9600 Series IP Deskphones Overview and Specifications

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Note

Using a cell, mobile, or GSM phone, or a two-way radio in close proximity to an Avaya IP telephone might cause interference.

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Regulatory Statements

Australia Statements

Handset Magnets Statement

Danger:

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

Industry Canada (IC) Statements

RSS Standards Statement

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. L'appareil ne doit pas produire de brouillage, et
2. L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Radio Transmitter Statement

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

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.

Radiation Exposure Statement

This device complies with 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.

Cet appareil est conforme aux limites d'exposition aux rayonnements RF d'Industrie Canada énoncés dans la population générale (environnement non contrôlé) et ne doivent pas être co-situés ou exploités conjointement avec une autre antenne ou émetteur.

Japan Statements

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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取扱説明書に従って正しい取り扱いをして下さい。 VCCI－B

Denan Power Cord Statement

Danger:

Please be careful of the following while installing the equipment:

- Please only use the connecting cables, power cord, and AC adapters shipped with the equipment or specified by Avaya to be used with the equipment. If you use any other equipment, it may cause failures, malfunctioning, or fire.
- Power cords shipped with this equipment must not be used with any other equipment. In case the above guidelines are not followed, it may lead to death or severe injury.

警告

本製品を安全にご使用頂くため、以下のことにご注意ください。

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México Statement

The operation of this equipment is subject to the following two conditions:

1. It is possible that this equipment or device may not cause harmful interference, and
2. This equipment or device must accept any interference, including interference that may cause undesired operation.

La operación de este equipo está sujeta a las siguientes dos condiciones:

1. Es posible que este equipo o dispositivo no cause interferencia perjudicial y
2. Este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

Power over Ethernet (PoE) Statement

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

Taiwan Low Power Radio Waves Radiated Devices Statement

802.11b/802.11g/BT:

Article 12 — Without permission granted by the NCC, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristic as well as performance to an approved low power radio-frequency devices.

Article 14 — The low power radio-frequency devices shall not influence aircraft security and interfere legal communications; If found, the user shall cease operating immediately until no interference is achieved. The said legal communications means radio communications is operated in compliance with the Telecommunications Act. The low power radio-frequency devices must be susceptible with the interference from legal communications or ISM radio wave radiated devices.

802.11b/802.11g/BT 警語：

第十二條→經型式認證合格之低功率射頻電機，非經許可，公司，商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

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U.S. Federal Communications Commission (FCC) Statements

Compliance Statement

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To comply with the FCC RF exposure compliance requirements, this device and its antenna must not be co-located or operating to conjunction with any other antenna or transmitter.

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 interferences that may cause undesired operation.

Class B Part 15 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 designated to provide reasonable protection against harmful interferences 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 interferences 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.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment . This equipment should be installed and operated with minimum distance of 8 in or 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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Contents

Chapter 1: Introduction

Purpose

This document describes tested product characteristics and capabilities, including 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.

Title	Use this document to:	Audience
Implementing — H.323		
Avaya deskphone H.323, 9608, 9611, 9621G, and 9641G Installation and Maintenance Guide	See install and upgrade procedures for 9601, 9608, 9611G, 9621G, and 9641G IP Deskphones in an H.323 environment.	Administrators and network engineers
Implementing — SIP		
Installing and Maintaining Avaya 9601/9608/9608G/9611G/9621G/ 9641G IP Deskphones SIP	See install and upgrade procedures for 9601, 9608, 9611G, 9621G, and 9641G IP Deskphones in a SIP environment.	Administrators and network engineers
Using — H.323		

Table continues…

Title	Use this document to:	Audience
Using Avaya IP Deskphone H.323 9608 and 9611G	See tasks that you can perform using the Avaya IP Deskphone H.323 9608 and 9611G deskphone.	Users and administrators
Using Avaya IP Deskphone H.323 9621G and 9641G	See tasks that you can perform using the Avaya IP Deskphone H.323 9621G and 9641G deskphone.	Users and administrators
Using Avaya IP Deskphone H.323 9608, 9611G,921G and 9641G in the Call Center	See tasks that you can perform in a call center using the Avaya IP Deskphone H.323 9608, 9611G, 9621G, and 9641G deskphone.	Users and administrators
Administering Avaya IP Deskphone H.323, 9608, 9611G, 9621G, and 9641G	Administer configurations and settings for 9608, 9611G, 9621G, and 9641G IP deskphones in an H.323 environment.	Administrators
Using — SIP		
Using Avaya 9601 IP Deskphone SIP	See the capabilities of a 9601 IP SIP deskphone and to learn about how various features work.	Users and administrators
Using Avaya 9608/9608G/9611G IP Deskphones SIP	See the capabilities of 9608 and 9611G IP SIP deskphones and to learn about how various features work.	Users and administrators
Using Avaya 9621G/9641G IP Deskphones SIP	See the capabilities of 9621G and 9641G IP SIP deskphones and to learn about how various features work.	Users and administrators
Using Avaya 9608/9608G/9611G IP Deskphones SIP for Call Center Agents	See the capabilities of 9608 and 9611G IP SIP deskphones in a call center set up and to learn about how various features work.	Call center agents and administrators
Using Avaya 9621G/9641G IP Deskphones SIP for Call Center Agents	See the capabilities of 9621G and 9641G IP SIP deskphones in a call center set up and to learn about how various features work.	Call center agents and administrators
Avaya 9601 IP Deskphones SIP Quick Reference	See frequently used tasks.	Users and administrators
Avaya 9608/9608G/9611G IP Deskphones SIP Quick Reference	See frequently used tasks.	Users and administrators
Avaya 9621G/9641G IP Deskphones SIP Quick Reference	See frequently used tasks.	Users and administrators
Avaya 9608/9608G/9611G/9621G/ 9641G IP Deskphones SIP Quick Reference for Call Center Agents	See frequently used tasks.	Call center agents and administrators
Administering 9601/9608/9608G/ 9611G/9621G/9641G IP Deskphones SIP	Administer configurations and settings for 9608, 9611G, 9621G, and 9641G IP deskphones in a SIP environment.	Administrators

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Chapter 2: 9600 Series IP Deskphones overview

9600 Series IP Deskphones is a series of desk handset devices that you can use for unified communication. The series leverages the enterprise IP network and eliminates the need for a separate voice network.

Avaya 9600 Series IP Deskphones offers high audio quality and customizability with low power requirements. With the high-performance models of this series that can operate in both the H.323 and the Session Initiation Protocol (SIP) environment, you can:

- Make conference calls more efficient and enhance customer interactions with high-quality audio.
- Gain access to information quickly through easy-to-read and high-resolution displays.
- Speed completion of common telephony tasks by using prompts on touch screens.
- Improve productivity with context-sensitive graphical interfaces that enhance call control and call management.
- Create a survivable, scalable infrastructure that delivers reliable performance and flexible growth as business needs change.
- Increase performance by deploying Gigabit Ethernet within your infrastructure.
- Reduce energy costs using efficient Power-over-Ethernet (PoE) including sleep mode which lowers energy consumption dramatically.

The 9600 Series IP Deskphones works with the Avaya Aura® environment to provide a flexible architecture that works with your investments and accommodates growth as your business needs change.

Related Links

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New in this release on page 13
Feature comparison of H.323-based and SIP-based models on page 14

9600 Series IP Deskphones models

Deskphone model	Description
9601	The 9601 deskphone is SIP-only phone that provides a four-row monochrome display and two lines with dual red and green LEDs. The phone has a built in 10/100 Ethernet switch with a port for your personal computer or a laptop.
9608/9608G	You can use up to eight lines for the deskphone. The deskphone supports a traditional user interface and a graphical monochrome display. The 9608 has a built in 10/100 Ethernet switch, and the 9608G has an integrated Gigabit.
9611G	The 9611G has a traditional user interface and a graphical color display. You can use up to eight lines with the 9611G deskphone. The 9611G deskphone has an integrated Gigabit and a USB interface. The deskphone has a graphical color display with a white backlight.
9621G	The 9621G IP deskphone provides gigabit capability and touch screen functionality. Customers with a need for gigabit connectivity to the desktop prefer the 9621G deskphone.
9641G/9641GS	The 9641G/9641GS deskphone provides advanced capabilities with a color touch screen, wideband speaker, USB interface, Bluetooth® enabled 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 9641G/9641GS deskphone.

Related Links

[9600 Series IP Deskphones overview](#) on page 10

Feature description

9600 Series IP Deskphones offers the following salient features:

- Easy to use interface
- Support for diverse users
- Deskphone customization
- Contact center models
- Support for Gigabit Ethernet
- Boost employee productivity

Easy to use interface

Avaya 9600 Series IP Deskphones has:

- Clear and intuitive user interface.
- 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.
- High resolution graphical displays.
- Integrated LED buttons that are available on traditional models 9601, 9608, and 9611 provide visual cues that enhance usability.
- 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 or Feature buttons.
- USB support with the H.323–based 9611G and 9641G models. These models support one USB device on the USB interface if you enable the USB power parameter through the settings file.

Support for diverse users

9600 Series IP Deskphones meets the need of the following user types.

User type	Description
Walkup users	People who visit your company, such as customers or suppliers. The 9601 model is ideal for these users.
Everyday users	People who use a phone as one of many communications tools – along with IM, email, or PDA. The 9608, 9608G, 9611G, and 9621G models meet their needs.
Essential users	People who rely on real-time voice communication and make use of many advanced phone applications. The 9611 and 9621G models meet their needs.
Navigators	People who are on the phone throughout the day because they handle calls for others, such as receptionists and executive assistants. The 9641G model is ideal for these users.

Deskphone customization

You can customize 9600 Series IP Deskphones through:

- Custom logos that enhances corporate identity and branding.
- Screen savers and background display images.

Contact center models

Contact center versions of the 9608, 9608G, 9611G, 9621G. and 9641G models provides a range of features for enhancing agent productivity, such as handling greetings, monitoring calls in the queue, service observing for remote monitoring, updating status, and quickly completing many other day-to-day tasks. You can add a dual headset adapter to the 9608, 9608G, 9611G, and 9641G models so that you an use two headsets simultaneously. You can use a contact center faceplate on the 9641G model that eliminates the handset cradle.

Support for Gigabit Ethernet

Gigabit Ethernet helps ensure compatibility with your current network and leverages existing bandwidth efficiently. Gigabit Ethernet handles data intensive traffic to co-located computers for high performance that facilitates the demands of future services and applications.

Boost employee productivity

To help users, 9600 Series IP Deskphones provides:

- Collaboration features, such as conference calls, instant messaging for only SIP-based phones, and Web applications.
- Increased call control and call management with intuitive interface and context sensitive screens. Touch screen options provide easy-to-manage messages and quick access to key applications such as call logs and phone book.
- Calendar integration for only SIP-based phones through which phones can display appointments and call into conference calls with a single button press.
- Presence integration for only SIP-based phones through which phones can display presence status of other users in the phone contact list. For example, whether the other user is on a call or in a do-not-disturb mode.
- Easy-to-use critical functions, such as call transferring, call forwarding, and conference calls.

New in this release

General enhancements

- Added support for Bluetooth® enabled headsets on the 9641G and 9641GS IP Deskphones.
- Added SLA Mon™. This feature was introduced for concurrency with H.323.

Security enhancements

- Added support for 256-bit Advanced Encryption Standard (AES-256) media encryption.

- Added support for secure call indicator provided by Avaya Aura® Platform 7.0.

Localization and user interface

- Added French and Russian keyboards on the 9621G, 9641G, 9641GS IP Deskphones.
- Added Language Localization Tool. Language localization tool is a MS® Excel file that is used to create localized language files.

Administrative features

- Added Service Observing to the Call Center Elite features. Supervisors can use this feature to remotely monitor and assist call center agents.
- Added support for RTCP-XR. This feature can be used to generate extended QoS statistics reports.

Related Links

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Feature comparison of H.323-based and SIP-based models

Two major protocols that handle Voice over IP (VoIP) signaling for 9600 Series IP Deskphones are SIP and H.323. The two protocols provide connection control and call progress signaling, but in very different ways. You can use these protocols simultaneously over the same network. The 9600 Series IP Deskphones models do not support both protocols at the same time. Neither protocol is necessarily superior, but each offers some unique advantages.

Feature	H.323-based models	SIP-based models
Additional required servers	None	Use the following servers: • SIP Proxy server to control SIP signalling. • Network Time server to control time-related parameters. • Presence server to track presence information of contacts added in the contacts list.
Backup and restore	Use HTTP to store backup files.	Use the Personal Profile Manager (PPM) services for backup and restore.
Network Address Translation (NAT)	Support	Do not support
Settings file and system parameters	Same as used by SIP models	Same as used by H.323. However, there are number of SIP-specific parameters

Table continues…

Feature	H.323-based models	SIP-based models
		used only by SIP-based models.
Language Support	Support the following languages: • Arabic • Chinese • Dutch • English • French • German • Hebrew • Italian • Japanese • Korean • Portuguese • Russian • Spanish • Turkish • Polish	Support the following languages: • Arabic • Simplified Chinese • Dutch • English • Parisian French • German • Hebrew • Italian • Japanese • Korean • Brazilian Portuguese • Russian • Latin American Spanish • Canadian French • Castilian Spanish
Resource ReSerVation Protocol (RSVP)	Support	Do not support
Quality of Service (QoS)	Use Avaya Aura® Communication Manager to set QoS.	Use parameters, such as L2QAUD, L2QSIG, DSCPAUD, and DSCPSIG to set QoS.
Presence	Do not support	Support
Integration with Microsoft Exchange and calender	Do not support	Support
Support of remote workers	Through Virtual Private Network (VPN)	Through Avaya SBCE (Session Border Controller for Enterprise)
Integrated Bluetooth on 9641G and 9641GS	Support	Support

Related Links

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Chapter 3: Interoperability

Product compatibility

For the latest and most accurate product compatibility information of 9600 Series IP Deskphones, see Product Compatibility Matrix.

For the latest and most accurate compatibility information of SIP-based 9600 Series IP Deskphones with headsets, see the document *Avaya one-X® 96X1 Series IP Deskphone Headset Profiles* at the Avaya Support website.

Chapter 4: Performance specifications

Traffic

9600 Series IP Deskphones supports operations that IEEE 802.3 standards specify. The following table lists the standards and the models that support them.

Standard	9601	9608 9608G	9611G	9621G	9641G	9641 GS
10BASE-T with autonegotiation	Yes	Yes	Yes	Yes	Yes	Yes
100BASE-TX with autonegotiation	Yes	Yes	Yes	Yes	Yes	Yes
1000BASE-T with autonegotiation	No	9608: No 9608G: Yes	Yes	Yes	Yes	Yes
Internal Ethernet switch that support half-duplex or full-duplex at the speed of 10 Mbps or 100 Mbps for non-gigabit phones and 10 Mbps, 100 Mbps, or 1000 Mbps for gigabit phones on either interface	Yes	Yes	Yes	Yes	Yes	Yes
Media Access Control (MAC) frame structure	Yes	Yes	Yes	Yes	Yes	Yes
Collision backoff delay	Yes	Yes	Yes	Yes	Yes	Yes
Auto MDI/MDI-X	Yes	Yes	Yes	Yes	Yes	Yes

Power

9600 Series IP Deskphones supports:

- Local powering, that is, by plugging the power cord into the power source.
- Power over Ethernet (PoE) or LAN-based powering as per IEEE 802.3af specification.

The IEEE 802.3af standard specifies 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. The following table provides the details of power consumption for each model.

Standard	9601	9608 9608G	9611G	9621G	9641G	9641GS
IEEE power classification	1	1	1	2	2	1: When the switch is in the low position. 3: When the switch is in the high position.
Power consumption when conservation mode is disabled (watts)	1.73	2.08	3.12	3.49	3.44	2.40
Power usage when conservation mode is enabled and backlight is turned off (watts)	1.73	1.93	2.64	3.18	3.28	3.55
Maximum power consumption (watts)	2.02	2.55	3.78	4.27	4.12	4.50
Power class target when button module is attached	Does not support button module	1,2	1,3	Does not support button module	2,3	2,3
Power class switch to change power class when you attach button module	No	Yes	Yes	No	Yes	Yes

Port and switch

9600 Series IP Deskphones supports the following ports and switches.

Port and switch	9601	9608 9608G	9611G	9621G	9641G	9641GS
USB 2.0	No	No	Yes	No	Yes	Yes
PC port	Yes	Yes	Yes	Yes	Yes	Yes
Headset jack	Yes	Yes	Yes	Yes	Yes	Yes
Button module interface	No	Yes	Yes	No	Yes	Yes
Adapter interface	No	No	No	No	No	No

Table continues…

Port and switch	9601	9608 9608G	9611G	9621G	9641G	9641GS
Ethernet interface	10/100 Mbps	9608: 10/100 Mbps 9608G: 10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
Secondary Ethernet interface	10/100 Mbps	9608: 10/100 Mbps 9608G: 10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
IEEE power switch	No	No	Yes	No	Yes	Yes

Software

9600 Series IP Deskphones supports the following software.

Software	9601	9608 9608G	9611G	9621G	9641G	9641GS
Call control protocol	SIP	SIP and H.323	SIP and H.323	SIP and H.323	SIP and H.323	SIP and H.323
Codec	• G.711 u/a law • G.722 • G.726 • G.729 a/b	• G.711 u/a law • G.722 • G.726 • G.729 a/b	• G.711 u/a law • G.722 • G.726 • G.729 a/b	• G.711 u/a law • G.722 • G.726 • G.729 a/b	• G.711 u/a law • G.722 • G.726 • G.729 a/b	• G.711 u/a law • G.722 • G.726 • G.729 a/b

Chapter 5: Environmental specifications

Hardware

9600 Series IP Deskphones supports the following hardware specifications.

Standard	9601	9608 9608G	9611G	9621G	9641G	9641GS
Dimensions in inches (cms): Height Width Depth without the stand	9.1 (23) 7.1 (18) 1.4 (3.5)	9.1 (23) 8 (20.4) 1.4 (3.5)	9.1 (23) 8 (20.4) 1.4 (3.5)	9.1 (23) 9.1 (23) 1.4 (3.5)	9.1 (23) 9.1 (23) 1.4 (3.5)	9.1 (23) 9.1 (23) 1.4 (3.5)
Wall mountable	Yes	Yes	Yes	Yes	Yes	Yes
Stand	Dual position	Dual position flip	Dual position flip	Dual position flip	Dual position flip	Dual position flip
Touch screen	NA	NA	NA	Resistive	Resistive	Capacitive
Display type	Monochrom e	FSTN monochrome	TFT 8 bit color	TFT 24 bit color	TFT 24 bit color	TFT 24 bit color
Display size in inches (cms)	2.4 x 1.1 (6.2 x 2.6)	3.2 x 2.2 (8.2 x 5.5)	2.8 x 2.1 (7.0 x 5.3)	3.7 x 2.1 (9.5 x 5.4)	4.1 x 2.3 (10.4 x 5.9)	4.1 x 2.3 (10.4 x 5.9)
Display resolution	132 x 59 pixel	180 x 120 pixel	320 x 240 pixel	480 x 272 pixel	480 x 272 pixel	480 x 272 pixel
Display backlight	No backlight	White	Yes	Yes	Yes	Yes
Call appearance or display buttons	2 with red and green LEDs each	8 with red and green LEDs each	8 with red and green LEDs each	Integrated in display	Integrated in display	Integrated in display
Softkeys call control	3	4	4	Variable integrated in display	Variable integrated in display	Variable integrated in display
Bluetooth support	Nor	No	No	No	Integrated Bluetooth supported	Integrated Bluetooth supported
Handset	Wideband	Wideband	Wideband	Wideband	Wideband	Wideband

Table continues…

Standard	9601	9608 9608G	9611G	9621G	9641G	9641GS
Handset weight in lbs (gms)	0.31(141)	0.31 (141)	0.31 (141)	0.31 (141)	0.31 (141)	0.31 (141)
Handset cord: length, type	9 ft (274.3 cms), 4-conductor coiled	9 ft (274.3 cm), 4-conductor coiled	9 ft (274.3 cm), 4-conductor coiled	9 ft (274.3 cm), 4-conductor coiled	9 ft (274.3 cm), 4-conductor coiled	9 ft (274.3 cm), 4-conductor coiled
Handset transmission frequency	7 Khz	7 Khz	7 Khz	7 Khz	7 Khz	7 Khz
Handset receiving frequency	7 Khz	7 Khz	7 Khz	7 Khz	7 Khz	7 Khz
Handsfree	Narrowband	Narrowband	Narrowband	Wideband	Wideband	Wideband
Microphone	1 omni-directional	1 omni-directional	1 omni-directional	1 omni-directional	1 omni-directional	1 omni-directional
Gigabit Ethernet	No	9608: No 9608G: Yes	Yes	Yes	Yes	Yes
Ethernet signal range	100 meters on category 5e unshielded twisted pair (UTP) cabl	100 meters on category 5e unshielded twisted pair (UTP) cable	100 meters on category 5e unshielded twisted pair (UTP) cable	100 meters on category 5e unshielded twisted pair (UTP) cable	100 meters on category 5e unshielded twisted pair (UTP) cable	100 meters on category 5e unshielded twisted pair (UTP) cable
Buttons	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 Snap ratio of 0.35 +/-	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 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 Snap ratio of 0.35 +/-	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	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 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 Snap ratio of 0.35 +/- 0.1 or higher

Table continues…

Standard	9601	9608 9608G	9611G	9621G	9641G	9641GS
	0.1 or higher		0.1 or higher	Snap ratio of 0.35 +/- 0.1 or higher		
Permanently labeled feature buttons	Speaker with red LED Headset with red LED Mute with red LED Volume Phone History with red LED Contacts “A” Menu Message Navigation: up, down, left, right OK More	Speaker with red LED Headset with red LED Mute with red LED Volume Phone History with red LED Contacts “A” Home Message Navigation: up, down, left, right OK	Speaker with red LED Headset with red LED Mute with red LED Volume Phone History with red LED Contacts “A” Home Message Navigation: up, down, left, right OK	Speaker with red LED Headset with red LED Mute with red LED Volume Phone History with red LED Contacts “A” Home Message with red LED Forwarding with red LED	Speaker with red LED Headset with red LED Mute with red LED Volume Phone History with red LED Contacts “A” Home Message with red LED Forwarding with red LED	Speaker with red LED Headset with red LED Mute with red LED Volume Phone History with red LED Contacts “A” Home Message with red LED Forwarding with red LED
Reliability rate in technician usage rate measured as 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	Less than or equal to 0.1	Less than or equal to 0.1

Altitude and air pressure

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

Temperature and humidity

All Avaya IP 9600 Series IP deskphones work in a temperature range from 40 to 120 degrees Fahrenheit or 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].

Physical system protection

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 1: 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 2: 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 3: 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 4: 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 5: 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

Table 6: 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
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)
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: Dial Plan

Dial plan

You can create a dial plan for 9600 Series IP Deskphones using the following characters.

Character	Description
Digits 0 through 9	Specific dialpad digits.
Asterisk (*)	The dialpad character asterisk (*).
Pound (#)	The dialpad character #, but only if it is the first character in the dialed string.
x	Any dialpad digit from 0 to 9.
Z or z	Present dial tone to the user. For example, for Feature Access Code (FAC) entry.
Brackets ([ ])	Any one character within the brackets is a valid match for a dial plan string.
Minus (-)	Any one digit between the bounds within the brackets, inclusive, is a match.
Plus (+)	The character before plus (+) may be repeated 0 or more additional times, for a valid match.
Pipe (|)	If there are multiple valid dial plan elements, each one is separated from the next by an OR symbol.
(“|”)	If the dial plan text string begins or ends with an OR symbol, that symbol is ignored.

Dialable characters

Characters that a user would put in a dial string. These are different from the dial plan elements.

Character	Description
Comma (,)	A comma (,) creates a 1.5-second pause between the digits that are sent. Do not use a comma (,) as the first character in the string.
Pound (#)	Can either be the first dialed element used in a FAC or TAC or the last character which is an end of dial string indication.
Asterisk (*)	Can either be the 1st dialed element used in a FAC or TAC.

Chapter 7: Security

Security overview

9600 Series IP Deskphones supports the following security features:

- HTTP authentication for backup and restore operations.
- 256-bit Advanced Encryption Standard (AES-256) media encryption.
- Secure call indicator provided by Avaya Aura® Platform 7.0.
- Compliance with IETF RFC 1948 *Defending Against Sequence Number Attacks, May 1996, 14 by S. Bellovin* .
- Models that provide WML Web applications to support Transport Layer Security (TLS) to establish a secure connection to an HTTP server on which the upgrade and settings files reside.

SSH

Avaya Services uses Secure Shell (SSH) protocol to remotely connect to 9600 Series IP Deskphones to monitor, diagnose, or debug phone performance. The 9600 Series IP Deskphones support SSHv2 only. SSHv1 is disabled.

TLS

9600 Series IP Deskphones supports Transport Layer Security (TLS) to enhance the security of your HTTP environment. The deskphones support HTTP and HTTPS authentication for backup and restore operations.

VPN

You can use H.323–based 9600 Series IP Deskphones on a Virtual Private Network (VPN) if your administrator configures the VPN option for your deskphones. VPN uses a high-speed connection to

the Internet and then to the VPN-administered solution in the enterprise network. VPN provides a significant improvement of the communications capabilities of SOHO users. With the 9600 Series IP Deskphones, you can implement a VPN in enterprise networks with third-party devices.

Avaya SBCE

You can use 9600 Series IP Deskphones with Avaya Session Border Controller for Enterprise (SBCE) to provide support for remote workers. Avaya SBCE provides the SIP trunking feature that allows SIP trunk-enabled enterprises to completely secure SIP connectivity over the Internet through SIP trunking services that Internet Telephony Service Provider (ITSP) provides.

SIP trunking ensures the privacy of all calls traversing the enterprise network, while maintaining a well-defined demarcation point between the core and access network. In addition, organizations can use SIP trunking to maintain granular control through well-defined domain policies. These policies secure SIP devices and servers from known SIP and Media vulnerabilities.

EAP-TLS

9600 Series IP Deskphones supports Extensible Authentication Protocol-Transport Layer Security (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.

SCEP

9600 Series IP Deskphones supports 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
- Save the agent greetings
- Perform a backup or restore

9600 Series IP Deskphones supports Media Encryption (SRTP) and uses built-in Avaya certificates for trust management. You can apply SCEP to your VPN operations or to standard enterprise network operations.

802.1X Supplicant operation

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

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 certification

For products sold into the U.S. Government sector, Joint Interoperability Test Command (JITC) certification is a mandatory requirement. Based on the operating system and the capabilities of the product, each product must adhere to the respective standard specified at http://iase.disa.mil/stigs/checklist/index.html.

Verification of JITC functionality includes execution of the scripts for the respective operating system on the product. The scripts are specified at http://iase.disa.mil/stigs/SRR/index.html.

Note:

Only H.323–based phones are JITC certified.

Port utilization

For the latest and most accurate information about ports and protocols that 9600 Series IP Deskphones utilizes, see Port Matrix. On the Web page, select the required link under Avaya one-X® Deskphone.

Chapter 8: Licensing requirements

You require the following licences for 9600 Series IP Deskphones:

- The Right to Use the software that runs on 9600 Series IP Deskphones. This license is already included with the purchase of the deskphone.
- The Right to Connect 9600 Series IP Deskphones to Communication Manager, Session Manager, or IP Office. This license is controlled by simultaneous user licenses that these servers enforce.

You can purchase licenses in bulk as required. For more information on the software license terms, see Policies & Legal.

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