basic	Extended	Basic	Extended
Profile 1	Profile 1	300	175	1,500	1,175
Profile 2	Profile 1	150	125	975	775
Profile 2	Profile 2	100	75	675	575

Session Coders		n2-standard-2		n2-highcpu-8	
From Coder Profile	To Coder Profile	Basic	Extended	Basic	Extended
Profile 1	Profile 2 + AMR-NB / G.722	100	75	625	525
Profile 2	Profile 2 + AMR-NB / G.722	75	50	475	425
Profile 1	Profile 2 + AMR-WB (G.722.2)	25	25	200	175
Profile 2	Profile 2 + AMR-WB	25	25	175	175
Profile 1	Profile 2 + SILK-NB	75	75	575	525
Profile 2	Profile 2 + SILK-NB	75	50	450	425
Profile 1	Profile 2 + SILK-WB	50	50	325	300
Profile 2	Profile 2 + SILK-WB	25	25	275	275
Profile 1	Profile 2 + Opus-NB	50	50	350	300
Profile 2	Profile 2 + Opus-NB	50	25	300	275
Profile 1	Profile 2 + Opus-WB	50	25	300	250
Profile 2	Profile 2 + Opus-WB	25	25	250	225

Notes:



- *Profile 1:* G.711 at 20ms only, without T.38 support.
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic:* Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended:* Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.

3.3.16 Mediant Virtual Edition (VE) SBC

The maximum number of supported SBC sessions is listed in Section 3.1 on page 35. These SBC sessions also support SRTP and RTCP XR. When DSP capabilities are required (DSP Performance Profile), the number of sessions that can use DSP capabilities is reduced, as shown in the tables in this section.

3.3.16.1 Mediant VE SBC for Hypervisors with Hyper-Threading

The following tables list maximum transcoding capacity for Mediant VE SBC running on the following hypervisors with Hyper-Threading: VMware, KVM/OpenStack, and Hyper-V.

Each vCPU refers to a Hyper-Threaded core (logical). For example, a 4-vCPU virtual machine allocates only 2 physical cores.



Note:

- The transcoding profiles below require the following minimum requirements:
 - ✓ Intel Xeon Scalable Processors or later. The capacity listed in the table below refer to 3.3 GHz all-core Turbo speed. When using different all-core Turbo speed, the capacity is increased or decreased accordingly.
 - ✓ Hyper-Threading enabled on host.
 - ✓ VMware Hypervisor:
 - VMware ESXi 6.7 or later. Capacities in table Table 3-1 were achieved using ESXi Version 7.0.3.
 - CPUOverrideHT ini file parameter is configured to 1.
 - ✓ KVM Hypervisor/OpenStack: Host-Passthrough mode must be used. For more information, refer to the [Installation Manual](#).
- CPU Affinity is recommended. For more information, refer to the *Installation Manual*.
- For transcoding capabilities, the 'SBC Performance Profile' (SBCPerformanceProfile) parameter must be configured to Optimized for Transcoding (2).

Table 3-41: Mediant VE SBC on Hypervisors with Hyper-Threading - Transcoding Capacity

Session Coders		Max. Sessions							
		2 vCPU 8-GB RAM		4 vCPU 8-GB RAM (VMware Only)		8 vCPU 16-GB RAM		16 vCPU 16-GB RAM (Not Hyper-V)	
From Coder Profile	To Coder Profile	Basic	Extended	Basic	Extended	Basic	Extended	Basic	Extended
Profile 1	Profile 1	300	200	800	600	1,200	825	2,400	2,400
Profile 1	Profile 2	150	125	500	400	675	550	2,075	1,650
Profile 2	Profile 2	100	100	350	300	475	400	1,425	1,250
Profile 1	Profile 2 + G.722 / AMR-NB	100	75	325	275	425	375	1,300	1,150
Profile 2	Profile 2 + G.722 / AMR-NB	75	75	250	225	325	300	1,000	925

Session Coders		Max. Sessions							
		2 vCPU 8-GB RAM		4 vCPU 8-GB RAM (VMware Only)		8 vCPU 16-GB RAM		16 vCPU 16-GB RAM (Not Hyper-V)	
From Coder Profile	To Coder Profile	Basic	Extended	Basic	Extended	Basic	Extended	Basic	Extended
Profile 1	Profile 2 + AMR-WB	25	25	100	100	125	125	425	400
Profile 2	Profile 2 + AMR-WB	25	25	75	75	125	125	375	375
Profile 1	Profile 2 + SILK-NB	100	75	300	275	400	350	1,225	1,100
Profile 2	Profile 2 + SILK-NB	75	75	225	225	325	300	975	900
Profile 1	Profile 2 + SILK-WB	50	50	175	150	225	200	700	650
Profile 2	Profile 2 + SILK-WB	50	50	150	150	200	200	600	600
Profile 1	Profile 2 + Opus-NB	50	50	175	150	250	200	750	650
Profile 2	Profile 2 + Opus-NB	50	25	150	125	200	175	650	575
Profile 1	Profile 2 + Opus-WB	50	25	150	125	200	175	625	525
Profile 2	Profile 2 + Opus-WB	25	25	125	100	175	150	550	475


Notes:

- *Profile 1:* G.711 at 20ms only, without T.38 support.
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic:* Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended:* Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.

3.3.16.2 Mediant VE SBC for Amazon AWS EC2

The following tables list maximum channel capacity for Mediant VE SBC on the Amazon EC2 platform.

3.3.16.2.1 Transcoding Sessions



Note: For transcoding capabilities, the 'SBC Performance Profile' (SBCPerformanceProfile) parameter must be configured to **Optimized for Transcoding (2)**.

3.3.16.2.1.1 m5n.large

Table 3-42: Mediant VE SBC on m5n.large - Transcoding Capacity

Session Coders		Max. Sessions	
From Coder Profile	To Coder Profile	Basic	Extended
Profile 1	Profile 1	250	150
Profile 2	Profile 1	125	100
Profile 2	Profile 2	75	75
Profile 1	Profile 2 + AMR-NB / G.722	75	75
Profile 2	Profile 2 + AMR-NB / G.722	50	50
Profile 1	Profile 2 + AMR-WB	25	25
Profile 2	Profile 2 + AMR-WB	25	25
Profile 1	Profile 2 + SILK-NB	75	50
Profile 2	Profile 2 + SILK-NB	50	50
Profile 1	Profile 2 + SILK-WB	25	25
Profile 2	Profile 2 + SILK-WB	25	25
Profile 1	Profile 2 + Opus-NB	50	25
Profile 2	Profile 2 + Opus-NB	25	25
Profile 1	Profile 2 + Opus-WB	25	25
Profile 2	Profile 2 + Opus-WB	25	25



Notes:

- *Profile 1:* G.711 at 20ms only, without T.38 support.
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic:* Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended:* Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.

3.3.16.2.1.2 c5n.2xlarge

Table 3-43: Mediant VE SBC on c5n.2xlarge - Transcoding Capacity

Session Coders		Max. Sessions	
From Coder Profile	To Coder Profile	Basic	Extended
Profile 1	Profile 1	1,950	1,275
Profile 2	Profile 1	1,050	850
Profile 2	Profile 2	725	625
Profile 1	Profile 2 + AMR-NB / G.722	675	575
Profile 2	Profile 2 + AMR-NB / G.722	500	475
Profile 1	Profile 2 + AMR-WB	200	200
Profile 2	Profile 2 + AMR-WB	175	175
Profile 1	Profile 2 + SILK-NB	625	550
Profile 2	Profile 2 + SILK-NB	500	450
Profile 1	Profile 2 + SILK-WB	350	325
Profile 2	Profile 2 + SILK-WB	300	300
Profile 1	Profile 2 + Opus-NB	375	325
Profile 2	Profile 2 + Opus-NB	325	300
Profile 1	Profile 2 + Opus-WB	300	275
Profile 2	Profile 2 + Opus-WB	275	250



Notes:

- *Profile 1:* G.711 at 20ms only, without T.38 support.
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic:* Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended:* Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.

3.3.16.2.1.3 c5n.9xlarge

Table 3-44: Mediant VE SBC on c5n.9xlarge - Transcoding Capacity

Session Coders		Max. Sessions	
From Coder Profile	To Coder Profile	Basic	Extended
Profile 1	Profile 1	7,000	6,800
Profile 2	Profile 1	5,725	4,575
Profile 2	Profile 2	3,925	3,450
Profile 1	Profile 2 + AMR-NB / G.722	3,600	3,125
Profile 2	Profile 2 + AMR-NB / G.722	2,775	2,550
Profile 1	Profile 2 + AMR-WB	1,175	1,150
Profile 2	Profile 2 + AMR-WB	1,050	1,000
Profile 1	Profile 2 + SILK-NB	3,400	3,025
Profile 2	Profile 2 + SILK-NB	2,675	2,475
Profile 1	Profile 2 + SILK-WB	1,900	1,800
Profile 2	Profile 2 + SILK-WB	1,650	1,625
Profile 1	Profile 2 + Opus-NB	2,075	1,775
Profile 2	Profile 2 + Opus-NB	1,775	1,600
Profile 1	Profile 2 + Opus-WB	1,725	1,450
Profile 2	Profile 2 + Opus-WB	1,500	1,325

Notes:

- *Profile 1*: G.711 at 20ms only, without T.38 support.
- *Profile 2*: G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic*: Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended*: Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.



3.3.16.2 Forwarding Session Capacity per Feature without Transcoding

The table below lists the maximum number of concurrent forwarding sessions per feature without using transcoding.

Table 3-45: Mediant VE SBC on Amazon EC2 - Forwarding Capacity per Feature

Feature	Max. Sessions	
	c5.2xlarge	c5.9xlarge
Fax Detection	5,500	7,000
AD/AMD/Beep Detection	5,500	7,000
CP Detection	5,500	7,000
Jitter Buffer	1,800	7,000



Notes:

- All figures were calculated for call duration of 100 seconds.
- For fax detection, figures are based on the following assumptions:
 - ✓ Timeout for fax detection is 10 seconds (default)
 - ✓ Fax detection is required on both legs of the call
- Figures for Call Progress (CP), AD, AMD, and Beep detection assume that detection is only on one leg of the call (if not, figures will be reduced).

3.3.16.3 Mediant VE SBC for Azure

The following tables list maximum channel capacity for Mediant VE SBC on the Azure platform.

Table 3-46: Mediant VE SBC on DS1_v2, D2ds_v5, D4ds_v5, D8ds_v5 - Transcoding Capacity

Session Coders		Max. Sessions							
		DS1_v2		D2ds_v5		D4ds_v5		D8ds_v5	
From Coder Profile	To Coder Profile	Basic	Extended	Basic	Extended	Basic	Extended	Basic	Extended
Profile 1	Profile 1	200	200	300	175	600	375	1,800	1,175
Profile 2	Profile 1	100	100	150	125	325	250	975	775
Profile 2	Profile 2	75	50	100	75	225	175	675	575
Profile 1	Profile 2 + AMR-NB / G.722	100	100	100	75	200	175	600	525
Profile 2	Profile 2 + AMR-NB / G.722	75	50	75	50	150	125	475	425
Profile 1	Profile 2 + AMR-WB (G.722.2)	25	25	25	25	50	50	200	175
Profile 2	Profile 2 + AMR-WB	25	25	25	25	50	50	175	175
Profile 1	Profile 2 + SILK-NB	100	75	75	75	175	175	575	525
Profile 2	Profile 2 + SILK-NB	50	50	75	50	150	125	450	425
Profile 1	Profile 2 + SILK-WB	50	50	50	50	100	100	325	300
Profile 2	Profile 2 + SILK-WB	50	25	25	25	75	75	275	275
Profile 1	Profile 2 + Opus-NB	50	50	50	50	100	100	350	300
Profile 2	Profile 2 + Opus-NB	50	50	50	25	100	75	300	275
Profile 1	Profile 2 + Opus-WB	50	25	50	25	100	75	300	250
Profile 2	Profile 2 + Opus-WB	25	25	25	25	75	75	250	225



Notes:

- Azure DS_v2 virtual machine series in general and DS1_v2 virtual machine size in particular are scheduled for retirement in May 2028. Therefore, it's recommended not to use them for new deployments, and to migrate existing deployments to the Dds_v5 (D2ds_v5, D4ds_v5, or D8ds_v5) virtual machine series.
- *Profile 1:* G.711 at 20ms only, without T.38 support.
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic:* Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended:* Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.
- For transcoding capabilities, the 'SBC Performance Profile' (SBCPerformanceProfile) parameter must be configured to **Optimized for Transcoding (2)**.

3.3.16.4 Mediant VE SBC for GCP

The following tables list maximum channel capacity for Mediant VE SBC on the GCP platform.

Table 3-47: Mediant VE SBC on GCP - Transcoding Capacity

Session Coders		n2-standard-2		n2-standard-4		n2-standard-8		n2-highcpu-32	
From Coder Profile	To Coder	Basic	Extended	Basic	Extended	Basic	Extended	Basic	Extended
1	Profile 1	300	200	625	400	1900	1225	3600	3600
2	Profile 1	150	125	325	275	1025	825	3600	3600
2	Profile 2	100	100	225	200	700	625	3350	2925
1	Profile 2 + AMR-NB / G.722	100	75	200	175	650	575	3075	2675
2	Profile 2 + AMR-NB / G.722	75	75	150	150	500	450	2375	2175
1	Profile 2 + AMR-WB	25	25	50	50	200	200	1000	975
2	Profile 2 + AMR-WB	25	25	50	50	175	175	900	875
1	Profile 2 + SILK-NB	100	75	200	175	600	550	2900	2600
2	Profile 2 + SILK-NB	75	75	150	150	475	450	2275	2125
1	Profile 2 + SILK-WB	50	50	100	100	350	325	1650	1550
2	Profile 2 + SILK-WB	50	50	100	100	300	300	1425	1400

Session Coders		n2-standard-2		n2-standard-4		n2-standard-8		n2-highcpu-32	
From Coder Profile	To Coder	Basic	Extended	Basic	Extended	Basic	Extended	Basic	Extended
1	Profile 2 + Opus-NB	50	50	125	100	375	325	1775	1525
2	Profile 2 + Opus-NB	50	25	100	75	325	275	1525	1350
1	Profile 2 + Opus-WB	50	25	100	75	300	250	1475	1250
2	Profile 2 + Opus-WB	25	25	75	75	275	225	1275	1125

**Notes:**

- *Profile 1:* G.711 at 20ms only, without T.38 support.
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic:* Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended:* Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.
- For transcoding capabilities, the 'SBC Performance Profile' (SBCPerformanceProfile) parameter must be configured to **Optimized for Transcoding (2)**.

3.3.17 Mediant Server Edition (SE) SBC



Note: Digital signal processing (DSP) is supported only on Mediant SE SBC based on DL360 G10.

The maximum number of supported SBC sessions is listed in Section 3.1 on page 35. These SBC sessions also support SRTP and RTCP XR. When DSP capabilities are required, the number of sessions that can use DSP capabilities is reduced, as shown in the table below.

Table 3-48: Mediant SE SBC (DL360 G10) - Transcoding Capacity per Coder Capability Profile

Session Coders		Max. Sessions	
From Coder Profile	To Coder Profile		
		Basic	Extended
Profile 1	Profile 1	9,600	6,625
Profile 2	Profile 1	4,400	3,625
Profile 2	Profile 2	2,875	2,500
Profile 1	Profile 2 + AMR-NB / G.722	2,925	2,600
Profile 2	Profile 2 + AMR-NB / G.722	2,150	1,950
Profile 1	Profile 2 + AMR-WB (G.722.2)	950	925
Profile 2	Profile 2 + AMR-WB	850	825
Profile 1	Profile 2 + SILK-NB	2,750	2,500
Profile 2	Profile 2 + SILK-NB	2,050	1,900
Profile 1	Profile 2 + SILK-WB	1,575	1,475
Profile 2	Profile 2 + SILK-WB	1,300	1,250
Profile 1	Profile 2 + Opus-NB	1,700	1,450
Profile 2	Profile 2 + Opus-NB	1,375	1,200
Profile 1	Profile 2 + Opus-WB	1,375	1,200
Profile 2	Profile 2 + Opus-WB	1,175	1,025

**Notes:**

- *Profile 1:* G.711 at 20ms only, without T.38 support.
- *Profile 2:* G.711, G.726, G.729 (A / AB), G.723.1, T.38.
- *Basic:* Excludes in-band signaling (in voice channel), VAD, Silence Suppression and fax detection.
- *Extended:* Includes DTMF transcoding (RFC 2833 to in-band signaling), VAD, Silence Suppression and fax detection
- Acoustic Echo Suppressor may reduce capacity. For more information, contact your AudioCodes sales representative.
- For transcoding capabilities, the 'SBC Performance Profile' (SBCPerformanceProfile) parameter must be configured to **Optimized for Transcoding (2)**.

3.3.17.1 Forwarding Session Capacity per Feature without Transcoding

The table below lists the maximum number of concurrent forwarding sessions per feature without using transcoding.

Table 3-49: Mediant SE SBC (DL360 G10) - Forwarding Capacity per Feature

Feature	Max. Sessions
Fax Detection	45,000
AD/AMD/Beep Detection	45,000
CP Detection	45,000
Jitter Buffer	6,000

**Notes:**

- All figures were calculated for call duration of 100 seconds.
- For fax detection, figures are based on the following assumptions:
 - ✓ Timeout for fax detection is 10 seconds (default)
 - ✓ Fax detection is required on both legs of the call
- Figures for Call Progress (CP), AD, AMD, and Beep detection assume that detection is only on one leg of the call (if not, figures will be reduced).

4 Configuration Table Capacity

The maximum rows (indices) that can be configured per configuration table is listed in the table below.

Table 4-1: Capacity per Configuration Table

Configuration Table	Mediant 500 / 500L / 800 / 1000B / 3100 MP-1288	Mediant 2600 / 4000B	Mediant 90xx / SE	Mediant VE / CE
Accounts	<ul style="list-style-type: none"> MP-1288: 288 Mediant 500 / 500L / 800 / 1000: 102 Mediant 3100: 1,500 	625	5,000	<ul style="list-style-type: none"> 2-32 GB: 1,500 64 GB: 5,000
Allowed Audio Coders Groups	10 (20 for Mediant 3100)	20	20	20
Allowed Video Coders Groups	5	5	5	5
Alternative Routing Reasons	20	20	20	20
Bandwidth Profile	486 (1,724 for Mediant 3100)	1,009	1,884	1,884
Call Admission Control Profile	102	1,500	1,500	1,500
Call Admission Control Rule (per Profile)	8	8	8	8
Call Setup Rules	<ul style="list-style-type: none"> MP-1288 / Mediant 1000/3100: 64 Mediant 500/500L/800: 100 	400	1,000	<ul style="list-style-type: none"> 2-8 GB: 500 16-64 GB: 1,000
Calling Name Manipulation for IP-to-Tel Calls	120	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Calling Name Manipulation for Tel-to-IP Calls	120	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Char Conversion	40	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Charge Codes	25	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Classification	102 (1,500 for Mediant 3100)	1,500	1,500	<ul style="list-style-type: none"> 2 GB: 750 3.5-64 GB: 1,500
Coders Groups	11 (21 for Mediant 3100)	21	21	21
Coders Groups > Coders	10 (per Coders Group)	10 (per Coders Group)	10 (per Coders Group)	10 (per Coders Group)
Cost Groups	10	10	10	10

Configuration Table	Mediant 500 / 500L / 800 / 1000B / 3100 MP-1288	Mediant 2600 / 4000B	Mediant 90xx / SE	Mediant VE / CE
Custom DNS Servers	n/a	n/a	32 (Mediant SE)	32
Custom MTU	n/a	n/a	16 (Mediant SE)	16
Destination Phone Number Manipulation for IP-to-Tel Calls	120	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Destination Phone Number Manipulation for Tel-to-IP Calls	120	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
DHCP Servers	1	1	1	1
Dial Plan	10 (25 for Mediant 3100)	25	50	50
Dial Plan Rule	2,000 (10,000 for Mediant 3100)	10,000	100,000	<ul style="list-style-type: none"> < 16 GB: 2,000 ≥ 16 GB: 100,000
Ethernet Devices	16 (1,024 for Mediant 3100)	1,024	1,024	1,024
External Media Source	1	1	1	1
Firewall	50 (500 for Mediant 3100)	500	500	500
Forward On Busy Trunk Destination	<ul style="list-style-type: none"> MP-1288: 288 Mediant 500/500L/800: 100 Mediant 1000: 240 Mediant 3100: 512 	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Gateway CDR Format	128 Syslog; 40 RADIUS (128 for Mediant 3100); 64 Locally Stored & JSON	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
HA Network Monitor	10	10	10	10
HTTP Directive Sets	30	30	30	30
HTTP Directives	500	500	500	500
HTTP Locations	40	40	120	<ul style="list-style-type: none"> < 8 GB: 40 ≥ 8 GB: 120
HTTP Proxy Servers	10	10	40	<ul style="list-style-type: none"> < 8 GB: 10 ≥ 8 GB: 40
HTTP Remote Hosts	10 (per Remote Web Service)	10 (per Remote Web Service)	10 (per Remote Web Service)	10 (per Remote Web Service)
IDS Matches	20	20	20	20
IDS Policies	20	20	20	20
IDS Rule	100 (20 per Policy)	100 (20 per Policy)	100 (20 per Policy)	100 (20 per Policy)

Configuration Table	Mediant 500 / 500L / 800 / 1000B / 3100 MP-1288	Mediant 2600 / 4000B	Mediant 90xx / SE	Mediant VE / CE
Inbound Manipulations	205 (3,000 for Mediant 3100)	3,000	3,000	3,000
Internal DNS	20	20	20	20
Internal SRV	10	10	10	10
IP Group Set	51 (350 for Mediant 3100)	350	2,500	<ul style="list-style-type: none"> 2 GB: 40 3.5 GB: 500 4-16 GB: 750 32-64 GB: 2,500
IP Groups	80 (700 for Mediant 3100)	700	5,000	<ul style="list-style-type: none"> 2 GB: 80 3.5 GB: 1,000 4-16 GB: 1,500 32-64 GB: 5,000
IP Interfaces	16 1,024 (Mediant 3100)	1,024	1,024	1,024
IP Profiles	<ul style="list-style-type: none"> MP-1288/Mediant 500/500L/800: 20 Mediant 1000: 40 Mediant 3100: 300 	300	<ul style="list-style-type: none"> Mediant 9030: 300 Mediant 9000/9080 /SE: 1,500 	<ul style="list-style-type: none"> 2 GB: 150 5-32 GB: 300 64 GB: 1,500 (5,000 if License Key includes VoiceAI Connect)
IP-to-IP Routing	615 (9,000 for Mediant 3100)	9,000	9,000	<ul style="list-style-type: none"> 2 GB: 4,500 3.5-64 GB: 9,000
IP-to-Tel Routing	120 (288 for MP-1288)	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
LDAP Server Groups	41 (600 for Mediant 3100)	600	600	600
LDAP Servers	82 (1,200 for Mediant 3100)	1,200	1,200	1,200
Local Users	20	20	20	20
Logging Filters	60	60	60	60
Login OAuth Servers	1	1	1	1
Malicious Signature	20	20	20	20
Management Access List	50	50	50	50
Media Realm Extension	<ul style="list-style-type: none"> MP-1288 / Mediant 500/500L/800: 2 x Max. Media Realms Mediant 3100: 5 x Max. Media Realms 	<ul style="list-style-type: none"> Mediant 2600: 2 x max. Media Realms Mediant 4000B: 5 x max. Media Realms 	5 x Max. Media Realms	5 x Max. Media Realms

Configuration Table	Mediant 500 / 500L / 800 / 1000B / 3100 MP-1288	Mediant 2600 / 4000B	Mediant 90xx / SE	Mediant VE / CE
Media Realms	12 (1,024 for Mediant 3100)	1,024	1,024	1,024
Message Conditions	82 (1,200 for Mediant 3100)	1,200	1,200	1,200
Message Manipulations	<ul style="list-style-type: none"> MP-1288 / Mediant 500/500L/800: 100 Mediant 1000: 200 Mediant 3100: 500 	500	500	500
Message Policies	20	20	20	20
NAT Translation	32	32	32	32
OAuth Servers	1	1	1	1
Outbound Manipulations	205 (3,000 for Mediant 3100)	3,000	3,000	3,000
OVOC Services	1	1	1	1
Phone Contexts	20	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Pre-Parsing Manipulation Rules	30	30	30	30
Pre-Parsing Manipulation Sets	10	10	10	10
Proxy Sets	80 (700 for Mediant 3100)	700	5,000	<ul style="list-style-type: none"> 2 GB: 80 3.5 GB: 1,000 4-16 GB: 1,500 32-64 GB: 5,000
Proxy Sets > Proxy Address (per Proxy Set)	10	10	50	<ul style="list-style-type: none"> 2 GB: 10 3.5 GB: 10 8-16 GB: 10 32-64 GB: 50
Proxy Sets > Proxy Address (DNS-resolved IP addresses per Proxy Set)	15	15	50	<ul style="list-style-type: none"> 2 GB: 15 3.5 GB: 15 8-16 GB: 50 32-64 GB: 50
Proxy Sets > Proxy Address (DNS-resolved IP addresses for all Proxy Sets combined)	500	2,100	20,000	<ul style="list-style-type: none"> 2 GB: 500 3.5 GB: 3,000 4 GB: 4,500 8-16 GB: 6,000 (20,000 for VAIC feature) 32-64 GB: 20,000
QoS Mapping	64	64	64	64

Configuration Table	Mediant 500 / 500L / 800 / 1000B / 3100 MP-1288	Mediant 2600 / 4000B	Mediant 90xx / SE	Mediant VE / CE
Quality of Experience Color Rules	256	256	256	256
Quality of Experience Profile	256	256	256	256
Quality Of Service Rules	510 (3,500 for Mediant 3100)	3,500	7,500	7,500
RADIUS Servers	3	3	3	3
Reasons for IP-to-Tel Alternative Routing	10	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Reasons for Tel-to-IP Alternative Routing	10	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Redirect Number IP-to-Tel	20	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Redirect Number Tel-to-IP	20	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Release Cause ISDN->ISDN	10	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Release Cause Mapping from ISDN to SIP	12	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Release Cause Mapping from SIP to ISDN	12	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Remote Media Subnet	5	5	5	5
Remote Web Services	7	7	7	7
Routing Policies (SBC)	20 (600 for Mediant 3100)	600	600	<ul style="list-style-type: none"> 2 GB: 20 3.5 GB: 70 4 GB: 100 8 GB: 200 16 GB: 400 32-64 GB: 600
Routing Policies (Gateway)	1	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
RTP-Only	n/a	n/a	3,000 (Mediant SE)	3,000
SBC CDR Format	128 Syslog; 40 RADIUS (128 for Mediant 3100); 64 Locally Stored & JSON	128 (Syslog); 128 (RADIUS);	128 (Syslog); 128 (RADIUS); 64 (Locally)	128 (Syslog); 128 (RADIUS); 64 (Locally Stored & JSON)

Configuration Table	Mediant 500 / 500L / 800 / 1000B / 3100 MP-1288	Mediant 2600 / 4000B	Mediant 90xx / SE	Mediant VE / CE
		64 (Locally Stored & JSON)	Stored & JSON)	
SBC User Information	<ul style="list-style-type: none"> Mediant 500: 1,600 Mediant 500L/800: 2,000 Mediant 1000: 800 Mediant 3100: 20,000 MP-1288: 350 	20,000	50,000	<ul style="list-style-type: none"> 2 GB: 1,000 3-4 GB: 3,000 8 GB: 20,000 16-64 GB: 50,000
	Note: The device limits the maximum number of users that can use a TLS connection:			
	<ul style="list-style-type: none"> Mediant 500: 300 Mediant 500L: 100 Mediant 800: 300 Mediant 1000: 300 Mediant 3100: 6,000 MP-1288: 350 	1,000	25,000	<ul style="list-style-type: none"> 2 GB: 100 3 GB: 500 4 GB: 5,000 8-16 GB: 6,000 32 GB: 16,000 64 GB: 25,000
SIP Interfaces	80 (1,200 for Mediant 3100)	700	1,200	<ul style="list-style-type: none"> 2 GB: 40 3 GB: 200 4 GB: 400 8 GB: 800 16 GB: 1,200 32-64 GB: 1,200
SIP Recording Rules	30	30	50	50
SNI-to-TLS Mapping	12 (15 for Mediant 1000; 100 for Mediant 3100)	100	100	100
SNMP Trap Destinations	5	5	5	5
SNMP Trusted Managers	5	5	5	5
SNMPv3 Users	10	10	10	10
Source Phone Number Manipulation for IP-to-Tel Calls	120	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Source Phone Number Manipulation for Tel-to-IP Calls	120	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
SRDs	20 (600 for Mediant 3100)	600	600	<ul style="list-style-type: none"> 2 GB: 20 3.5 GB: 70 4 GB: 100 8 GB: 200 16 GB: 400 32-64 GB: 600
SSH Interfaces	16	16	16	16
Static Routes	30	30	30	30

Configuration Table	Mediant 500 / 500L / 800 / 1000B / 3100 MP-1288	Mediant 2600 / 4000B	Mediant 90xx / SE	Mediant VE / CE
Supplementary Services	100	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Syslog Servers	4	4	4	4
TCP/UDP Proxy Servers	10	10	10	10
Tel Profiles	9 (40 for Mediant 3100)	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Tel-to-IP Routing	180	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Telnet Interfaces	16	16	16	16
Test Call Rules	5 (default)	5 (default)	5 (default)	5 (default)
Time Band	70 (21 per Cost Group)	70 (21 per Cost Group)	70 (21 per Cost Group)	70 (21 per Cost Group)
TLS Contexts	<ul style="list-style-type: none"> MP-1288 / Mediant 500/500L/800: 12 Mediant 1000: 15 Mediant 3100: 100 	100	100	100
Tone Index	50	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Trunk Group	<ul style="list-style-type: none"> MP-1288: 288 Mediant 500/500L/800: 24 Mediant 1000: 240 Mediant 3100: 512 	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Trunk Group Settings	<ul style="list-style-type: none"> MP-1288: 289 Mediant 500/500L/800: 101 Mediant 1000: 241 Mediant 3100: 512 	n/a (Gateway only)	n/a (Gateway only)	n/a (Gateway only)
Upstream Groups	10	10	10	10
Upstream Hosts	50 (5 per Upstream Group)	50 (5 per Upstream Group)	50 (5 per Upstream Group)	50 (5 per Upstream Group)
Weak Passwords List	150	150	150	150
Web Interfaces	20	20	20	20

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5 Supported SIP Standards

This section lists SIP RFCs and standards supported by the device.

5.1 Supported SIP RFCs

The table below lists the supported RFCs.

Table 5-1: Supported RFCs

RFC	Description	Gateway	SBC
draft-choudhuri-sip-info-digit-00	SIP INFO method for DTMF digit transport and collection	√	√
draft-ietf-bfcpbis-rfc4583bis-12	Session Description Protocol (SDP) Format for Binary Floor Control Protocol (BFCP) Streams	×	√ (forwarded transparently)
draft-ietf-sip-connect-reuse-06	Connection Reuse in SIP	√	√
draft-ietf-sipping-cc-transfer-05	Call Transfer	√	√
draft-ietf-sipping-realtimefax-01	SIP Support for Real-time Fax: Call Flow Examples	√	√ (forwarded transparently)
draft-ietf-sip-privacy-04.txt	SIP Extensions for Network-Asserted Caller Identity using Remote-Party-ID header	√	√
draft-johnston-sipping-cc-uui-04	Transporting User to User Information for Call Centers using SIP	√	√ (forwarded transparently)
draft-levy-sip-diversion-08	Diversion Indication in SIP	√	√
draft-mahy-iptel-cpc-06	The Calling Party's Category tel URI Parameter	√	√ (forwarded transparently)
draft-mahy-sipping-signaled-digits-01	Signaled Telephony Events in the Session Initiation Protocol	√	√
draft-sandbakken-dispatch-bfcp-udp-03	Revision of the Binary Floor Control Protocol (BFCP) for use over an unreliable transport	×	√ (forwarded transparently)
ECMA-355, ISO/IEC 22535	QSIG tunneling	√	√ (forwarded transparently)
RFC 2327	SDP	√	√
RFC 2617	HTTP Authentication: Basic and Digest Access Authentication	√	√
RFC 2782	A DNS RR for specifying the location of services	√	√
RFC 2833	Telephone event	√	√
RFC 2976	SIP INFO Method	√	√
RFC 3261	SIP	√	√
RFC 3262	Reliability of Provisional Responses	√	√

RFC	Description	Gateway	SBC
RFC 3263	Locating SIP Servers	√	√
RFC 3264	Offer/Answer Model	√	√
RFC 3265	(SIP)-Specific Event Notification	√	√
RFC 3310	Hypertext Transfer Protocol (HTTP) Digest Authentication Using Authentication and Key Agreement (AKA)	√	×
RFC 3311	UPDATE Method	√	√
RFC 3323	Privacy Mechanism	√	√
RFC 3325	Private Extensions to the SIP for Asserted Identity within Trusted Networks	√	√
RFC 3326	Reason header	√	√ (forwarded transparently)
RFC 3327	Extension Header Field for Registering Non-Adjacent Contacts	√	×
RFC 3361	DHCP Option for SIP Servers	√	×
RFC 3362	Real-time Facsimile (T.38) - image/t38 MIME Sub-type Registration	√	√
RFC 3372	SIP-T	√	√ (forwarded transparently)
RFC 3389	RTP Payload for Comfort Noise	√	√ (forwarded transparently)
RFC 3420	Internet Media Type message/sipfrag	√	√
RFC 3455	P-Associated-URI	√	√ (using user info \ account)
RFC 3489	STUN - Simple Traversal of UDP	√	√
RFC 3515	Refer Method	√	√
RFC 3550	RTP: A Transport Protocol for Real-Time Applications	√	√
RFC 3578	Interworking of ISDN overlap signalling to SIP	√	×
RFC 3581	Symmetric Response Routing - rport	√	√
RFC 3605	RTCP attribute in SDP	√	√ (forwarded transparently)
RFC 3608	SIP Extension Header Field for Service Route Discovery During Registration	√	×
RFC 3611	RTCP-XR	√	√
RFC 3665	SIP Basic Call Flow Examples	√	√
RFC 3666	SIP to PSTN Call Flows	√	√ (forwarded transparently)
RFC 3680	A SIP Event Package for Registration (IMS)	√	×
RFC 3711	The Secure Real-time Transport Protocol (SRTP)	√	√

RFC	Description	Gateway	SBC
RFC 3725	Third Party Call Control	√	√
RFC 3824	Using E.164 numbers with SIP (ENUM)	√	√
RFC 3842	MWI	√	√
RFC 3891	"Replaces" Header	√	√
RFC 3892	The SIP Referred-By Mechanism	√	√
RFC 3903	SIP Extension for Event State Publication	√	√
RFC 3911	The SIP Join Header	Partial	×
RFC 3960	Early Media and Ringing Tone Generation in SIP	Partial	√
RFC 3966	The tel URI for Telephone Numbers	√	√
RFC 4028	Session Timers in the Session Initiation Protocol	√	√
RFC 4040	RTP payload format for a 64 kbit/s transparent call - Clearmode	√	√ (forwarded transparently)
RFC 4117	Transcoding Services Invocation	√	×
RFC 4168	The Stream Control Transfer Protocol (SCTP) as a Transport for SIP	×	√
RFC 4235	Dialog Event Package	Partial	Partial
RFC 4240	Basic Network Media Services with SIP - NetAnn	√	√ (forwarded transparently)
RFC 4244	An Extension to SIP for Request History Information	√	√
RFC 4320	Actions Addressing Identified Issues with SIP Non-INVITE Transaction	√	√
RFC 4321	Problems Identified Associated with SIP Non-INVITE Transaction	√	√
RFC 4411	Extending SIP Reason Header for Preemption Events	√	√ (forwarded transparently)
RFC 4412	Communications Resource Priority for SIP	√	√ (forwarded transparently)
RFC 4458	SIP URIs for Applications such as Voicemail and Interactive Voice Response	√	√ (forwarded transparently)
RFC 4475	SIP Torture Test Messages	√	√
RFC 4497 or ISO/IEC 17343	Interworking between SIP and QSIG	√	√ (forwarded transparently)
RFC 4566	Session Description Protocol	√	√
RFC 4568	SDP Security Descriptions for Media Streams for SRTP	√	√
RFC 4582	The Binary Floor Control Protocol (BFCP)	×	√ (forwarded transparently)
RFC 4715	Interworking of ISDN Sub Address to sip isub parameter	√	√ (forwarded transparently)

RFC	Description	Gateway	SBC
RFC 4730	A SIP Event Package for Key Press Stimulus (KPML)	Partial	×
RFC 4733	RTP Payload for DTMF Digits	√	√
RFC 4904	Representing trunk groups in tel/sip URIs	√	√ (forwarded transparently)
RFC 4960	Stream Control Transmission Protocol	×	√
RFC 4961	Symmetric RTP and RTCP for NAT	√	√
RFC 4975	The Message Session Relay Protocol (MSRP)	×	√
RFC 5022	Media Server Control Markup Language (MSCML)	√	×
RFC 5079	Rejecting Anonymous Requests in SIP	√	√
RFC 5627	Obtaining and Using Globally Routable User Agent (UA) URIs (GRUU) in SIP	√	√ (forwarded transparently)
RFC 5628	Registration Event Package Extension for GRUU	√	×
RFC 5806	Diversion Header, same as draft-levy-sip-diversion-08	√	√
RFC 5853	Requirements from SIP / SBC Deployments	-	√
RFC 6035	SIP Package for Voice Quality Reporting Event, using sip PUBLISH	√	√
RFC 6135	An Alternative Connection Model for the Message Session Relay Protocol (MSRP)	×	√
RFC 6140	Registration for Multiple Phone Numbers in the Session Initiation Protocol (SIP)	√	√
RFC 6337	Session Initiation Protocol (SIP) Usage of the Offer/Answer Model	-	√
RFC 6341	Use Cases and Requirements for SIP-Based Media Recording (Session Recording Protocol - draft-ietf-siprec-protocol-02, and Architecture - draft-ietf-siprec-architecture-03)	√	√
RFC 6442	Location Conveyance for the Session Initiation Protocol	-	√
RFC 7245	An Architecture for Media Recording Using the Session Initiation Protocol	√	√
RFC 7261	Offer/Answer Considerations for G723 Annex A and G729 Annex B	√	√
RFC 7865	Session Initiation Protocol (SIP) Recording Metadata	√	√
RFC 7866	Session Recording Protocol	√	√
RFC 8068	Session Initiation Protocol (SIP) Recording Call Flows	√	√

5.2 SIP Message Compliance

The SIP device complies with RFC 3261, as shown in the following subsections.

5.2.1 SIP Functions

The device supports the following SIP Functions:

Table 5-2: Supported SIP Functions

Function	Comments
User Agent Client (UAC)	-
User Agent Server (UAS)	-
Proxy Server	The device supports working with third-party Proxy Servers such as Nortel CS1K/CS2K, Avaya, Microsoft OCS, Alcatel, 3Com, BroadSoft, Snom, Cisco and many others
Redirect Server	The device supports working with third-party Redirection servers
Registrar Server	The device supports working with third-party Registration servers

5.2.2 SIP Methods

The device supports the following SIP Methods:

Table 5-3: Supported SIP Methods

Method	Comments
ACK	-
BYE	-
CANCEL	-
INFO	-
INVITE	-
MESSAGE	Supported only by the SBC application and send only
NOTIFY	-
OPTIONS	-
PRACK	-
PUBLISH	Send only
REFER	Inside and outside of a dialog
REGISTER	Send only for Gateway application; send and receive for SBC application
SUBSCRIBE	-
UPDATE	-

5.2.3 SIP Headers

The device supports the following SIP headers:

Table 5-4: Supported SIP Headers

SIP Header	SIP Header
Accept	Proxy- Authenticate
Accept-Encoding	Proxy- Authorization
Alert-Info	Proxy- Require
Allow	Prack
Also	Reason
Asserted-Identity	Record- Route
Authorization	Refer-To
Call-ID	Referred-By
Call-Info	Replaces
Contact	Require
Content-Disposition	Remote-Party-ID
Content-Encoding	Response- Key
Content-Length	Retry-After
Content-Type	Route
Cseq	Rseq
Date	Session-Expires
Diversion	Server
Expires	Service-Route
Fax	SIP-If-Match
From	Subject
History-Info	Supported
Join	Target-Dialog
Max-Forwards	Timestamp
Messages-Waiting	To
MIN-SE	Unsupported
P-Associated-URI	User- Agent
P-Asserted-Identity	Via
P-Charging-Vector	Voicemail
P-Preferred-Identity	Warning
Priority	WWW- Authenticate
Privacy	-



Note: The following SIP headers are not supported:

- Encryption
- Organization

5.2.4 SDP Fields

The device supports the following SDP fields:

Table 5-5: Supported SDP Fields

SDP Field	Name
v=	Protocol version number
o=	Owner/creator and session identifier
a=	Attribute information
c=	Connection information
d=	Digit
m=	Media name and transport address
s=	Session information
t=	Time alive header
b=	Bandwidth header
u=	URI description header
e=	Email address header
i=	Session info header
p=	Phone number header
y=	Year

5.2.5 SIP Responses

The device supports the following SIP responses:

Table 5-6: Supported SIP Responses

Response Type		Comments
1xx Response (Information Responses)		
100	Trying	The device generates this response upon receiving a Proceeding message from ISDN or immediately after placing a call for CAS signaling.
180	Ringing	The device generates this response for an incoming INVITE message. Upon receiving this response, the device waits for a 200 OK response.
181	Call is Being Forwarded	The device doesn't generate these responses. However, the device does receive them. The device processes these responses the same way that it processes the 100 Trying response.
182	Queued	The device generates this response in Call Waiting service. When the SIP device receives a 182 response, it plays a special waiting Ringback tone to the telephone side.
183	Session Progress	The device generates this response if the Early Media feature is enabled and if the device plays a Ringback tone to IP
2xx Response (Successful Responses)		
200		OK

Response Type		Comments
202		Accepted
204		No Notification
3xx Response (Redirection Responses)		
300	Multiple Choice	The device responds with an ACK, and then resends the request to the first new address in the contact list.
301	Moved Permanently	The device responds with an ACK, and then resends the request to the new address.
302	Moved Temporarily	The device generates this response when call forward is used to redirect the call to another destination. If such a response is received, the calling device initiates an INVITE message to the new destination.
305	Use Proxy	The device responds with an ACK, and then resends the request to a new address.
380	Alternate Service	The device responds with an ACK, and then resends the request to a new address.
4xx Response (Client Failure Responses)		
400	Bad Request	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
401	Unauthorized	Authentication support for Basic and Digest. Upon receipt of this message, the device issues a new request according to the scheme received on this response.
402	Payment Required	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
403	Forbidden	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
404	Not Found	The device generates this response if it is unable to locate the callee. Upon receiving this response, the device notifies the User with a Reorder Tone.
405	Method Not Allowed	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
406	Not Acceptable	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
407	Proxy Authentication Required	Authentication support for Basic and Digest. Upon receipt of this message, the device issues a new request according to the scheme received on this response.
408	Request Timeout	The device generates this response if the no-answer timer expires. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.

Response Type		Comments
409	Conflict	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
410	Gone	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
411	Length Required	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
413	Request Entity Too Large	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
415	Unsupported Media	If the device receives a 415 Unsupported Media response, it notifies the User with a Reorder Tone. The device generates this response in case of SDP mismatch.
420	Bad Extension	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
423	Interval Too Brief	The device does not generate this response. Upon receipt of this message the device uses the value received in the Min-Expires header as the registration time.
424	Bad Location Information	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
428	Use Identity Header	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
429	Provide Referrer Identity	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
433	Anonymity Disallowed	If the device receives a 433 Anonymity Disallowed, it sends a DISCONNECT message to the PSTN with a cause value of 21 (Call Rejected). In addition, the device can be configured, using the Release Reason Mapping, to generate a 433 response when any cause is received from the PSTN side.
436	Bad Identity Info	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
437	Unsupported Credential	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
438	Invalid Identity Header	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
439	First Hop Lacks Outbound Support	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.

Response Type		Comments
440	Max-Breadth Exceeded	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
470	Consent Needed	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
480	Temporarily Unavailable	If the device receives this response, it notifies the User with a Reorder Tone. This response is issued if there is no response from remote.
481	Call Leg/Transaction Does Not Exist	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
482	Loop Detected	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
483	Too Many Hops	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
484	Address Incomplete	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
485	Ambiguous	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
486	Busy Here	The SIP device generates this response if the called party is off-hook and the call cannot be presented as a call waiting call. Upon receipt of this response, the device notifies the User and generates a busy tone.
487	Request Canceled	This response indicates that the initial request is terminated with a BYE or CANCEL request.
488	Not Acceptable	The device doesn't generate this response. Upon receipt of this message and before a 200 OK has been received, the device responds with an ACK and disconnects the call.
491	Request Pending	When acting as a UAS: the device sent a re-INVITE on an established session and is still in progress. If it receives a re-INVITE on the same dialog, it returns this response to the received INVITE. When acting as a UAC: If the device receives this response to a re-INVITE, it starts a timer. After the timer expires, the UAC tries to send the re-INVITE again.
5xx Response (Server Failure Responses)		
500	Internal Server Error	Upon receipt of any of these responses, the device releases the call, sending an appropriate release cause to the PSTN side. The device generates a 5xx response according to the PSTN release cause coming from the PSTN.
501	Not Implemented	
502	Bad gateway	

Response Type		Comments
503	Service Unavailable	
504	Gateway Timeout	
505	Version Not Supported	
6xx Response (Global Responses)		
600	Busy Everywhere	Upon receipt of any of these responses, the device releases the call, sending an appropriate release cause to the PSTN side.
603	Decline	
604	Does Not Exist Anywhere	
606	Not Acceptable	

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