Avaya 9600 Series H.323 IP Deskphones Overview and Specifications

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Federal Communications Commission (FCC) Interference Statement

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 instructions, 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 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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

FCC/Industry Canada Radiation Exposure Statement

This device complies with the FCC's and Industry Canada's RF radiation exposure limits set forth for the general population (uncontrolled environment) and must not be co-located or operated in conjunction with any other antenna or transmitter.

Warning

The handset receiver contains magnetic devices that can attract small metallic objects. Care should be taken to avoid personal injury.

Power over Ethernet (PoE) warning

This equipment must be connected to PoE networks without routing to the outside plant.

根據國家通訊傳播委員會低功率電波輻射性電機管理辦法規定：

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前項合法通信，指依電信規定作業之無線電信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

VCCI-Class B statement:

This is a Class B product based on the standard of the VCCI Council. If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

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Chapter 1: Introduction

Purpose

This document describes tested product characteristics and capabilities, including product overview and feature descriptions, interoperability, performance specifications, security, and licensing requirements.

Intended audience

This document is intended for people who want to gain a high-level understanding of the product features, functions, capacities, and limitations.

Related resources

Documentation

See the following related documents.

Document number	Title	Use this document to:	Audience
Implementing			
16–300698	Administering Avaya IP Deskphone H.323, 9608, 9611G, 9621G, and 9641G	Administer the user options for the Avaya H.323, 9608, 9611G, 9621G, and 9641G IP deskphones.	Administrators
16–603603	Avaya deskphone H.323, 9608, 9611, 0621G, and 9641G Installation and Maintenance Guide	Install and implement the Avaya IP deskphone H.323, 9608, 9611, 0621G, and 9641G	Administrators and network engineers

Document number	Title	Use this document to:	Audience
Using			
16–603593	Using Avaya IP Deskphone H.323 9608 and 9611G	Refer to tasks that you can perform using the Avaya IP Deskphone H.323 9608 and 9611G deskphone	End users, and Administrators
16–603594	Using Avaya IP Deskphone H.323 921G and 9641G	Refer to tasks that you can perform using the Avaya IP Deskphone H.323 9621G and 9641G deskphone	End users and Administrators
16–603613	Using Avaya IP Deskphone H.323 9608, 9611G,921G and 9641G in the Call Center	Refer to tasks that you can perform in a call center using the Avaya IP Deskphone H.323 9608, 9611G, 9621G, and 9641G deskphone	End users and Administrators

Training

The following courses are available on the Avaya Learning website at www.avaya-learning.com. After logging in to the website, enter the course code or the course title in the **Search** field and click **Go** to search for the course.

Course code	Course title
ACIS-6006	ACIS - Avaya Communication Manager (5.2.1)
APSS-1300	APSS - Avaya Networking

Support

Visit the Avaya Support website at http://support.avaya.com for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

Warranty

Avaya provides a one-year limited warranty on the 9600 Series IP Deskphones. For more information on standard warranty terms and details regarding support, while under warranty, refer the support site at http://support.avaya.com/.

Chapter 2: 9600 Series IP deskphones overview

Overview

You can use Avaya 9600 H.323 Series IP deskphones in your enterprise IP networks and eliminate the need for a separate voice network in your environment.

The high audio quality, comparative cost, superior acoustics, and high performance delivered by the 9600 Series IP deskphones helps reduce the energy cost and the carbon footprint.

In a call center environment, the 9600 Series IP deskphones have features that you can use for enhancing agent productivity, handling greetings, monitoring calls in the queue, updating status, and quickly completing day to day tasks.

Avaya 9600 H.323 Series IP deskphones are compatible with the entire range of Avaya products such as Avaya Aura® Communication Manager, Avaya Aura® Session Manager, Avaya Call Assistant, Avaya Conferencing Standard Edition, and Avaya Aura® Messaging. You can use the 9600 Series IP deskphones to communicate seamlessly across applications, soft phones, and mobility solutions.

Table 1: Available deskphone models

Deskphone model	Features
9608	You can use up to eight lines and administer graphical labels centrally for the deskphone. The deskphone supports a traditional user interface and a graphical monochrome display. The deskphone includes graphical labels that you can administer centrally and thereby avoid use of paper labels.
9611G	The 9611G has a traditional user interface and a graphical color display. The deskphone includes graphical labels that you can administer centrally. You can use up to eight lines with the 9611 deskphone. The 9611 deskphone supports integrated Gigabit and a USB interface. The deskphone has a 3.5 inch graphical color display with a white backlight.

Deskphone model	Features
9621G	The 9621G IP deskphone delivers gigabit capability and touch screen functionality on a 4.3 inch color touch screen. Customers with a need for gigabit connectivity to the desktop prefer the 9621G deskphone.
9641G	The 9641G deskphone delivers advanced capabilities with 4.7 inch wide color touch screen, wideband speaker, USB interface, Bluetooth headset support, and gigabit connectivity to the desktop. Customers who require gigabit capability for the desktop and the option to add more advanced capabilities prefer the 9641 deskphone.

Feature description

Avaya 9600 H.323 Series IP deskphones have the following features:

- Monochrome and color high resolution screens that display context sensitive information, contextual menus, prompts, and instructions that are easy to read.
- Touch screens on select models that you can use to navigate through the applications for Weather, World Clock, My Pictures, WML Browser, and Favorites.
- Integrated LED buttons, available on traditional models 9608 and 9611, provide visual cues that enhance usability.
- Softkeys and scrolling menus on the display guide users through every process, simplifying applications such as call logs and company-wide corporate directories.
- Screen saver and background display images that you can customize.
- Adapter interfaces that accommodate button modules and dual headset adapters to provide flexibility and adaptability. You can use SBM24 and BM12 button modules that provide up to 24 and 12 system based Call Appearances/Feature buttons respectively for use with the deskphones.
- USB support with the 9611G and the 9641G deskphones. These deskphones support one USB device on the USB interface if you enable the USB power parameter through the settings file.
- Extension to cellular (EC500) feature that you can configure to reach your colleagues anywhere by remembering a single number.
- User interface on the deskphones that is consistent with the entire Avaya portfolio of solutions including desktop and mobile endpoints.

New in this release

Avaya 9600 Series H.323 IP deskphones Release 6.3 has the following enhancements and features.

Enhancement	Description
Single Sign on	To allow a PC user to control the login and locked status of a telephone from the PC. **Note:** Contact DevConnect for more information on obtaining the API and developing PC client applications.
Identity Certificate (SCEP) support	To perform secure backup of agent greetings.
Authentication using EAP-TLS	To authenticate the users using the EAP-TLS mode of secure authentication.
IP redirect	The IP redirect feature directs deskphones to download software from the nearest server on the network, thereby reducing download time.

Chapter 3: Interoperability

Call servers

Communication Manager

Refer the Compatibility Matrix for more information on interoperability of the 9600 Series H.323 IP deskphones with versions of Communication Manager.

Product compatibility

For the latest and most accurate compatibility information go to https://support.avaya.com/CompatibilityMatrix/Index.aspx.

Headsets compatible with the 9600 Series deskphones

Go to Avaya DevConnect Search for more information on headset vendors and the related application notes.

Type the name of an individual headset vendor in the **Search** box (e.g. Plantronics, Felitron etc.) and click **Go**. Expand the search results to view the relevant application note.

Chapter 4: Specifications

Power supply specifications

Power specifications

Avaya 9600 Series H.323 IP deskphones work on the standard Power over Ethernet (PoE) specification of 802.3af. The specification provides for up to 15.4 W of DC power that has a voltage of minimum 44 V DC and a current specification of 350 mA for each device.

Table 2: Power Consumption

Phone model	IEEE power classification	Typical power usage, conservation mode disabled.	Typical power usage, conservation mode enabled, backlight if any turned off.	Maximum power usage
9608	1	2.08	1.93	2.55
9611G	1	3.12	2.64	3.78
9621G	2	3.49	3.18	4.27
9641G	2	3.44	3.28	4.12

Table 3: Power specifications with button module attachments

Deskphone	9608	9611G	9621G	9641G
PoE Power support	The 9608 deskphone natively supports Power over Ethernet (802.3af) and has a PoE rating of Class 1 when you do not connect a SMB24 or 12 button x1 module to the deskphone.	The 9611 deskphone natively supports Power over Ethernet (802.3af) and a PoE rating of Class 1 when you do not connect a SMB24 or 12 button x1 module to the deskphone.	The 9621 deskphone natively supports Power over Ethernet (802.3af) and has a maximum PoE rating of Class II. The deskphone does not support the use of button modules.	The 9641 deskphone natively supports Power over Ethernet (802.3af), and has a maximum PoE rating of Class II when you connect a single button module, either the SBM24 or 12

Deskphone	9608	9611G	9621G	9641G
		With the addition of a button module, you can increase the PoE class by one power level i.e. PoE class II. With the addition of three button modules the PoE class does not exceed PoE Class II.		button x1 module. With the addition of button modules or the USB stick, you can increase the PoE class by one power level i.e. PoE class III.
Power Interface	PoE: IEEE	PoE: IEEE	PoE: IEEE	PoE: IEEE
Power class target	1,2	1,3	2	2,3
Power class switch	Yes	Yes	No	Yes

Port and switch connections

Connection specifications

Parameter	9608	9611G	9621G	9641G
USB 2.0 interface	No	Yes	No	Yes
Gigabit Ethernet switch	No	Yes	Yes	Yes
PC port	Yes	Yes	Yes	Yes
Button module	Yes	Yes	No	Yes
IEEE power switch	No	Yes	no	Yes
Headset jack	Yes	Yes	Yes	Yes
Ethernet interface	10/100 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
Secondary Ethernet interface	10/100 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps

Button modules

You can add up to three SBM24 button modules on the 9608, 9611G, and 9641G, IP deskphones. As of software Release 6.0, you can add up to three BM12 button modules to the 9608, 9611G, and/or 9641G.

Power specifications

Avaya 9600 Series H.323 IP deskphones work on the standard Power Over Ethernet (POE) specification of 802.3af. The specification provides for up to 15.4 W of DC power that has a voltage of minimum 44 V DC and a current specification of 350 mA for each device.

Table 4: Power Consumption

Phone model	IEEE power classification	Typical power usage, conservation mode disabled.	Typical power usage, conservation mode enabled, backlight if any turned off.	Maximum power usage
9608	1	2.08	1.93	2.55
9611G	1	3.12	2.64	3.78
9621G	2	3.49	3.18	4.27
9641G	2	3.44	3.28	4.12

Power specifications with button module attachments

Deskphone	9608	9611G	9621G	9641G
PPOE Power support	The 9608 deskphone natively supports Power over Ethernet (802.3af) and has a PoE rating of Class 1 when you do not connect a SMB24 or 12 button x1 module to the deskphone.	The 9611 deskphone natively supports Power over Ethernet (802.3af) and a PoE rating of Class 1 when you do not connect a SMB24 or 12 button x1 module to the deskphone. With the addition of a button module, you can increase the PoE class by one power level	The 9621 deskphone natively supports Power over Ethernet (802.3af) and has a maximum PoE rating of Class II. The deskphone does not support the use of button modules.	The 9641 deskphone natively supports Power over Ethernet (802.3af), and has a maximum PoE rating of Class II when you connect a single button module, either the SBM24 or 12 button x1 module. With the addition of button modules or the USB stick, you can increase the

Deskphone	9608	9611G	9621G	9641G
		i.e. PoE class II. With the addition of three button modules the PoE class does not exceed PoE Class II.		PoE class by one power level i.e. PoE class III.
Power Interface	PoE: IEEE	PoE: IEEE	PoE: IEEE	PoE: IEEE
Power class target	1,2	1,3	2	2,3
Power class switch	Yes	Yes	No	Yes

Traffic specifications

This topic lists the IP traffic capabilities of the 9600 Series H.323 IP deskphones and the types of operations that are supported.

IP line interface and supported traffic

The 9608 IP deskphone supports 10BASE-T and 100BASE-TX operation as specified by IEEE Std 802.3 [8.4-1,1a]. The 9608 IP deskphone supports Auto-negotiation of 10BASE-T / 100BASE-TX operation as specified in IEEE Std 802.3, clause 28 and Annex 28B.

The 9611G, 9621G and 9641G IP deskphones support 10BASE-T, 100BASE-TX and 1000BASE-T operation as specified by IEEE Std 802.3 [8.4-1,1a]. The 9611G, 9621G and 9641G IP deskphones support auto-negotiation of 10BASE-T/100BASE-TX/100BASE-T operation as specified in IEEE Std 802.3, clause 28 and Annex 28B

All 9600 Series IP deskphones that have an internal Ethernet switch support half-duplex or full-duplex operation and any speed that is 10/100 for non-gigabit phones, and 10/100/1000 on the gigabit phones on either interface.

All 9600 Series IP deskphones that have an internal Ethernet switch support the ability to independently disable auto-negotiation on the Ethernet line interface and on the secondary Ethernet interface. The deskphones support the ability to set either interface to operate at 10 Mbps, 100 Mbps, or 1000 Mbps for the gigabit phones in half-duplex or full-duplex mode.

All 9600 Series IP deskphones support the MAC frame structure as specified in IEEE Std 802.3, clause 3. Media access control is as specified in IEEE Std 802.3, clause 4.

All 9600 Series IP deskphones support collision backoff delay as specified in IEEE Std 802.3, clause 4.2.3.2.5.

All 9600 Series IP deskphones support auto MDI/MDI-X.

Chapter 5: Environmental specifications

Environmental specifications

Altitude and air pressure specifications

All Avaya IP 9600 Series IP deskphones function normally at altitudes from sea level to 10,000 feet. The deskphones can withstand a pressure of 15.2 to 9.4 psia.

Operating temperature specifications

All Avaya IP 9600 Series IP deskphones work in a temperature range from 40 degrees Fahrenheit to 120 degrees Fahrenheit. (4 to 49 degrees Celsius).

Storage environment specifications

Extreme temperature specifications: All Avaya IP 9600 Series IP deskphones work normally after being soaked for at least 6 hours each in a non-operational state at -40 degree Fahrenheit and any relative humidity, at 90 degree Fahrenheit and 90% relative humidity, and at 150 degrees Fahrenheit and 15% relative humidity. The deskphones can function normally after up to three hours of recovery time at ambient conditions following each stress.

Temperature and humidity specifications: All Avaya IP 9600 Series IP deskphones function normally after a recovery time of up a to three hours at ambient conditions when cycled through the following temperature and non-condensing humidity conditions three times: 30 minutes at 150 degree Fahrenheit and 15 percent relative humidity, followed by 30 minutes at 90 degrees Fahrenheit and 90 percent relative humidity, followed by 30 minutes at -40 degrees F and any convenient humidity.

Normal operating specification: All Avaya IP 9600 Series IP deskphones function normally in the environment where temperatures are between 40 degrees Fahrenheit and relative humidities are between 5 percent and 95 percent, except that above 84 degree Fahrenheit, the maximum relative humidity is limited to that corresponding to a specific (absolute) humidity of 168 grains of water vapor per pound (lbm) of dry air. For example, 34 percent relative humidity at 120 degrees Fahrenheit, assuming an atmospheric pressure of 14.7 psia. The deskphones are allowed up to 30 minutes to stabilize at each temperature tested.

Design for Environment Guidelines and specifications

All 9600 Series IP deskphones conform to the Design for Environment Guidelines and Requirements [8.1-5] as clarified below.

DFE Guidelines for Energy Efficient Products (Section 2): All 9600 Series IP deskphones do not require a cooling fan.

DFE Guidelines for Products Containing Batteries (Section 3): All 9600 Series IP deskphones do not contain batteries.

DFE Guidelines for Designing Plastic Parts (Section 4): All 9600 Series deskphone plastic parts are not coated (Section 4.4). Note: Section 4.4 of the Design for Environment Guidelines and Requirements specifies that plastic parts are not to be painted. However some deskphones might have been painted.

All 9600 Series IP deskphones housing and handset surfaces are textured (Section 4.5).

All 9600 Series deskphone plastic parts do not use resins containing:

- PVC (Section 4.7.1.2)
- Brominated flame retardants: polybrominated biphenyl, polybrominated biphenyl oxide (PBBO, also called polybrominated biphenyl ether (PBBE), polybrominated diphenyl oxide (PBDO) and polybrominated diphenyl ether (PBDE)), bromomethane and halothane (Sections 4.7.1.3, 4.9.1 and Appendix A)
- Halogenated flame retardants (Section 4.9.2)
- Heavy metal additives: lead, cadmium, chromium and mercury (Sections 4.7.1.4 and 4.9.3).
- All 9600 Series IP deskphone plastic parts weighing more than 25 grams are marked with ISO-compliant resin codes (Section 4.8). DFE Guidelines for Designing Printed Wiring Boards (Section 5):
- All 9600 Series IP deskphones do not contain lead (Section 5.3). All IP telephones do not use components containing mercury (Section 5.7.2).
- DFE Guideline for Waste Electrical and Electronic Equipment (WEEE) (Section 6.5.1). See also section [8.4-6].

Hardware dimensions

Deskphone dimensions

Deskphone	Height	Width	Depth
9608	230 mm	204 mm	35 mm without stand
9611G	230 mm	204 mm	35 mm without stand
9621G	230 mm	232 mm	35 mm without stand
9641G	230 mm	232 mm	35 mm without stand

Hardware and physical specifications

Parameter	9608	9611G	9621G	9641G
Handset Tx frequency	7 Khz	7 Khz	7 Khz	7 Khz

Parameter	9608	9611G	9621G	9641G
Handset Rx frequency	7 Khz	7 Khz	7 Khz	7 Khz
Handset cord length and amp; type	9-foot 4-conductor coiled	9-foot 4-conductor coiled	9-foot 4-conductor coiled	9-foot 4-conductor coiled
Handset weight	141 gms	141 gms	141 gms	141 gms
Permanently labeled feature buttons	Speaker (w/red LED) Headset (w/red LED) Mute (w/red LED) Volume (up/ down) Phone History (w/red LED) Contacts “A” Home Message Navigation: up, down left, right OK	Speaker (w/red LED) Headset (w/red LED) Mute (w/red LED) Volume (up/ down) Phone History (w/red LED) Contacts “A” Home Message Navigation: up, down left, right OK	Speaker (w/red LED) Headset (w/red LED) Mute (w/red LED) Volume (up/ down) Phone History (w/red LED) Contacts “A” Home Message (w/red LED) Forwarding (w/red LED)	Speaker (w/red LED) Headset (w/red LED) Mute (w/red LED) Volume (up/ down) Phone History (w/red LED) Contacts “A” Home Message (w/red LED) Forwarding (w/red LED)
Button Specs	Activation force = 100 to 160 grams, Travel distance = 1.1 to 1.3 millimeters, height = approximately 0.5 millimeter above the housing when fully depressed, A snap ratio of 0.35 +/- 0.1 or higher.	Activation force = 100 to 160 grams, Travel distance = 1.1 to 1.3 millimeters, height = approximately 0.5 millimeter above the housing when fully depressed, A snap ratio of 0.35 +/- 0.1 or higher.	Activation force = 100 to 160 grams, Travel distance = 1.1 to 1.3 millimeters, height = approximately 0.5 millimeter above the housing when fully depressed, A snap ratio of 0.35 +/- 0.1 or higher.	Activation force = 100 to 160 grams, Travel distance = 1.1 to 1.3 millimeters, height = approximately 0.5 millimeter above the housing when fully depressed, A snap ratio of 0.35 +/- 0.1 or higher.
Main display	181 x 120 pixel monochrome no grey levels	3.5 inch 320 x 240 pixel TFT 18 bit color	4.3 inch 480 x 272 pixel TFT 24 bit color	4.7 inch 480 x 272 pixel TFT 24 bit color
Display Backlight	White	Yes	Yes	Yes
Touch Screen	No	No	Resistive (4 wire)	Resistive (4 wire)

Parameter	9608	9611G	9621G	9641G
CA/Feature Buttons – main display (physical buttons)	8 with red and green LEDs each	8 with red and green LEDs each	No	No
Softkeys call control	4	4	No	No
Ethernet Signal range	100 meters (328 feet) on category 5e UTP (unshielded twisted pair) cable.	100 meters (328 feet) on category 5e UTP (unshielded twisted pair) cable.	100 meters (328 feet) on category 5e UTP (unshielded twisted pair) cable.	100 meters (328 feet) on category 5e UTP (unshielded twisted pair) cable.
Bluetooth	No	No	No	Yes
Handset	Wideband	Wideband	Wideband	Wideband
Hands-free	Narrowband	Narrowband	Wideband	Wideband
Microphone and amp type	1 omni-directional	1 omni-directional	1 omni-directional	1 omni-directional
PCB Chip	11170	11109	11109	11109
Reliability Rate in Technician Usage rate (the number of units used from repair stock per month per 100 units in the installed base)	Less than or equal to 0.1.	Less than or equal to 0.1.	Less than or equal to 0.1.	Less than or equal to 0.1.

Physical system protection specifications

External voltages, surges, and transient specifications

All Avaya 9600 Series IP deskphones function normally after being subjected to surges marked normal in the table below. All Avaya 9600 Series IP deskphones comply with appropriate safety requirements after being subjected to all surges in the following table. .Surges are specified below as either normal or FCC (Part 68 Rules). The peak voltage and peak current define a constant source resistance of the surge generator.

Table 5: High voltage surge table

TYPE	PEAK VOLTAGE (Volts)	PEAK CURRENT (Amps)	MAXIMUM RISE TIME (µ sec)	MAXIMUM DECAY TIME (µ sec)	NUMBER OF SURGES OF POLARITY EACH
P-2 FCC	2500	1000	2	10	10
P-4A Normal	6000	200	0.5	See Note A	12
T-1A Normal	6000	200	0.5	See Note A	12
NOTE A: 0.5 µsec - 100 kHz ringing wave shape; refer to IEEE-587 IEEE, Inc., IEEE Guide for Surge Voltages in Low-Voltage AC Power Circuits, IEEE Std 587-1980, January 30, 1981.					

Peak voltage applies with the source terminated in at least 10,000 Ohms. Peak current applies with the source terminated in a short circuit. Rise and decay times apply to both voltage and current waveforms terminated as indicated above, and are defined as follows: Rise Time is the interval between the 10 percent and 90 percent of peak points on the leading edge multiplied by 1.25.

Decay Time is the time interval between the 10 percent of peak point on the leading edge and the 50 percent of peak point on the trailing edge.

Electromagnetic compatibility specifications

Radiated Emissions: All 9600 Series IP deskphones meet the applicable FCC Rules Part 15 regulations for Class B devices. Radiated emissions from 9600 Series IP deskphones do not exceed the level of field strength specified in the following table for Class B devices.

Table 6: Maximum allowed radiated field strength

Freq	Class A		Class B
	Field strength in dbµV/m	Field strength in dbµV/m	
	At 10 metres	At 3 metres	At 3 metres
30 to 88	39	49	40
88 to 216	44	54	43
216 to 960	46	56	46
above 960	50	60	54

Radiated RF emission specification

All 9600 Series IP deskphones meet Class B radiated emissions limits EN55022:2006 as specified in the following table:

Table 7: Radiated Emission Limits for International Applications

Frequency	Class A Quasi-Peak Field Strength Limit (dBµV/m at 10 m)	Class B Quasi-Peak Field Strength Limit (dBµV/m at 10 m)
30 - 230	40	30
230 - 1000	47	37

Conducted RF emissions specifications (FCC)

All 9600 Series IP deskphones meet the applicable FCC Rules Part 15 regulations [2] for Class B devices. 9600 Series IP deskphones limit radio frequency voltage conducted back into the ac power lines to values below FCC Part 15 Class B levels.

Conducted RF emissions specifications (CE Mark)

All 9600 Series IP deskphones meet the following Class B conducted emissions limits for ac Mains and for telecommunication ports (EN55022:2006).

Table 8: Conducted Emissions Limits for International Applications on AC Mains

Freq (MHz)	Class A Emission Limits (dbµV)		Class B Emission Limits (dbµV)	
	Quasi-Peak	Average	Quasi-Peak	Average
0.15 – 0.5	79	66	66 - 56	56 - 46
0.5 - 5	73	60	56	46
5 - 30	73	60	60	50

Table 9: Conducted Common Mode Emissions Limits for International Applicationson Telecommunication Ports for Class B Equipment

Freq (MHz)	Voltage limits (dbµV)		Voltage limits (dbµA)	
	Quasi-Peak	Average	Quasi-Peak	Average
0.15 – 0.5	84 - 74	74 - 64	40 - 30	30 - 20
0.5 - 30	74	64	30	20
Where a range of limits is specified, the limits decrease linearly with the logarithm of the frequency. The above limits are given in terms of the current measured into a terminating impedance stabilization network (ISN) under the assumption that the 150-Ohm impedance will be realized throughout the test range. The tighter (lower) limit applies at the transition frequency.				

Electrostatic Discharge (ESD) Immunity – ESD Performance under Normal Operation for CE Mark:

All 9600 Series IP deskphones comply with the ESD immunity requirements in EN 55024:1998, and Amendment A1:2001 to EN 55024:1998 and Amendment A2:2003 to EN 55024:1998

Radiated RF Electromagnetic Field Immunity

All 9600 Series IP deskphones comply with the conducted RF Field immunity requirements in EN 55024:1998, and Amendment A1:2001 to EN 55024:1998 and Amendment A2:2003 to EN 55024:1998, including the particular test conditions and particular performance criteria in Appendix A of that standard.

EFT Immunity for CE Mark

All 9600 Series IP deskphones comply with the EFT immunity requirements in EN 55024:1998, and Amendment A1:2001 to EN 55024:1998 and Amendment A2:2003 to EN 55024:1998.

Surge Immunity for CE Mark

All 9600 Series IP deskphones comply with the Surge immunity requirements in EN 55024:1998, and Amendment A1:2001 to EN 55024:1998 and Amendment A2:2003 to EN 55024:1998.

Power Frequency Magnetic Field Immunity for CE Mark

All 9600 Series IP deskphones comply with the Power Frequency Magnetic Field immunity requirements in EN 55024:1998, and Amendment A1:2001 to EN 55024:1998 and Amendment A2:2003 to EN 55024:1998, including the particular test conditions and particular performance criteria in Appendix B of that standard.

AC Voltage Dips and Interruptions Immunity for CE Mark

All 9600 Series IP deskphones comply with the ac Voltage Dips and Interruptions immunity requirements in EN 55024:1998, and Amendment A1:2001 to EN 55024:1998 and Amendment A2:2003 to EN 55024:1998.

Safety and Protection Platform specifications

All 9600 Series IP deskphones conform to the requirements of IEC-60950-1 [8.4-4a], EN60950-1 [8.4-4b] and UL-60950-1 [8.4-4c].

All 9600 Series IP deskphones are listed with c/UL to the requirements of UL 60950-1.

All 9600 Series IP deskphones are certified to the requirements of IEC 60950-1 according to the procedure of the IECEE CB Scheme.

Regulatory standards

All 9600 Series IP deskphones conform to the following regulatory requirements.

Table 10: Telecom specifications

US FCC (Part 15, including Class B EMC, and Part 68 (HAC) hearing-aid compatibility)
European Union CE (including Class B EMC and CB Scheme report with all National Differences) EC EN55022: 2006
ETSI hearing-aid compatibility

CSA / UL (Canadian and USA Safety)
VCCI (Japanese Voluntary Control Council for Interference by Information Technology Equipment)
CB Test for TUV
JATE (Japan Approvals Institute for Telecommunications Equipment)
NOM (Normas Oficiales Mexicanas –safety)
RoHS/lead free compliance
ANATEL (label with registration number and EAN number/bar code for Brazil)
CCC Mark for sale in the People’s Republic of China
China RoHS
Korea (only MIC Information device test certificate, the Telecommunication will be done by Avaya)
AUS C-Tick
Russian PCT Type Approval
WEEE compliance with associated icon: 
FCC Part 15 Class B and EU Class B EMC requirements
ACP systems (of which the IP telephones are a part) are registered for FCC Part 68 compliance.
Dialpad layout- ITU-T Recommendation E.161 [8.6-1]
HAC on handset “HAC” is included on the phone per FCC Part 68.300 (c) to indicate hearing-aid compatibility

Chapter 6: Security

Security specifications

All 9600 Series IP deskphones have the following security features:

- All 9600 Series IP deskphones that have WML Web applications support Transport Layer Security (TLS). The deskphone uses TLS to establish a secure connection to a HTTP server, in which the upgrade and settings file can reside.
- All 9600 Series IP deskphones support HTTP authentication for backup and restore operations.
- All 9600 Series IP deskphones are compliant with IETF RFC 1948 *Defending Against Sequence Number Attacks*, *May 1996, 14 by S. Bellovin* from Release 1.5 onwards.

Secure Shell support

Secure Shell (SSH) protocol is a tool that the Avaya Services organization use to remotely connect to IP deskphones to monitor, diagnose, or debug deskphone performance. Release 6.2 supports only the SSHv2 version.

TLS

All 9600 Series deskphones support the use of TLS to enhance the security of your HTTP environment The deskphones support HTTP/HTTPS authentication for backup and restore operations.

When you use TLS, the call server uses TLS_RSA_WITH_AES_128_CBC_SHA cipher suite for authentication.

VPN

You can use the 9600 Series deskphones on a VPN if your administrator has configured the VPN option for your deskphones. A VPN uses a high-speed connection to the Internet and then to the VPN-administered solution in the enterprise network. VPNs provide a significant improvement of the communications capabilities of SOHO users. 9600 Series IP Telephone Release 3.1 and later provide the capability to implement a VPN in Enterprise networks with third-party devices.

EAP-TLS

All 9600 Series deskphones support the use of EAP-TLS mode of authentication. The call server supports EAP-TLS as specified in RFC 2716 if an identity certificate is present in the deskphone.

Simple Certificate Enrollment Protocol (SCEP)

All 9600 Series deskphones support the use of Simple Certificate Enrollment Protocol (SCEP) to provide an identity certificate for use with certificate-based VPN authentication methods. The 802.1x EAP-TLS method also uses the identity certificate for authentication. When you use TLS with HTTPS, you can use the identity certificate to authenticate the deskphone and save the agent greetings or perform a backup or restore. The 9600 Series IP deskphones support Media Encryption (SRTP) and use built-in Avaya certificates for trust management. You can apply SCEP to your VPN operation or to standard enterprise network operations.

802.1X Supplicant operation

All 9600 IP deskphones support Supplicant operation and Extensible Authentication Protocol (EAP), but for software Release 6.1 and earlier, only with the MD5-Challenge authentication method.

Denial of Service attacks

All 9600 Series IP deskphones are resilient to denial of service events. Software for all IP deskphones does not reset in response to, and will automatically resume normal operation without user intervention after, the denial-of-service attacks. Threshold value of this attack is 1.5 Mbps.

Virus malware related attacks

Deskphones are delivered free from known viruses, worms, and other malware. Products are built in an environment that is free from known viruses, worms, and other malware. The "gold" version of a product is built on a machine that is known to be clean. For example, built from a known source or the operating system version is taken from the manufacturer's source.

JITC specification

For products sold into the US Government sector, Joint Interoperability Test Command Certification (JITC) is required. Each product must adhere to the respective standard specified in the following URL based on the operating system (for Linux platforms, the “UNIX Standard” is required) and the capabilities of the product.

http://iase.disa.mil/stigs/checklist/index.html

Verification of JITC functionality includes execution of the scripts specified on the following URL for the respective operating system on the product.

http://iase.disa.mil/stigs/SRR/index.html

Note:

JITC is a U.S government mandatory requirement.

Port Utilization

You can view the latest Port utilization matrix for the Avaya 9600 Series H.323 deskphones at the link: Port matrix

Chapter 7: Licensing information

The Right to Use the software that runs on an Avaya 9600 Series H.323 IP deskphone is included with the purchase of the deskphone.

The Right to Connect a 9600 Series IP deskphone to Communication Manager, Session Manager or IP Office is controlled by simultaneous user licenses enforced by the server.

Licenses can be purchased in bulk or as required.

For more information on the software license terms, refer the link Policies & Legal.

Glossary

802.1X	An authentication method for a protocol requiring a network device to authenticate with a back-end Authentication Server before gaining network access.
Bluetooth	A standardized technology that is used to create temporary (ad-hoc) short-range wireless communication systems. The Bluetooth wireless personal area networks (WPANs) connect personal accessories, such as headsets, keyboards, and portable devices, to communication equipment and networks.
Communication Manager	A key component of Avaya Aura®. It delivers rich voice and video capabilities and provides a resilient, distributed network for media gateways and analog, digital, and IP-based communication devices. It includes advanced mobility features, built-in conference calling, contact center applications and E911 capabilities.
Duplex	The transmission of voice and/or data signals for simultaneous two-way communication.
EAP-TLS	Extensible Authentication Protocol, or EAP, is an authentication framework frequently used in wireless networks and Point-to-Point connections. EAP is defined in RFC 3748. EAP-Transport Layer Security (EAP-TLS), defined in RFC 5216, is an IETF open standard protocol, with strong security used by wireless vendors. EAP-TLS uses PKI to secure communication to a RADIUS authentication server or another type of authentication server.
EC500	A feature that bridges calls received by the Avaya Aura® Communication Manager server to any mobile phone, regardless of location or wireless service provider.
H.323	A TCP/IP-based protocol for VoIP signaling.
IEEE	The Institute of Electrical and Electronics Engineers (IEEE, read I-Triple-E) is a professional association headquartered in New York City that is dedicated to advancing technological innovation and excellence. IEEE provides learning opportunities within the engineering sciences, research, and technology.
HAC	Hearing Aid Compatibility, an Federal Communications Commission (FCC), part of the United States government Part 68 standard for handset equalization for interoperability with t-coil enabled hearing aid devices.

Hardware	An Avaya machine or component, including object code in the form of firmware, that is applied to components only in a manufacturing facility or repair depot.
PoE Power over Ethernet	Power over Ethernet or PoE describes any of several standardized or ad-hoc systems which pass electrical power along with data on Ethernet cabling. This allows a single cable to provide both data connection and electrical power to devices such as wireless access points or IP cameras.
SCEP	Simple Certificate Enrollment Protocol, used to obtain a unique digital certificate.
SSH	Secure Shell (SSH) is a network protocol for secure data communication, remote shell services or command execution and other secure network services between two networked computers that it connects through a secure channel over an insecure network. For example, a server running an SSH server program and a client running an SSH client program.
TLS	Transport Layer Security, an enhancement of Secure Sockets Layer (SSL). TLS is compatible with SSL 3.0 and allows for privacy and data integrity between two communicating applications.
VPN	Virtual Private Network, a private network constructed across a public network such as the Internet. A VPN can be made secure, even though the network uses using existing Internet connections to carry data communication. Security measures involve encrypting data before sending data across the Internet and decrypting the data at the other end. To add an additional level of security, you can encrypt the originating and receiving network address.

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