



Overview

of the

Avaya™ G700 Media Gateway

controlled by an

Avaya™ S8300 Media Server or an

Avaya™ S8700 Media Server

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Notice

Every effort was made to ensure that the information in this document was complete and accurate at the time of printing. However, information is subject to change.

Warranty

Avaya Inc. provides a limited warranty on this product. Refer to your sales agreement to establish the terms of the limited warranty. In addition, Avaya's standard warranty language as well as information regarding support for this product, while under warranty, is available through the following website:

<http://www.avaya.com/support>

Preventing Toll Fraud

"Toll fraud" is the unauthorized use of your telecommunications system by an unauthorized party (for example, a person who is not a corporate employee, agent, subcontractor, or is not working on your company's behalf). Be aware that there may be a risk of toll fraud associated with your system and that, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

Avaya Fraud Intervention

If you suspect that you are being victimized by toll fraud and you need technical assistance or support, in the United States and Canada, call the Technical Service Center's Toll Fraud Intervention Hotline at 1-800-643-2353.

How to Get Help

For additional support telephone numbers, go to the Avaya Web site:

<http://www.avaya.com/support/>

If you are:

- Within the United States, click *Escalation Lists*, which includes escalation phone numbers within the USA.
- Outside the United States, click *Escalation Lists* then click *Global Escalation List*, which includes phone numbers for the regional Centers of Excellence.

Providing Telecommunications Security

Telecommunications security (of voice, data, and/or video communications) is the prevention of any type of intrusion to (that is, either unauthorized or malicious access to or use of) your company's telecommunications equipment by some party.

Your company's "telecommunications equipment" includes both this Avaya product and any other voice/data/video equipment that could be accessed via this Avaya product (that is, "networked equipment").

An "outside party" is anyone who is not a corporate employee, agent, subcontractor, or is not working on your company's behalf. Whereas, a "malicious party" is anyone (including someone who may be otherwise authorized) who accesses your telecommunications equipment with either malicious or mischievous intent.

Such intrusions may be either to/through synchronous (time-multiplexed and/or circuit-based) or asynchronous (character-, message-, or packet-based) equipment or interfaces for reasons of:

- Utilization (of capabilities special to the accessed equipment)
- Theft (such as, of intellectual property, financial assets, or toll-facility access)
- Eavesdropping (privacy invasions to humans)
- Mischief (troubling, but apparently innocuous, tampering)
- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

Be aware that there may be a risk of unauthorized intrusions associated with your system and/or its networked equipment. Also realize that, if such an intrusion should occur, it could result in a variety of losses to your company (including but not limited to, human/data privacy, intellectual property, material assets, financial resources, labor costs, and/or legal costs).

Responsibility for Your Company's Telecommunications Security

The final responsibility for securing both this system and its networked equipment rests with you - Avaya's customer system administrator, your telecommunications peers, and your managers. Base the fulfillment of your responsibility on acquired knowledge and resources from a variety of sources including but not limited to:

- Installation documents
- System administration documents
- Security documents
- Hardware-/software-based security tools
- Shared information between you and your peers
- Telecommunications security experts

To prevent intrusions to your telecommunications equipment, you and your peers should carefully program and configure:

- Your Avaya-provided telecommunications systems and their interfaces
- Your Avaya-provided software applications, as well as their underlying hardware/software platforms and interfaces
- Any other equipment networked to your Avaya products.

TCP/IP Facilities

Customers may experience differences in product performance, reliability and security depending upon network configurations/design and topologies, even when the product performs as warranted.

Standards Compliance

Avaya Inc. is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Avaya Inc. The correction of interference caused by such unauthorized modifications, substitution or attachment will be the responsibility of the user. Pursuant to Part 15 of the Federal Communications Commission (FCC) Rules, the user is cautioned that changes or modifications not expressly approved by Avaya Inc. could void the user's authority to operate this equipment.

Product Safety Standards

This product complies with and conforms to the following international Product Safety standards as applicable:

Safety of Information Technology Equipment, IEC 60950, 3rd Edition including all relevant national deviations as listed in Compliance with IEC for Electrical Equipment (IECEE) CB-96A.

Safety of Information Technology Equipment, CAN/CSA-C22.2 No. 60950-00 / UL 60950, 3rd Edition

Safety Requirements for Customer Equipment, ACA Technical Standard (TS) 001 - 1997

One or more of the following Mexican national standards, as applicable: NOM 001 SCFI 1993, NOM SCFI 016 1993, NOM 019 SCFI 1998

The equipment described in this document may contain Class 1 LASER Device(s). These devices comply with the following standards:

- EN 60825-1, Edition 1.1, 1998-01
- 21 CFR 1040.10 and CFR 1040.11.

The LASER devices operate within the following parameters:

- Maximum power output: -5 dBm to -8 dBm
- Center Wavelength: 1310 nm to 1360 nm

Luokan 1 Laserlaite
Klass 1 Laser Apparat

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposures. Contact your Avaya representative for more laser product information.

Electromagnetic Compatibility (EMC) Standards

This product complies with and conforms to the following international EMC standards and all relevant national deviations:

Limits and Methods of Measurement of Radio Interference of Information Technology Equipment, CISPR 22:1997 and EN55022:1998.

Information Technology Equipment – Immunity Characteristics – Limits and Methods of Measurement, CISPR 24:1997 and EN55024:1998, including:

- Electrostatic Discharge (ESD) IEC 61000-4-2
- Radiated Immunity IEC 61000-4-3
- Electrical Fast Transient IEC 61000-4-4
- Lightning Effects IEC 61000-4-5
- Conducted Immunity IEC 61000-4-6
- Mains Frequency Magnetic Field IEC 61000-4-8
- Voltage Dips and Variations IEC 61000-4-11
- Powerline Harmonics IEC 61000-3-2
- Voltage Fluctuations and Flicker IEC 61000-3-3

Federal Communications Commission Statement

Part 15:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Part 68: Answer-Supervision Signaling. Allowing this equipment to be operated in a manner that does not provide proper answer-supervision signaling is in violation of Part 68 rules. This equipment returns answer-supervision signals to the public switched network when:

- answered by the called station,
- answered by the attendant, or
- routed to a recorded announcement that can be administered by the customer premises equipment (CPE) user.

This equipment returns answer-supervision signals on all direct inward dialed (DID) calls forwarded back to the public switched telephone network. Permissible exceptions are:

- A call is unanswered.
- A busy tone is received.
- A reorder tone is received.

Avaya attests that this registered equipment is capable of providing users access to interstate providers of operator services through the use of access codes. Modification of this equipment by call aggregators to block access dialing codes is a violation of the Telephone Operator Consumers Act of 1990.

This equipment complies with Part 68 of the FCC Rules and the requirements adopted by the ACTA. On the rear of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. The digits represented by ## are REN without a decimal point (e.g., 03 is a REN of 0.3). If requested, this information must be provided to the telephone company.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in devices not ringing in response to an incoming call. In most, but not all areas, the sum of RENs should not exceed 5.0. To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. REN is not required for some types of analog or digital facilities.

Means of Connection

Connection of this equipment to the telephone network is shown in the following table.

| Manufacturer's Port Identifier | FIC Code | SOC/REN/A.S. Code | Network Jacks |
|--------------------------------|-----------|-------------------|---------------|
| Ground Start CO trunk | 02GS2 | 0.5A | RJ11C |
| DID trunk | 02RV2-T | AS.0 | RJ11C |
| Loop Start CO trunk | 02LS2 | 0.5A | RJ11C |
| 1.544 digital interface | 04DU9-BN | 6.0Y | RJ48C |
| | 04DU9-DN | 6.0Y | RJ48C |
| | 04DU9-IKN | 6.0Y | RJ48C |
| | 04DU9-ISN | 6.0Y | RJ48C |
| Basic Rate Interface | 02IS5 | 6.0F | RJ49C |

If the terminal equipment (for example, the media server or media gateway) causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, please contact the Technical Service Center at 1-800-242-2121 or contact your local Avaya representative. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant.

It is recommended that repairs be performed by Avaya certified technicians.

The equipment cannot be used on public coin phone service provided by the telephone company. Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

This equipment, if it uses a telephone receiver, is hearing aid compatible.

Canadian Department of Communications (DOC) Interference Information

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

DECLARATIONS OF CONFORMITY

United States FCC Part 68 Supplier's Declaration of Conformity (SDoC)

Avaya Inc. in the United States of America hereby certifies that the equipment described in this document and bearing a TIA TSB-168 label identification number complies with the FCC's Rules and Regulations 47 CFR Part 68, and the Administrative Council on Terminal Attachments (ACTA) adopted technical criteria.

Avaya further asserts that Avaya handset-equipped terminal equipment described in this document complies with Paragraph 68.316 of the FCC Rules and Regulations defining Hearing Aid Compatibility and is deemed compatible with hearing aids. Copies of SDoCs signed by the Responsible Party in the U. S. can be obtained by contacting your local sales representative and are available on the following Web site:

<http://www.avaya.com/support>

All Avaya media servers and media gateways are compliant with FCC Part 68, but many have been registered with the FCC before the SDoC process was available. A list of all Avaya registered products may be found at:

<http://www.part68.org/>

by conducting a search using "Avaya" as manufacturer.

European Union Declarations of Conformity



Avaya Inc. declares that the equipment specified in this document bearing the "CE" (*Conformité Européenne*) mark conforms to the European Union Radio and Telecommunications Terminal Equipment Directive (1999/5/EC), including the Electromagnetic Compatibility Directive (89/336/EEC, Class B) and Low Voltage Directive (73/23/EEC). This equipment has been certified to meet CTR3 Basic Rate Interface (BRI) and CTR4 Primary Rate Interface (PRI) and subsets thereof in CTR12 and CTR13, as applicable.

Copies of these Declarations of Conformity (DoCs) can be obtained by contacting your local sales representative and are available on the following Web site:

<http://www.avaya.com/support>

Japan

This is a Class B product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may occur, in which case, the user may be required to take corrective actions.

この装置は、情報処理装置等電波障害自主規制協議会（V C C I）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

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For the most current versions of documentation, go to the Avaya Web site:

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Overview

The Avaya™ S8300 Media Server, the G700 Media Gateway, and Avaya™ Media Modules provide the ability to converge voice and data into one infrastructure, creating flexibility for growing companies. The S8300 Media Server is a Pentium based processor in a Media Module form factor that resides in the G700 Media Gateway. The S8300 Media Server is also available in a Local Survivable Processor (LSP) configuration when the S8700 Media Server or another S8300 Media Server is used as the primary controller. The G700 Media Gateway is based on an Avaya P330 switch, that contains VoIP resources, and modular interface connectivity. The Media Modules provide analog, digital, T1/E1, BRI, and additional VoIP capabilities.

See the figure [“S8300 Media Server in a G700 Media Gateway” on page 9](#) for an example of the S8300 Media Server and Media Modules installed in the G700 Media Gateway.

Main Components

The following components can be used with the S8300 Media Server and the G700 Media Gateway:

- Avaya™ Media Modules:
 - Avaya MM710 T1/E1 Media Module
 - Avaya MM711 Analog Media Module
 - Avaya MM712 DCP Media Module
 - Avaya MM720 BRI Media Module
 - Avaya MM760 VoIP Media Module
- ["Maintenance Software"](#) (page 12), which monitors both the overall G700 Media Gateway and the media modules.
- ["Avaya Communication Manager"](#) (page 13). For information about Avaya Communication Manager software, refer to the *Overview for Avaya Communication Manager Software*, 555-233-767.
- Avaya P330 Expansion Module
- Avaya WAN Access Router Module for the Avaya P330 Stackable Switching System

The S8300 Media Server, the G700 Media Gateways and all other components will be described in more detail in the following sections.

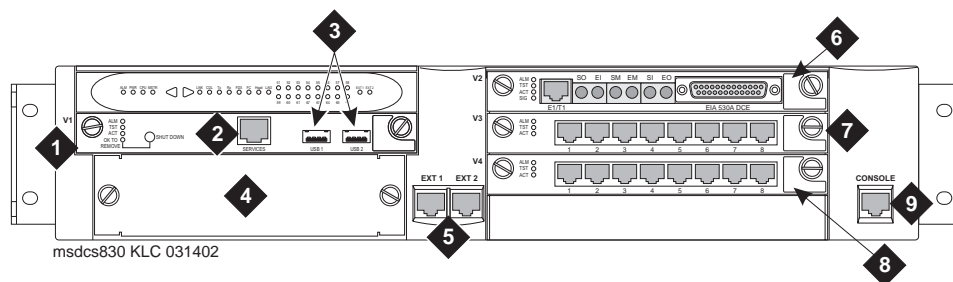
S8300 Media Server

The S8300 Media Server is a Pentium-based processor that runs on a Linux operating system and resides in slot V1 of the G700 Media Gateway. It comes standard with the following:

- Avaya Terminal Emulator: An administration tool that provides terminal emulation capabilities and a variety of connectivity options you can save and reuse
- A 20GB hard disk
- 256 MB RAM
- A WEB server used for the following:
 - Backups and restores for customer data
 - Easy access to view current alarms
 - The ability to perform server maintenance including busy out and release busyout, shutdown, and status of the S8300 Media Server
 - Security commands that will enable and disable the modem, start and stop FTP server, and view the software license
 - SNMP access to configure trap destinations, and stop and start the master agent
 - S8300 Media Server configuration information and upgrade access
 - Download of the Avaya Terminal Emulator from the S8300 Media Server to a PC on the LAN
- Linux operating system (Redhat v6.x)
- Interface for IA770 INTUITY AUDIX Messaging
- Trivial File Transfer Protocol (TFTP) server
- H.248 Media Gateway Signaling Protocol
- Control messages tunneled over H.323 Signaling Protocol
- Two E1/T1 ports and a 10/100BaseT port
- Two serial ports supporting V.35, RS530 and 10/100BaseT port
- Two 10/100Base-T Ethernet switch ports
- Two USB ports for modem connections
- SNMP alarming
- Support for remote call out alarming

See the following figure for an example of the S8300 Media Server in a G700 Media Gateway.

S8300 Media Server in a G700 Media Gateway



1. The S8300 Media Server in slot V1.
2. Service ports
3. Two USB ports
4. Avaya Expansion Module Slot
5. Dual 10/100Base-T Ethernet switch ports
6. Media Module slot V2
7. Media Module slot V3
8. Media Module slot V4
9. Console connection for on-site administration.

G700 Media Gateway

The G700 Media Gateway is designed to offer options and provide scalability. It is functional on its own or with other G700 Media Gateways. Fifty G700 Media Gateways can be supported using the S8300 Media Server. A maximum of 250 G700 Media Gateways can be supported using the S8700 Media Server. The G700 is also functional in a stack that is mixed with Avaya P330 devices such as the P333T, P333R, and P334.

To provide power to IP telephones without additional cables, stack the G700 Media Gateways with the Avaya P333T-PWR.

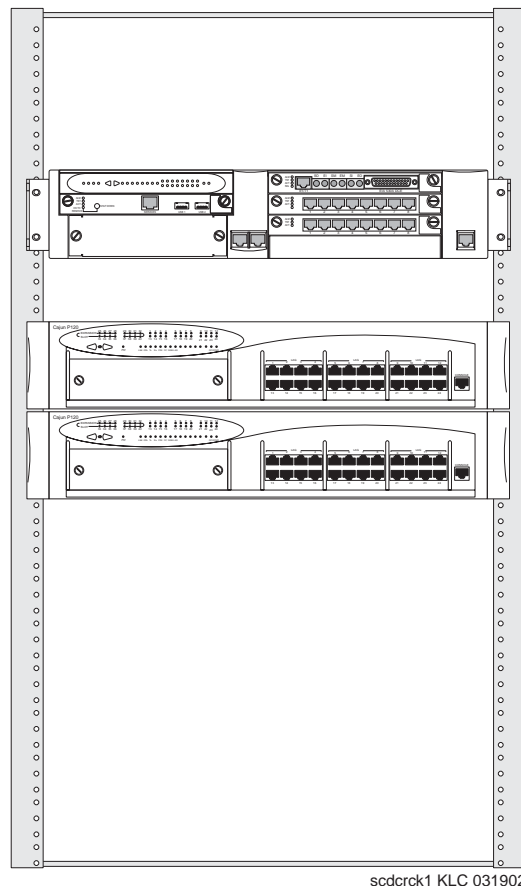
The following list describes the basic architecture of the G700 Media Gateway:

- Intel i960 controller that hosts all the base switch control and management software.
- Supports 15 ports of tone detection
- Fits in a EIA-310-D standard 19 inch rack
- Can sit on a desk top
- Contains four Media Module slots
- One Avaya P330 expansion module slot
- One slot for the Avaya P330 Octaplane stacking fabric

- Contains an internal Motherboard described in detail later in this section
- Standard based 10/100 Ethernet Interface connection types
- Internal global AC power supply that provides low voltage DC power to the fans, Motherboard and Media Modules
- Four internal fans that provide cooling for the internal components
- A LED board that indicates system level status
- A serial port for command line access
- A VoIP engine that supports up to 64 G.711 single channel calls
- Eight port layer 2 switch

The G700 Media Gateway has a physical design that is similar to the Avaya stackable switching products. The following figure shows the G700 Media Gateway with two Avaya P330 switches. The G700 is shown at the top of the stack.

G700 Media Gateway with two Avaya P330 switches



Avaya Expansion Module

The G700 Media Gateway is architecturally based on the Avaya P330 switch. Therefore, customers can use any of the Avaya Expansion Modules with the G700 Media Gateway. Additional Avaya LAN and WAN expansion modules connect directly to the G700 Media Gateway without requiring additional hardware. Two expansion modules are available from Avaya:

- Avaya X330 WAN Access Routing Module
- Avaya P330 LAN Expansion Modules

The Avaya X330 WAN Access Routing Module

Customers with multiple branch offices need network solutions that are simple flexible and scalable. The Avaya X330 WAN Access Routing Module allows customers to deploy a unified, high performance LAN/WAN infrastructure in one data stack.

Highlights of the Avaya X330 WAN Access Router

- Provides integrated WAN access that can be used with external firewalls or VPN Gateways
- Works with the following WAN and routing protocols
 - Point-to-Point (PPP) over channelled E1/T1
 - Frame Relay
 - RIP v1 and v2
 - Single Area OSPF
 - VRRP Redundancy
 - Throughput: wire speed WAN routing
- Congestion control
- Standard auto-negotiation
- Link redundancy
- 802.1Q/p VLAN and priority

Avaya P330 LAN Expansion Module

Highlights of the Avaya P330 LAN Expansion Module

- Maximum flexibility to the data stack
- Standard auto-negotiation
- Link Aggregation Group (LAG)
- LAG redundancy
- Link redundancy
- Congestion control
- 802.1Q/p VLAN and priority

Avaya P330 Stacking Fabric (Octaplane)

The Octaplane is a name for an Avaya hardware capability to bundle stackable components using a 4 bgps in each direction technology. This technology combines separate units into a larger logical switch using different lengths of cables that are connected to the expansion slots in the rear of the units. The cables are wired in a ring configuration, providing redundancy to the stack. In the event that a single unit should fail, the stack integrity is maintained. You can remove, or replace, any single unit without disrupting operation or performing stack-level reconfiguration.

Power Supply

The G700 Media Gateway uses an AC power supply. A power supply located in the G700 Media Gateway converts AC input power to voltages needed by the solution.

Maintenance Software

The Media Server with the G700 Media Gateway has a dual maintenance strategy. Maintenance software runs on both the G700 Media Gateway platform and the Media Server for the subsystems on the platform. This platform software performs initialization and motherboard maintenance, along with internal environmental monitoring.

In contrast, Media Modules are tested and brought into service by the Media Server maintenance software after the G700 Media Gateway registers with the Media Server. While the G700 Media Gateway maintenance software is aware of the Media Modules, the modules and associated ports are controlled by the Media Server. Error logs are maintained on the Media Server.

S8300 and G700 Reliability

A G700 Media Gateway can include a Local Survivable Processor (LSP), which allows a G700 Media Gateway to be a survivable call-processing server for remote and branch locations. The LSP is actually an S8300 Media Server that sits in idle standby mode, not processing any calls. Each LSP has a copy of the translations of the primary controller, either an S8700 Media Server or an S8300 Media Server. Translations are updated regularly and automatically on the LSP from the primary controller via a virtual link through a dedicated IP network. When the media gateway's processor (MGP) or IP endpoints perceive the primary controller to be unreachable, they attempt to register with the LSP so call processing can continue.

Calls That Are Preserved

The LSP will activate if, for any reason, the communication between the G700 Media Gateway and the primary media server stops. The fail-over from the primary media server to the LSP is an automatic process and does not require human intervention. IP-to-IP shuffled calls are preserved, though IP phone users cannot use phone features with currently-active calls. All other calls are dropped. After the LSP assumes control of call-processing, IP-to-IP shuffled calls still operate normally. Users with DCP and analog phones can call other users on phones connected to their media gateway, but must make calls over the public network to reach users on the primary controller.

When the primary controller or its connection to the media gateway is restored, a manual reset on the LSP breaks the communication between the LSP and all registered endpoints. This reset causes the endpoints to register with the primary media server. During fail-back to the primary media server, all calls are dropped again with the exception of IP-to-IP calls.

LSP Capacities

An LSP can support up to 50 G700 Media Gateways. The number of LSPs that can be supported in a configuration depends on the primary controller. The S8700 Media Server can support up to 50 LSPs. The S8300 Media Server can support up to 10 LSPs. An S8300 Media Server and an LSP cannot reside in the same G700 Media Gateway.

The LSP has an IP address that differs from that of the primary controller. And since it receives saved translations from the primary server, the LSP does not require Communication Manager administration.

Avaya Communication Manager

Avaya Media Servers use Avaya Communication Manager for call processing solutions. For more information on these solutions, see the Overview for Avaya Communication Manager.

Avaya Communication Manager is an open, scalable, highly reliable and secure telephony application. Avaya Communication Manager software provides user functionality, and system management functionality, intelligent call routing, application integration and extensibility, and enterprise communications networking. Communication Manager offers over 500 features, in the following categories.

- Call center
- Telephony features
- Localization
- Collaboration
- Messaging
- Telecommuting
- System management
- Reliability
- Security, privacy and safety
- Attendant features
- Networking
- Intelligent call routing
- Application programming interfaces

System Management

Avaya VisAbility Management Suite

Avaya™ VisAbility™ Management Suite offers a comprehensive set of WEB-based network and system management solutions that support Avaya converged voice solutions. Avaya VisAbility Management Suite combines individual applications into four offers:

- The Standard Management Solutions
- The Standard Management Solutions Plus
- The Enhanced Converged Management Offer
- The Advanced Converged Management Offer

For more detailed information on the Avaya VisAbility Management Suite see:

- <http://www.avaya.com>, Products and Services, Products A-Z

Maintenance Web Interface

The Web browser-based tool on the S8300 Media Server uses a Graphical User Interface (GUI) interface to perform server administration tasks such as:

- Backups and restores for customer data.
- An easy access to view current alarms.
- The ability to perform server maintenance including busy out and release busy out of the S8300 Media Server, shutdown of the S8300 Media Server, and status of the S8300 Media Server.
- Security commands that will enable and disable the modem, start and stop FTP server, and view the license.
- SNMP access to configure trap destinations, stop and start the master agent.
- S8300 Media Server configuration information and upgrade access.
- Download of ASA from the S8300 Media Server to a PC on the LAN (with the Standard Management Solutions Plus option only).

The Web interface contains an extensive help system that describes all the Web screens and Media Server procedures.

Customer Configuration Options

The S8300 Media Server with the G700 Media Gateway provides a standards-based, IP communications infrastructure without compromising the customer's applications, reliability, and multi-service networking. This solution can be installed for small customers or large customers with branch offices or in a multi-site configuration.

The S8300 Media Server with the G700 Gateway provides the following networking benefits:

- Feature transparency across the network via QSIG or DCS+.
- A consistent user experience with the same user interface
- Unified system management
- Multiple applications, supported by Avaya Communication Manager, that offer a full enterprise feature set and use IP standards for gateway control.
- Ease of moves, adds, and changes with the same administration interface.

Endpoint Devices

The S8300 Media Server supports the following types of endpoint devices.

Avaya Telephones for the S8300 Media Server

The S8300 Media Server and G700 Media Gateway support the following types of telephones:

IP Telephones

- Avaya 4602 IP Telephone
- Avaya 4606 IP Telephone
- Avaya 4612 IP Telephone
- Avaya 4620 IP Telephone
- Avaya 4624 IP Telephone
- Avaya 4630 IP Screenphone

Digital Telephones

- Avaya 2420 Digital Telephone
- Avaya 6402 and The Avaya 6402D Digital Telephones
- Avaya 6408D+ Digital Telephone
- Avaya 6416D+M Digital Telephone

- Avaya 6424D+M Digital Telephone
- Avaya Callmaster IV (603F) Digital Telephone
- Avaya Callmaster V (607A) Digital Telephone
- Avaya Callmaster VI (606A) Digital Telephone
- Avaya 302D Attendant Console
- Avaya Softconsole

Analog Telephones

- Avaya 6211 Analog Telephone
- Avaya 6219 Analog Telephone
- Avaya 2500 and The Avaya 2554 Analog Terminals
- 2520 Explosive Atmosphere Telephone

Avaya Wireless

- Avaya TransTalk 9040

SoundStation

- 3127 SoundPoint Speakerphone
- 3127 SoundStation Speakerphone
- 3127 SoundStation Premier Audioconferencing

Printers

Since the S8300 Media Server is tied in with the customer's LAN, print requests can be sent to any printer within the LAN and IP region of the S8300 Media Server.

A system printer is supported when a terminal server is used. In this case, the printer is connected to an adjunct PC such as a CDR system, CMS, or Call Accounting System.

A journal printer is supported when a terminal server is used.

System Capacities

The S8300 Media Server with G700 Media Gateways (MGs) offers the following maximum capacities.

S8300 System Capacities

| Item | Quantity Supported |
|--|--------------------|
| Number of Users per S8300 | 450 |
| Number of Trunks per S8300 | 450 |
| Total Endpoints (Trunks and Users) per S8300 | 900 |
| MGs per S8300 | 50 |
| LSPs per S8300 | 10 |
| MGs per LSP | 50 |
| Announcement Sources per S8300 | 50 |
| Busy Hour Calls (Maximum, non-call center) | 10,000 |
| Busy Hour Calls (Maximum, call center) | 5,000 |
| Locations | 50 |

For a complete list of capacities, see *System Capacities Table for the Avaya Communication Manager on Avaya Media Servers*, 555-233-605, Issue 1.

Adjuncts

This is a partial list of the some adjuncts that Avaya provides.

- Call Detail Recording (CDR), when a terminal server is used.
- INTUITY AUDIX R5.1 Messaging Solutions
- INTUITY AUDIX LX R1
- Avaya BCMS/BCMS Vu
- Avaya Call Management System (CMS) R3V11
- The Avaya Interactive Response system.
- CallVisor Adjunct-Switch Applications Interface (ASAI)

S8300-Specific Adjunct Support

IA 770 INTUITY AUDIX Messaging

The IA770 INTUITY™ AUDIX® Messaging is an optional voice mail system used with the S8300 Media Server. The IA770 requires a small circuit board that is plugged directly into a connector on the S8300 Media Server. The IA770 software and the MultiVantage™ software communicate over the connection on the TDM bus that exists between the small circuit board and the S8300 Media Server.

The IA 770 uses many of the resources of the S8300 Media Server and the G700 Media Gateway in which it resides. The following outlines the shared resources used by the IA 770:

- The S8300 hard drive for data storage and retrieval
- The S8300 TFTP server is used for the following:
 - Downloading and updating the license file
 - Backup and restore of data
 - Software updates and upgrades
- The IP address of the S8300 for administration access
- The S8300 license file for feature activation
- The S8300 General Alarm Manager for alarm display
- The S8300 Web interface to start and stop the system

The IA770 also shares the same switch-tone parameters established for the S8300 Media Server. The countries for which country-specific switch-tone parameters are shared and jointly customizable are:

- Brazil
- Canada
- China
- France

- Germany
- Italy
- Japan
- Mexico
- South Korea
- United Kingdom

Call Center

The S8300 Media Server provides an excellent solution for a small call center. The S8300 Media Server with the G700 Media Gateway supports the following call center capabilities:

- All three Avaya call center packages: Avaya Call Center Basic, Avaya Call Center Deluxe, and Avaya Call Center Elite
- Supports up to 250 agents
- Supports a maximum of 16 ASAI links
- Avaya G700 announcement software
- Supports Avaya IP Agent

Avaya G700 Announcement Software

Voice announcements are used in a call center environment to announce delays, direct customers to different departments, and entertain and inform calling parties. The announcement capability is standard and comes co-resident on the G700. The G700 announcement software has many of the functionalities of the TN2501AP VAL circuit pack.

The G700 announcement software has the following capacities:

G700 Announcement software capacities

| Area description | Avaya G700 announcement software |
|--|--|
| Maximum storage time per media gateway | Up to 20 minutes at 64Kbps uncompressed speech |

G700 Announcement software capacities*Continued*

| Area description | Avaya G700 announcement software |
|--|--|
| Concurrent Calls per Announcement | 1,000 |
| Announcements per media gateway | 256 |
| Maximum number of announcements in a configuration | 6,400 when using the S8700 Media Server as the primary controller (up to 250 media gateways each contributing 256 announcements) 1280 when using the S8300 Media Server as the primary controller (up to 50 media gateways each contributing 256 announcements) |

International Information

The S8300 Media Server is available in the following countries:

S8300-Supported Countries

| | | |
|-----------|-----------------|-------------|
| Argentina | Hong Kong | Peru |
| Australia | Ireland | Puerto Rico |
| Austria | Israel | Russia |
| Bahamas | Italy | Singapore |
| Belgium | Jamaica | Spain |
| Bermuda | Japan | Sweden |
| Bolivia | Korea | Switzerland |
| Brazil | Mexico | Taiwan |
| Canada | The Netherlands | Trinidad |

S8300-Supported Countries *Continued*

| | | |
|------------|-------------|----------------|
| Chile | New Zealand | Tobago |
| China | Nordics | United Kingdom |
| Colombia | Panama | United States |
| Costa Rica | Paraguay | Uruguay |
| France | Hong Kong | Venezuela |
| Germany | Ireland | |
| Guatemala | Israel | |

Avaya Media Modules

Avaya Media Modules convert the voice path of the traditional circuits such as analog trunk, T1/E1, and DCP to a TDM bus. The VoIP engine then converts the voice path from the TDM bus to a compressed or uncompressed and packetized VoIP on an Ethernet connection.

The Avaya Media Modules reside in the G700 Media Gateway and interact with the motherboard and backplane.

There are five Media Modules:

- Avaya MM710 T1/E1 Media Module
- Avaya MM711 Analog Media Module
- Avaya MM712 DCP Media Module
- Avaya MM720 BRI Media Module
- Avaya MM760 VoIP Media Module

Avaya™ MM710 T1/E1 Media Module

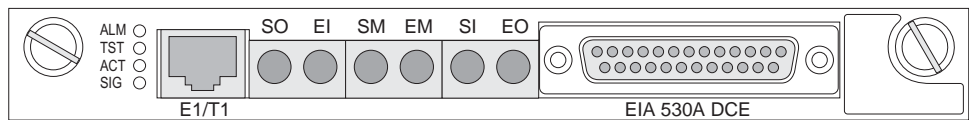
The MM710 terminates a T1 or E1 connection. The MM710 has built-in Channel Service Unit (CSU) so an external CSU is not necessary. The CSU is only used for the T1 circuit.

The MM710 highlights:

- ISDN PRI capability (23B + D or 30B + D).
- Trunk signaling to support US and International CO or tie trunks.
- Echo cancellation in either direction.

See the following figure for an example of the MM710.

Avaya™ MM710 T1/E1 Media Module



mmdc710 KLC 020402

For more information, see *Hardware Guide for Avaya Communication Manager*.

Avaya™ MM711 Analog Media Module

The MM711 provides analog trunk and telephone features and functionality.

The administrator can configure any of the eight ports of the MM711 as follows:

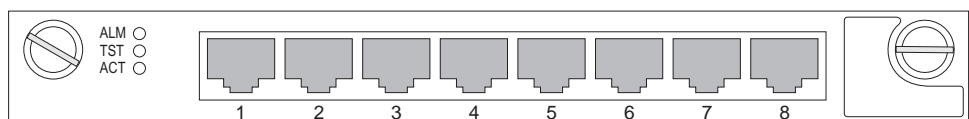
- Central office trunk, either loop start or ground start.
- Analog Direct Inward Dialing (DID) trunks, either wink start or immediate start.
- 2-wire analog Outgoing CAMA E911 trunks for connectivity to the PSTN.
- MF signaling is supported for CAMA ports.
- Analog, tip/ring devices such as single-line telephones with or without LED message waiting indication.

The MM711 also supports:

- Type 1 and Type 2 Caller ID.
- Ring voltage generation for a variety of international frequencies and cadences.

See the following figure for an example of the MM711.

Avaya™ MM711 Analog Media Module



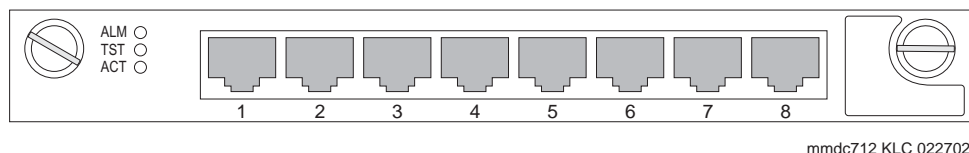
mmdc711 KLC 022702

For more information, see *Hardware Guide for Avaya Communication Manager*.

Avaya™ MM712 DCP Media Module

The MM712 allows you to connect up to eight two-wire Digital Communications Protocol (DCP) voice terminals.

See the following figure for an example of the MM712.

Avaya™ MM712 DCP Media Module

For more information, see *Hardware Guide for Avaya Communication Manager*.

Avaya™ MM720 BRI Media Module

The MM720 contains eight ports that interface to the central office at the ISDN T reference point. Information is communicated in two ways:

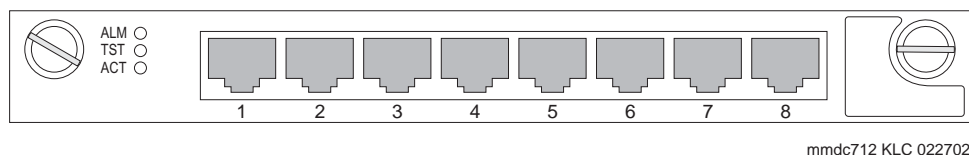
- Over two 64 Kb channels called B1 and B2
 - Can be circuit switched simultaneously
- Over a 16 Kb channel called the D channel
 - Used for signaling
 - Occupies one time slot for all eight D channels

The circuit switched connections have a u-law or A-law option for voice operation. The circuit switched connections operate as 64 Kb clear channels when in the data mode.

The MM720 does not support the following:

- BRI stations
- Combining both B channels together to form a 128 Kb channel

See the following figure for an example of the MM720.

Avaya™ MM720 BRI Media Module

For more information on the MM720 see *Hardware Guide for Avaya Communication Manager*.

Avaya™ MM760 VoIP Media Module

The MM760 is a clone of the motherboard VoIP engine. The MM760 provides an additional 64 VoIP channels with G.711 compression.

The capacity is 64 G.711 TDM/IP simultaneous calls, or 32 compression codec, G.729 or G.723, TDM/IP simultaneous calls. These call types can be mixed on the same resource; in other words, the simultaneous call capacity of the resource is 64 G.711 equivalent calls.

See the following figure for an example of a MM760.

Avaya™ MM760 VoIP Media Module



mmdc760 KLC 022702

For more information, see *Hardware Guide for Avaya Communication Manager*.