Cisco Unified IP Phone 7970G

Cisco® Unified Communications is a comprehensive IP communications system of voice, video, data, and mobility products and applications. It enables more effective, more secure, more personal communications that directly affect both sales and profitability. It brings people together by enabling a new way of communicating—where your business moves with you, security is everywhere, and information is always available...whenever and wherever it is needed. Cisco Unified Communications is part of an integrated solution that includes network infrastructure, security, mobility, network management products, lifecycle services, flexible deployment and outsourced management options, end-user and partner financing packages, and third-party communications applications.

The Cisco Unified IP Phone 7970G fills the communication needs of executive and high-end office environments that conduct moderate telephone traffic. Dedicated voicemail, directories, settings, and services keys are provided to deliver easy access to key features. Illuminated mute and speakerphone keys are provided to give a clear indication of speaker status. A high-resolution, color, touch-sensitive screen provides clear visual indication of the calls that are being handled, and Extensible Markup Language (XML) services deliver a rich user experience. The Cisco Unified IP Phone 7970G offers numerous important security features plus the choice of IEEE 802.3af Power over Ethernet (PoE), or local power through an optional power adaptor while still retaining compatibility with Cisco PoE equipment (Figure 1).

Figure 1.   Cisco Unified IP Phone 7970G

Features

The Cisco Unified IP Phone 7970G is designed to grow with your organization. A dynamic, soft-key driven feature set enables the phone to keep pace with your requirements via regular software upgrades. Moves, adds, and changes are easy: users can simply pick up their phones and move to a new location anywhere on the network. The Cisco Unified IP Phone 7970G also provides accessibility features to those with special needs. Tables 1-7 present the features, specifications, and compliance information of the Cisco Unified IP Phone 7970G, Table 8 provides ordering information, and Table 9 lists available optional accessories.

Table 1.   Features of Cisco Unified IP Phone 7970G

Feature	Description
Messages	The phone offers direct access to voicemail with a single button touch.
Directories	The phone identifies incoming messages and categorizes them on the screen, allowing users to quickly and effectively return calls using direct dial-back capability. The corporate directory integrates with the Lightweight Directory Access Protocol Version 3 (LDAP3) standard directory.
Settings	The Settings feature key allows the user to adjust display contrast, select background images (if available), and select from a large number of unique ringer sounds through the User Preference menu. Network Configuration preferences also can be set up (usually by the system administrator). Configuration can be either automatically or manually set up for Dynamic Host Control Protocol (DHCP), Trivial File Transfer Protocol (TFTP), Cisco Unified CallManager, and backup Cisco Unified CallManager instances. Other available Settings submenus include Device Configuration and Security Configuration.
Services	The Cisco Unified IP Phone 7970G allows users to quickly access diverse information such as weather, stocks, quote of the day, or any Web-based information using XML to provide a portal to an ever-growing world of applications, features, and information.
Help	The online Help feature gives users information about the phone keys, buttons, and features. The pixel display allows for greater flexibility of features and significantly expands the information viewed when using features such as Services, Information, Messages, and Directory. For example, the Directory button can show local- and server-based directory information.
Display	The phone has a large, high-resolution, graphical 12-bit color, touch-sensitive display, with backlighting to enhance its visual appearance (320 x 234 pixels).
Speakerphone, Mute, and Headset buttons	The phone offers high-quality speakerphone technology, including easy-to-use speaker On/Off, Microphone, Mute, and Headset buttons. These buttons are lit when active. For added security, the audible dual-tone multifrequency (DTMF) tones are masked when the speakerphone mode is used.
Ethernet switch	The internal 2-port Cisco Ethernet switch allows for a direct connection to a 10/100BASE-T Ethernet network through an RJ-45 interface with single LAN connectivity for both the phone and a colocated PC. The system administrator can designate separate VLANs (802.1Q) for the PC and Cisco Unified IP phones, providing improved security and reliability of voice and data traffic.
Headset port	A dedicated headset port eliminates the need for a separate amplifier when using a headset. This feature allows the handset to remain in its cradle, making headset use simpler.
External speaker and microphone ports	3.5-mm stereo jacks are fitted to the phone for external speakers and an external microphone. The electrical and audio characteristics are similar to those fitted to many modern PCs. However, when connecting externally powered audio equipment to these ports, the phone has no control over electrical signals that may be introduced by this external equipment. For this reason, Cisco can not endorse any external audio equipment that is connected to the phone when it is powered through inline PoE.
Volume Control	The convenient Volume Control button on the phone provides for easy decibel-level adjustments for the speakerphone, handset, headset, and ringer. The handset is hearing aid-compatible (HAC). Additional volume control gain can be achieved using an inline handset amplifier such as Walker Equipment W-10 and CE-100 amplifiers.
Adjustable foot-stand	The phone foot-stand is adjustable from flat to 60 degrees to provide optimum display viewing and comfortable use of all buttons and keys. The foot-stand is keyed to match standard wall-jack configurations for wall mounting. Two optional wall-mount brackets are also offered, as noted later in this document.
Flexible power options	The Cisco Unified IP Phone 7970G supports IEEE 803.af PoE (Class III). In addition, the phone supports Cisco Prestandard Power over Ethernet (PoE), allowing power to be drawn from any of the Cisco Inline Power-capable blades and boxes. When connected to a Cisco PoE device, the phone will use Cisco Discovery Protocol (CDP) to negotiate the power available. The phone can also be powered locally with a power supply (CP-PWR-CUBE-3).
Multiple ring tones	More than 24 user-adjustable ring tones are available.

Americans with Disabilities Act (ADA) features	A HAC handset (meeting ADA requirements) is available, as well as HAC compliance for magnetic coupling to approved HAC hearing aids. The dial pad is also ADA-compliant.
Signaling protocol support	The phone is supported with Cisco Unified CallManager 3.3 or later, and Cisco Unified CallManager Express 3.2(1) and later. Both SCCP and SIP signaling protocols are supported by the phone when used with a Cisco Call Control agent.
Codec support	G.711μ and G.729a audio compression codecs are available.
Quality of service (QoS) options	The phone supports differentiated services code point (DSCP) and 802.1q/p standards.
Security	The phone supports manufacturing-installed digital certificates, device authentication, and encryption. 802.1X link layer authentication is also provided, requires 8.2(1) or later phone firmware.
Language support	Support for more than 20 languages is built in (depends on Cisco Unified CallManager software version).
Configuration options	IP address assignment can be statically configured or configured through the DHCP client.
Voice quality	Comfort-noise generation and voice activity detection (VAD) programming are performed on a systems basis. RTCP streams are generated by the phone to provide voice quality metrics (requires 8.2(1) phone firmware or later).

Table 2.　Security Features

Item	Description
Certificates	Phones are shipped with factory-installed X.509v3 certificates. There is also an option of installing and removing certificates at the customer's site.
Device Authentication and signaling encryption	Transport layer security (TLS) with AES-128 encryption is offered when using Cisco Unified CallManager 4.0 or later and Cisco Unified CallManager Express Version 4.0(2) or later.
Media encryption	Secure Real-Time Transport Protocol (SRTP) with AES-128 encryption is offered when using Cisco Unified CallManager 4.0 or later and Cisco Unified CallManager Express Version 4.0(2) or later.
802.1X Link Layer Authentication	Phones running the 8.2(1) firmware load, or later, can utilize the 802.1X Link Layer Authentication protocol to connect to a Catalyst® switch implementing this security mechanism. A single downstream device, connected to the PC port, may also implement 802.1X Link Layer Authentication and the phone will pass through the EAPoL requests on a proxy basis.

Table 3.　Software and Physical Specifications

Item	Description
Firmware upgrades	Firmware upgrade supported using a TFTP server
Dimensions (H x W x D)	9.1 x 10.5 x 6 in. (23.1 x 26.67 x 15.24 cm)
Weight	3.6 lb (1.8 kg)
Phone casing composition	Polycarbonate acrylonitrile butadiene styerene (ABS) plastic in textured dark gray color with silver bezel

Table 4.　Power Options

Item	Description
IEEE 802.3af PoE	Can receive power from IEEE 802.3af-compliant data switches (Class III)
Cisco Pre-Standard PoE	The 7970 IP phone can receive power from a Cisco Prestandard PoE switch, and will operate with reduced brightness, through CDP negotiation, in order not to exceed the maximum power available
Local power	Powered locally with a power adapter (CP-PWR-CUBE-3=) along with one of the power cords listed in Table 5

Table 5.　AC Region and Country-Specific Power Cords

Part Number	Description

CP-PWR-CORD-AP=	Asia Pacific
CP-PWR-CORD-AR=	Argentina
CP-PWR-CORD-AU=	Australia
CP-PWR-CORD-CE=	European Community
CP-PWR-CORD-CN=	China
CP-PWR-CORD-JP=	Japan
CP-PWR-CORD-NA=	North America
CP-PWR-CORD-SW=	Switzerland
CP-PWR-CORD-UK=	United Kingdom

Table 6. Temperature Ratings

Item	Description
Operating temperature	32 to 104°F (0 to 40°C)
Relative humidity	10 to 95% (noncondensing)
Storage temperature	14 to 140°F (-10 to 60°C)

Table 7. Certifications

Item	Description
Regulatory compliance	CE Marking
Safety	· Underwriters Laboratories (UL) 60950 · Canadian Standards Association (CSA) C22.2 No. 60950 · EN 60950 · IEC 60950 · AS/NZS60950 · TS 001
Electromagnetic compatibility	· Federal Communications Commission (FCC) Part 15 (CFR 47) Class B · ICES-003 Class B · EN55022 Class B · CISPR22 Class B · AS/NZS CISPR 22 Class B · CISPR 24 · VCCI Class B · EN55024 · EN 50082-1 · EN 61000-3-2 · EN 61000-3-3 · EN 61000-6-1
Telecom	· FCC Part 68 (CFR47) HAC · TIA 810A

Table 8. Ordering Information

Part Number	Description
CP-7970G	Cisco Unified IP Phone 7970G
CP-7970G=	Cisco Unified IP Phone 7970G, Spare
CP-7970G-CH1	Cisco Unified IP Phone 7970G, for Channels, with one station user license
SW-CCM-UL-7970	Unified CallManager User License for One 7970 Phone
SW-CCME-UL-7970	Unified CallManager Express User License for One 7970 Phone

Note: All Cisco Unified IP phones require the purchase of a phone user license, regardless of call protocol being used.

Table 9. Optional Accessories

SKU	Description
CP-LCKNGWALLMOUNT=	Universal locking wall-mounting kit
CP-PWR-CUBE-3=	Local power adapter for sites where PoE is not available; refer to Table 5 for the right power cord part number for your region
CP-HANDSET-CORD=	Spare phone handset cord
CP-HANDSET=	Spare phone handset
CP-7914=	14-button key expansion module

Cisco Unified IP Phone Expansion Module 7914 Support

An optional 14-button add-on module, the Cisco Unified IP Phone Expansion Module 7914 (CP-7914=), provides 14 additional buttons for programming directory numbers or speed dials, or a combination of the two. Up to two expansion modules can be used with the Cisco Unified IP Phone 7970G, and will require an external power cube CP-PWR-CUBE-3.

Warranty

Cisco Unified IP phones are covered by a Cisco standard 1-year hardware warranty.

Cisco Unified Communications Services and Support

Using the Cisco Lifecycle Services approach, Cisco and its partners offer a broad portfolio of end-to-end services to support the Cisco Unified Communications system. These services are based on proven methodologies for deploying, operating, and optimizing IP communications solutions. Initial planning and design services, for example, can help you meet aggressive deployment schedules and minimize network disruption during implementation. Operate services reduce the risk of communications downtime with expert technical support, and optimize services enhance solution performance for operational excellence. Cisco and its partners offer a system-level service and support approach that can help you create and maintain a resilient, converged network that meets your business needs.

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