



AVAYA

AVAYA COMMUNICATION SERVER 1000E

The foundation of your unified communications experience

Avaya Communication Server 1000E is a full-featured IP telephony communications system that delivers the benefits of network convergence and collaborative communications, while providing all your employees with access to productivity-enhancing applications.

The Communication Server 1000E is a highly scalable communications platform that can evolve and grow with your business needs. It incorporates comprehensive resilience and security capabilities, helping ensure the protection of your network, its traffic and your users. The Communication Server 1000E consists of the following three key elements:

- **The Communication Server 1000E Call Server** provides reliable call and connection management service. It controls the system software and is capable of supporting up to 22,500 clients per server, as well as enabling geographically redundant configurations to help ensure business continuity.
- **The IP Signaling and Network Routing Servers** perform important IP call control services such as registration of IP terminals and IP endpoints, IP address translation and bandwidth control. They enable the streamlining of the network dialing plan and simplify the scalability and management of Communication Server 1000 networks.
- **Enterprise Media Gateways** support a complete range of analog and digital line and trunk interfaces across LAN or WAN infrastructures.

Supporting both Standard Availability (SA) and High Availability (HA) options, the Communication Server 1000E comes in multiple deployment configurations. These can include co-resident call and signaling server applications, TDM-only options for SA configurations, or integrated hardware to run call server and IP Signaling and Network Routing applications. Alternatively, you can choose commercial off the shelf (COTS) servers for running the IP Signaling and Network Routing applications with full support of all features and capabilities, including multiple redundancy configurations.

The Communication Server 1000E supports a broad portfolio of business-critical applications including unified messaging, web-based contact center applications, SIP-based multimedia services, integration with Microsoft Office Communications Server 2007 and over 750 world-class business telephony features designed to keep your enterprise competitive.

The Communication Server 1000E delivers the capabilities, feature richness and flexibility that enable a simple evolutionary path to the award-winning Avaya Aura® unified communications solution.

Communication Server 1000E Technical Specs

Call Server	
Call Server Capacity	22,500 IP users
Operating System	VxWorks V5.5.19, Red Hat Linux 5.1 for Co-Resident System
CPU	CPPM with Intel Pentium M 738
Memory	2GB DDR RAM
Mass Storage Media	40 GB Fixed Media Disk
Busy Hour Call Completions*	CPPM 950,000 * BHCC ratings are nominal only; actual capacity is dependent on site configuration and application features.
Maximum Number of IP Phones	22,500 IP / 11,250 SIP
Maximum Number of Digital Phones	5,000
Maximum Number of Analog Phones	5,000
Call Control APIs Supported	TAPI, SIP TR-87, AML
Software Features	Over 750 features including: Six Party Conference (62 Party Conference with Integrated Conference Bridge), Attendant Recall, Automatic Busy Redial, Call Duration Display Timer, Call Forward (nine types), Call Join, Call Park, Call Transfer, Call Waiting, Calling Line Identification, Calling Party Name Display, Charge Account Codes, Controlled Class of Service, DID Route Control, Flash, Hold, Hunting (six types), IP Call Recording, Malicious Call Trace, NAT Traversal, Network Virtual Office Login, Override Position Busy, Personal Directory, Redial List and Callers List, Remote Message Waiting, Ring Again, Trunk Route Optimization – Call Modification, Mobile extension, SIP Hospitality, Dynamic Call Redirect, Bandwidth Management, Active Call Fail-Over, Alternate Call Routing, PVQM, Automatic QoS.

Signaling Server	CPPM	HP DL360 G9
CPU	Intel Pentium M 738	Intel E5-2620v3 Hex Core CPU 2.4GHz
Memory	2 GB DDR Dram	16GB DDR4 RAM
Mass Storage Media	40GB Fixed Media Disk	2x 300GB GB HDU (Raid 1)
Operating System	Linux RedHat V5.1	Linux RedHat V5.1
IP Sets	5,000	5,000
H323 Virtual Trunks	1,200	1,200
SIP Virtual Trunks	1,800	1,800
Personal Directory, Recall List, Call List	22,500	22,500
H323 call per hr	40,000	80,000
SIP calls per hr	40,000	80,000
NRS calls per hr	100,000	200,000
Endpoints per NRS	5,000	5,000
Routing entries per NRS	20,000	20,000
SIP line gateway / SIP Clients	1,800	1,800

Trunking	
Supported Trunks	<ul style="list-style-type: none"> • IP: IP Virtual Trunks using IP Peer Networking over H.323 or SIP • Digital: DTI, ISDN-PRI • Analog: Loop and Ground Start CO, FX, WATS, two or four wire E&M, four wire DX, DID, TIE, RAN Paging
Network Signaling Protocols	H.323v4, MCDN, SIP, LDAP, QSig, QSS, in band and DPNSS

Phones & Clients	
IP Phones & Clients	<ul style="list-style-type: none"> • 1100 Series IP Deskphones, 1200 Series IP Deskphones, 2000 Series IP Deskphones • 1535 IP Deskphone • 2033 IP Conference Phone • 2050 IP Softphone for Windows PC and 2050 IP Softphone for Windows Mobile • 2200 Series WLAN Handsets, 6100 Series WLAN Handsets • IP Phone/Client Accessories: 1100 Series Expansion Module (18-button); 2000 Series Expansion Module (24-button); 1200 Series Expansion Modules (12/18Key); Enhanced USB Desktop Adapter and Mobile USB Headset Adapter for 2050 IP Softphone
IP Phone Powering Options	802.3af Power over Ethernet, Power over LAN Hub and local AC adapter
Digital Phones	3900 Series Digital Deskphones
Attendant Services Compatibility	2250 Attendant Console; PC Console Interface Unit (PCCIU) (The PCCIU supports PC-based Attendant software from various third-parties)

Applications	
IP Remote Services	<ul style="list-style-type: none"> • Enterprise Media Gateway 1000B: supports up to 400 survivable IP users in addition to Digital and Analog users. • Survivable Media Gateway: supports up to 22,500 IP users
Unified Messaging	<ul style="list-style-type: none"> • Avaya Aura Messaging – connects via SIP in flexible single or redundant deployments up to 300 ports • Microsoft Exchange 2007 Unified Messaging
Contact Center	<ul style="list-style-type: none"> • Avaya Aura Contact Center 7: configurable up to 10,000 agents with up to 3,350 actively logged on (configuration dependent). Busy-hour capacity: 66,000 calls per hour per application (configuration dependent).
Interactive Voice Response	<ul style="list-style-type: none"> • Media Processing Server 500: Scalable up to eight T1/E1 spans (192/240 ports) in a single system. Multiple systems can be networked together for additional capacity. • Media Processing Server 1000: A single MPS 1000 system starts at 4 digital spans and grows to 384 spans. 96 - 9216 T1 channels or 120 - 11520 E1 channels. 120 - 11520 VoIP channels. Mixed T1/VoIP or E1/VoIP configuration. An extremely compact solution, the MPS 1000 requires approximately 1/8 the floor space of a similarly configured VPS/ is system. A system supporting up to 1536 T1 or 1920 E1 channels can be deployed in a single cabinet.
Conferencing	<ul style="list-style-type: none"> • Multimedia Conferencing: A standalone SIP-based reservation-less audio/video conferencing solution for the CS 1000 and also interoperable with Microsoft OCS. Operates on COTS hardware. Single conference capacity to 300 participants, single server capacity to 800 ports and cluster capacity to 5,600 ports. Audio conference recording supported.
Multimedia	<ul style="list-style-type: none"> • The Converged Office solution for Communication Server 1000 integrates Avaya business-grade telephony with Microsoft Office Communications Server 2007 desktop collaboration and communication systems in an open-SIP, standards-based environment. This robust, enterprise-class architecture provides a winning solution that goes beyond the complexity of competitive middleware offerings.

Applications (cont.)	
Integrated Applications	<ul style="list-style-type: none"> Integrated Conference Bridge: Capacity per card – up to ten simultaneous three-party conference calls, a conference with up to 32 participants or any combination thereof. 24 and 32 port configurations and the dual card 42, 50 and 62 port configurations supported. Ten languages supported. Supports conference scheduling through Microsoft Outlook. Conferences can be scheduled or ad hoc (reservationless). Integrated Recorded Announcement: Small (five channel), Medium (six channel) and Large (ten Channel) configurations available supporting up to 20, 36 or 40 concurrent calls per card. With RAN Broadcast software option, number of concurrent calls equals 136, 152 and 242 per card, respectively. Eight minutes of voice or music memory standard; expandable up to five hours. Netscape Communicator 3.0 or later and Microsoft Internet Explorer 3.0 or later are supported. Integrated Call Director: Extensive find me/follow me capabilities for one number dialing. Remote dial access. Eight port/50 user expandable to 100 users, 16 port/100 user expandable to 150 users, 24 port/150 user expandable to 200 users and 32 port/200 user expandable to 300 users are the configurations available. Seventeen languages supported. Netscape Communicator 4.01 or later and Microsoft Internet Explorer 4.5 or later are supported. Hospitality Voice Services: Two, four and eight port configurations available. Two port configuration supports up to 200 rooms; Four port up to 500 rooms; Eight port up to 1000 rooms. Maximum of one IVS card per system. Netscape Communicator 4.01 or later and Microsoft Internet Explorer 4.5 or later are supported. Integrated Call Assistant: 5 to 32 port configurations available. Up to 32 ports supported on CS 1000 Release 4.0 or later. Netscape Communicator 4.01 or later and Microsoft Internet Explorer 4.5 or later are supported. Flash Card Option: Maximum of 16 voice greetings and menus, eight call screening tables, 1000 database name capacity, 14 predefined menus. American English supported. Hard Drive Option: Maximum of 32 voice greetings and menus, 32 call screening tables, 10,000 database name capacity, 22 predefined menus, 3000 personal verification recordings. Eight languages supported.
Wireless & Mobility	<p>Hardware: 4000 Series DECT Handsets (SIP)</p> <ul style="list-style-type: none"> 4710 and 4710E DECT Access Points Software: Minimum release of CS 1000 software supported is 5.5.
Management	<ul style="list-style-type: none"> As elements of Avaya Aura System Manager, the Unified Communications Management Solution (UCM) can support up to 1000 elements in a CS 1000 security domain. Supported elements include CS 1000 Element Manager (one per CS 1000), NRS Manager and Subscriber Manager.

System Capabilities	
Standards and Protocols Supported	802.1d, 802.1p, 801.1Q, 802.3, 802.3af, 802.11a/b/g, DCL, DHCP, DiffServ, DNS, FAX, FAX Group 3/4, G.711, G.726, G.728, G.729, G.729a, H. 225, H.245, H.323v4, IP Precedence, LDAP, SNMP, NAT, NTP, RSVP, RTP, RTCP, SIP, SSH, T.120, T.37, TCP/IP, Q.931, UDP/IP, VPIM, W RED and the following RFCs:2401, 2402, 2406, 2408, 2409, 2412, 2617, 2833, 2976, 3261, 3262, 3263, 3264, 3265, 3311, 3323, 3325, 3326.
Mechanical Standards	Call Servers and Media Gateways (including Expansion, PRI and MG 1010) comply with Bellcore GR-63-CORE. Signaling Server complies with Mil Std 810E Method 516.

System Redundancy and Survivability Options	
Signaling Server	<ul style="list-style-type: none"> Unistim TPS - Load balanced with active failover Network Redirect - Primary, Secondary, Failsafe Automatic Failover SIP Proxy - Primary, Alternate - Active/Active Failover SIP and H.323 Gateways - Automatic Trunk Failover
Call Server <ul style="list-style-type: none"> Call Processor(s) Geographic Redundancy Campus Redundancy 	Optionally Redundant Yes Yes
Media Gateways <ul style="list-style-type: none"> Survivable Media Gateway MG 1000E MG 1000E PRI MG 1000B (Branch) MG 1010 MG XPEC (Integrated IPE Module) 	Survivable Call Server Dual Homing Dual Homing Survivable Call Server Survivable Call Server with redundant power and cooling Dual Homing

Environmental	
Operating Environment	COTS Signaling Server: HP DL360 G9 Operating Ambient Temperature 41° to 104° F (5° to 40° C), Operating Altitude to 10,000 ft (3,050m), Operating Relative Humidity 8% to 90% (non-condensing).
	Call Server and Media Gateway, Media Gateway Expansion and PRI Ambient Temperature: Recommended: 15-30 degrees Celsius (59-86 degrees Fahrenheit) - Absolute 0-45 degrees Celsius (32- 113 degrees Fahrenheit) - Relative Humidity (%) without condensation: Recommended: 20%-55% - Absolute: 10%-95%.
	MG 1010 Ambient Temperature: Recommended: 0-45 degrees Celsius (32-113 Fahrenheit) for a minimum of 2 hours. The system shall operate in an ambient temperature of 40°C with a relative humidity of 95% (non-condensing) for a minimum of 3 days.
Input Voltage	COTS Signaling Server: AC 110-240V, 50/60 Hz, auto-sensing; DC N/A
	Call Server: AC 110-240V, 50/60 Hz; DC N/A
	Media Gateway: MG 1000 and Expansion AC 110-240V, 50/60 Hz; DC -48V; MG 1000E PRI AC 110-240V, 50/60 Hz; DC N/A; MG 1010 AC 110-240V, 50/60 Hz; DC N/A
Power Consumption	COTS Signaling Server (HP DL360 G9): Watts 500; Heat Output Maximum 1979 BTU/hr
	Call Server: Watts 300; Heat (BTU/hr) 1024
	Media Gateway: <ul style="list-style-type: none"> MG 1000 and Expansion: Watts 300; Heat (BTU/hr) 1024 MG 1000E PRI: Watts 80; Heat (BTU/hr) 342 MG 1010: Watts 630 maximum; Heat (BTU/hr) 2150 maximum
Dimensions and Weights	COTS Signaling Server (HP DL360 G9) 19" rack mount: 1U; Width 42.62 cm (16.78 in); Height 4.32 cm (1.70 in); Depth 75 cm (29.5 in); Weight (maximum) 13.45 kg (29.7 lb)
	Call Server: Width 17.4 in. (442 mm); Depth 15.5 in. (392 mm); Height 5.2 in. (132 mm); 19 Rack Mounting 3U; Weight 29 lb. (13.2 kg)
	Media Gateway: MG 1000 and Expansion; Width 17.2 in. (437 mm); Depth 12.8 in. (325 mm); Height 8.4 in. (213 mm); 19 Rack Mounting 5U; Weight 30 lb. (13.6 kg.)

About Avaya

Avaya is a leading, global provider of customer and team engagement solutions and services available in a variety of flexible on-premise and cloud deployment options. Avaya's fabric-based networking solutions help simplify and accelerate the deployment of business critical applications and services. For more information, please visit www.avaya.com.

© 2016 Avaya Inc. All Rights Reserved.

Avaya and the Avaya logo are trademarks of Avaya Inc. and are registered in the United States and other countries. All other trademarks identified by ®, TM, or SM are registered marks, trademarks, and service marks, respectively, of Avaya Inc. Other trademarks are the property of their respective owners.

12/16 • UC5164-04

