



VoIP Phone Standards

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Revision History

Date	Page	Version	Revision
7/25/2016	All	1.0	Initial version 1.0.
5/15/2017	All	2.0	Version 2.0. Added Cisco 8811 , Service Requirements , Exceptions , and Useful Life sections.
6/17/2020	18+	3.0	Removed Revolabs, updated Cisco Conference offerings, Added VG.
11/29/2022	All	3.1	Added classroom mounting information and fixed the links to the OIT wiring standards.

Introduction

The UNLV VoIP Phone Standards have been compiled for architects and engineers retained to provide professional services for UNLV. This includes the planning, construction, and maintenance standards of VoIP telephone equipment to be used on campus.

These standards have been prepared so that reliable and consistent systems are constructed, thereby requiring minimal maintenance and operating expense. Adherence to these standards is required. Deviations must be reviewed with UNLV Telecommunications prior to implementation. Equal or improved concepts, methods, or productions will be given full consideration when presented prior to implementation.

The standards presented in this document should be followed in conjunction with any of the other applicable campus design standards such as the [UNLV Wiring Standards](#).

The images in this document are provided for illustrative purposes only. Please refer to product descriptions for specific information about each item.

If an item outlined in these specifications is no longer available, please contact UNLV Telecommunications to make a recommendation on a replacement product.

Sections of this document will be revised and updated as experience from construction developments warrant. Each revised section supersedes all previous editions and directives concerning VoIP phone practices for UNLV.

All questions should be directed to UNLV Telecommunications at (702) 895-3011.

Approved Manufacturer



Cisco has been selected as UNLV's manufacturer of choice for VoIP phones for use on UNLV's owned/leased properties.

About Cisco

Cisco is the worldwide leader in IT that helps companies seize the opportunities of tomorrow by proving that amazing things can happen when you connect the previously unconnected. At Cisco, customers come first and an integral part of our DNA is creating long-lasting customer partnerships and working with them to identify their needs and provide solutions that support their success.

Approved Desk Phones

There are 3 currently approved models of IP phones and a corresponding Key Module Expansion (KEM) if more than 5 extensions are needed for one IP phone.

Cisco 8845



Figure 1: 8845 IP Phone

8845 Summary

The Cisco IP Phone 8845 delivers affordable entry to HD video communications. It's ideal for knowledge workers, administrative staff, managers, and executives. It's also well suited to shared workspace environments.

Cisco Spark Phone OS provides flexible deployment options for the 8845, whether Cisco on-premises, from the Cisco cloud, or in a hybrid configuration.

8845 Features

- Easy-to-use, one-touch 720p HD desktop video
- Integration with personal mobile devices using Cisco Intelligent Proximity for Mobile Voice
- Wideband audio for exceptional clarity
- High-resolution, 5-inch, widescreen color display for navigation and interaction
- Choice of wired, Bluetooth and USB headsets from third-party vendors**
- Cisco EnergyWise reduces energy costs and carbon footprint in off-work hours
- Gigabit Ethernet and 802.3af/at Power over Ethernet reduce installation and infrastructure costs

*Preferred phone for UNLV.

**Consult your preferred third-party headset vendor for compatible headsets on the IP Phone 8845.

Cisco 8861



Figure 2: 8861 IP Phone

8861 Summary

The IP Phone 8861 delivers highly secure, easy-to-use, mission-critical, comprehensive VoIP communications and telephony feature integration with your personal mobile devices for your entire organization. It also offers flexible deployment options: Cisco on-premises, hosted and Spark Cloud along with third-party-hosted call control servers.

8861 Features

- Exceptional clarity in VoIP communications with wideband audio

- Integration with personal mobile devices using Cisco Intelligent Proximity for Mobile Voice
- High-resolution, widescreen color display
- Optional Cisco IP Phone 8800 Key Expansion Module to simplify dialing and offer expanded status detail
- Choice of wired, Bluetooth, and USB headsets from third-party vendors**
- Cisco EnergyWise reduces energy costs and carbon footprint in off-work hours
- Gigabit Ethernet and 802.3af/at Power over Ethernet reduce installation and infrastructure costs

*Compatible with the [8800 Key Module Expansion](#)

**Consult your preferred third-party headset vendor for compatible headsets on the IP Phone 8861.

Cisco 8865



Figure 3: 8865 IP Phone

8865 Summary

Deploy mission-critical, high-definition video and comprehensive VoIP communications for your entire organization. The Cisco IP Phone 8865 is affordable, highly secure, easy to use, and integrates with your personal mobile devices. It also provides flexible deployment options: Cisco on-premises, hosted and Spark Cloud along with third-party hosted call control platforms*.

8865 Features

- Easy-to-use, one-touch face-to-face collaboration with 720p HD desktop video

- Exceptional clarity in video and VoIP communications with wideband audio
- Integration with personal mobile devices using Cisco Intelligent Proximity for Mobile Voice
- Optional Cisco IP Phone 8800 Key Expansion Module for simplified dialing and expanded status detail
- Choice of options with wired, Bluetooth, and USB headsets from third-party vendors**
- Cisco EnergyWise reduces energy costs and carbon footprint in off-work hours
- Gigabit Ethernet and 802.3af/at Power over Ethernet reduce installation and infrastructure costs

*Compatible with the [8800 Key Module Expansion](#)

**Consult your preferred third-party headset vendor for compatible headsets on the IP Phone 8865.

Cisco 8800 Key Module Expansion



Figure 4: 8800 Key Module Expansion

8800 KEM Summary

Expand personal interaction within departments while increasing responsiveness to inbound callers with the optional Cisco IP Phone 8800 Series Key Expansion Module. Designed for receptionists, administrative staff, managers, and executives, this module simplifies communications with single-button access to the people and features your staff use most.

8800 KEM Features

- 18 physical, programmable LED line and feature keys per module
- Second-page key provides 18 additional line and feature keys per module using software
- Graphical, backlit, high-resolution color display makes viewing easy
- One-, two-, and three-module configurations expand scalability and extend phone investment

Approved Classroom, Shop or Lab Phone

For rooms classified as a classroom, workshop or laboratory per UNLV Space Management.

Cisco 8811



Figure 5: 8811 IP Phone

8811 Summary

Get highly secure, easy-to use, high-quality wideband audio, and comprehensive, mission-critical VoIP communications. The Cisco IP Phone 8811 is ideal for knowledge workers and remote workers across industries and businesses of all sizes. It can be deployed on Cisco on-premises, hosted, Spark Cloud, and third-party-hosted call control servers.

8811 Features

- High-quality, full duplex wideband audio and superior echo cancellation for exceptional clarity
- High-resolution, five-inch, widescreen grayscale display makes it easier to recognize calls and see status information
- Five-way navigation cluster and four context-sensitive soft keys make interactions more efficient
- Choice of headsets from Cisco third-party vendor partners offer flexibility**
- Cisco EnergyWise reduces energy cost and carbon footprint in off-work hours
- Gigabit Ethernet and 802.3af/at Power over Ethernet reduce installation and infrastructure costs

**Consult your preferred third-party headset vendor for compatible headsets on the IP Phone 8865.

Approved Conference Phones

Departments on campus may have use for conference style phones in various areas. The following are the standard VoIP conference phones that UNLV Telecom supports.

Cisco 8832



Figure 6: Cisco 8832 IP Conference Phone

8832 Summary

The 8832 delivers high-quality, full-duplex, wideband VoIP communications. Its 360-degree coverage addresses the needs of medium to large conference rooms up to 800 square feet (74.3 square meters). It also serves private office desks, such as those for executives.

8832 Features

- Wideband (G.722) for crystal-clear audio performance
- 360-degree coverage or rooms up to 800 square feet (74.3 square meters)
- Up to 26 attendees
- Backlit, anti glare, color pixel display eases viewing and navigation
- Same easy-to-use call experience as other 8800 Series IP Phones
- Scalable: options for daisy-chaining*, expansion microphones
- Wired and DECT wireless expansion microphone options*
- SHA-256 encryption to help secure communications

*Larger conference rooms may require daisy-chaining of base units (up to two maximum) or adding the optional expansion mics.

Cisco 7832



Figure 7: Cisco 7832 IP Conference Phone

7832 Summary

The Cisco IP Conference Phone 7832 is ideal for your small conference rooms and private office desktops. With the 7832, you can increase business call efficiency and collaboration with cost-effective audio conferencing.

7832 Features

- 360-degree room coverage for spaces up to 172 square feet (16 square meters)
- Microphone pickup up to 7 feet (213 centimeters) from the endpoint
- 10/100 Power over Ethernet (Class 2), requiring no standalone power supply
- Enhanced security with Secure Hash Algorithm 2 (SHA-2) support

Legacy (Analog/TDM) Support

Legacy support for analog/TDM devices (Ex: fax machines) exists through a Voice Gateway that converts the IP traffic into analog tones and back again. UNLV Telecommunications achieves this using Cisco's VG310 Voice Gateway.

VG204XM



Figure 8: VG204XM Voice Gateway

VG204XM Summary

The Cisco VG204XM Analog Voice Gateway provides a low density intermediate path to enable the Time Division Multiplex (TDM) to IP transition.

VG204XM Features

- Standalone solutions for low-density two or four line deployments
- Combine RJ11 interfaces with Cisco IOS Software manageability to increase the functionality of analog equipment
- Are housed in compact, fanless, desktop chassis that are also wall-mountable

VG310



Figure 9: VG310 Voice Gateway

VG310 Summary

The Cisco VG310 Analog Voice Gateway provides an intermediate path to enable the Time Division Multiplex (TDM) to IP transition.

VG310 Features

- Two 10/100/1000BASE-T Gigabit Ethernet ports
- External compact flash memory
- AC and DC power inputs
- 24-analog Foreign Exchange Station (FXS) voice ports using one RJ-21 analog voice interface connector
- Enhanced High-Speed WAN Interface Card (EHWIC), Voice Interface Card (VIC), and Voice WAN Interface Card (VWIC)

Mounting Options

Wall Mounts

UNLV Telecom will facilitate the purchase of the appropriate wall mounts for departments as requested. The following mounting options exist for Cisco 8800 Series Phones:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cuipph/8800-series/english/adminguide/P881_BK_C136782F_00_cisco-ip-phone-8800_series/P881_BK_C136782F_00_cisco-ip-phone-8811-8841_chapter_01000.html

Cisco 8800 series phones with cameras

Part number

CP-8800-VID-WMK=

Applies to

- Cisco 8845
- Cisco 8865 (without the [KEM](#))

Visual representation

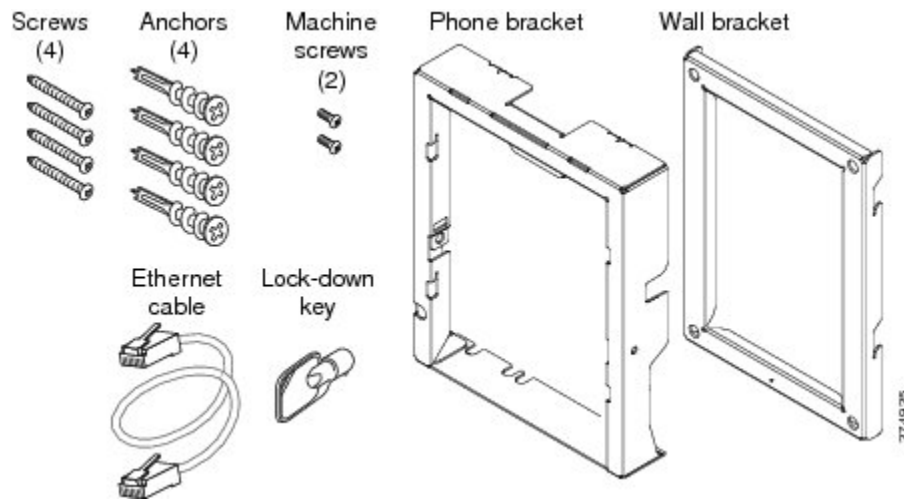


Figure 10: CP-8800-VID-WMK= Lockable Wall Mount

Cisco 8800 series phones without cameras

Part number

CP-8800-WMK=

Applies to

- Cisco 8811
- Cisco 8861 (without the [KEM](#))

Visual representation

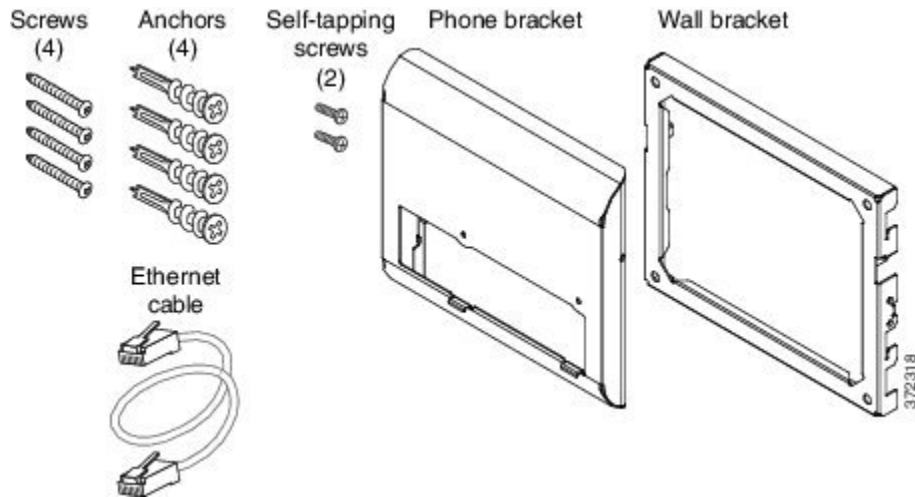


Figure 11: CP-8800-WMK= Non-Lockable Wall Mount

Mounting requirements for a classroom

New classroom builds should have the phone on a wall near a lectern so that it is accessible to everyone in the room.

- Do not install behind the lectern
- Device height and the surrounding area have to be ADA compliant and accessible
- Placement must be no higher than 48" from the floor/ground
- Handset cord must stretch to at least 29"
- An OIT-compliant network drop should be available behind where the phone will be mounted

Cisco 8800 series phones with [KEM](#)

Part number

CP-8800-BEKEM-WMK=

Applies to

- Cisco 8861 with one (1) [KEM](#)

Visual representation

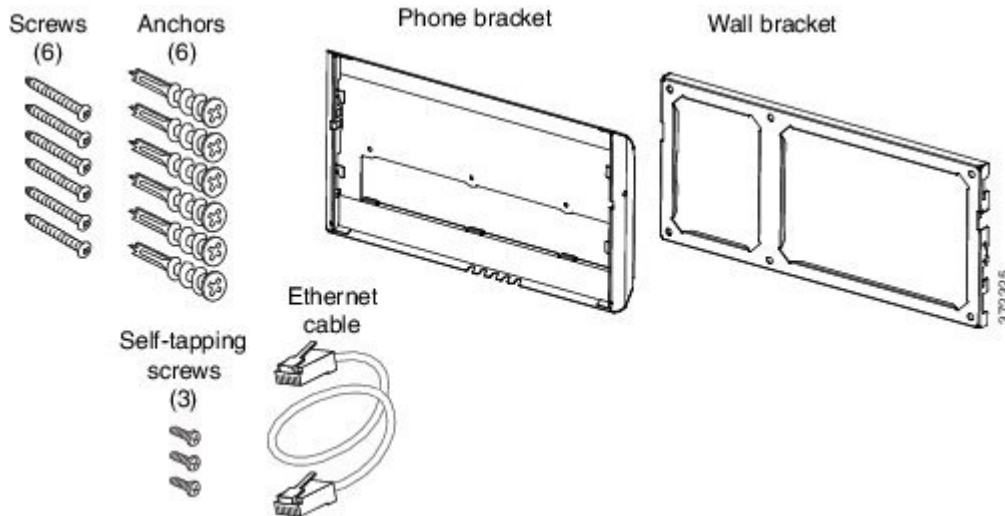


Figure 12: CP-8800-BEKEM-WMK= Non-Lockable Wall Mount for phone with one [KEM](#)

Service Requirements

Physical Connection

Port Requirements

A 1Gb copper RJ45 port is required for the phone to connect to. The port must be able to provide up to Class 4 (15.4 Watts) Power over Ethernet as classified by the 802.3AF specification for certain models of Cisco phones. Currently, 8811 and 8845 model phones only require Class 2 (7.0 Watts) PoE, but the 8865 requires Class 4.

Cabling Requirements

Cabling connecting the phone must be under the maximum distance range of the technology being utilized as well as of the CAT5e specification or greater and is subject to [UNLV OIT's Wiring Standards](#). The cabling must pass OIT's cable testing standards as laid forth in the wiring standards.

Dedicated cabling back to the UNLV switch in local IDF rooms are required. This prohibits things like split cabling/drops and additional switching equipment being in the path back to the IDF as well as potentially other unlisted situations with cabling that may arise and Telecom in collaboration with NDE reserves the rights to identify additional situations this will prohibit.

Insufficient cabling will need to be replaced or repaired before a Cisco IP phone can be installed.

Uptime

In the event of a power outage, Telecom in combination with OIT strive to provide an uptime of 30 minutes. For any new or renovation projects that include new UPSs for IDF rooms, those UPSs need to be spec'd out to handle a minimum of 30 minutes of uptime.

911

Calls to 911 made from on campus phones route to UNLV Dispatch per UNLV Police Services.

Location Data

At the very least, physical location data about the switch the phone is connected to is required, if not the granular location data of the end-port the phone is connected to.

We also need to know the location of the physical phone (building and room number) as well as the user's' name for 911 compliance and billing needs.

Regulations

Please see: [Appendix B - Regulations](#)

Exceptions

Requesting an Exception

Requests for exceptions to the phone standards set forth in this document need to be submitted to the Director of Telecommunications.

Example Exceptions

Voice Gateway

If there is a justifiable business need for a device that requires analog/POTS service that a Cisco Voice gateway can provide, an exception will be granted for service to be provided to the device by a currently supported Cisco Voice Gateway.

Analog/POTS

If there is a justifiable business need for a device that requires analog/POTS service that a Cisco Voice gateway cannot provide specific reasons an exception will be granted for service to be provided to the device by CenturyLink (or other current analog/POTS provider).

Power over Ethernet (PoE)

If there is an appropriate port that can handle Cisco call traffic that is not PoE enabled, an exception can be made and a Cisco Power Cube can be ordered (at the customer's expense) that will power the phone externally through a wall socket (not through the network).

Appendix A

Contacts

Telecommunications

<http://telecom.unlv.edu>

Main Line	(702) 895-3011, telecom@unlv.edu
Darren Paulson - Director	(702) 895-5757, darren.paulson@unlv.edu

OIT - NDE

<http://oit.unlv.edu>

Jon Myers	(702) 895-0731, jon.myers@unlv.edu
Lorita Chesler	(702) 895-0724, lorita.chesler@unlv.edu

Appendix B

Regulations

NRS 704 - Regulation of Public Utilities Generally

<http://www.leg.state.nv.us/Nrs/NRS-704.html>

Definitions

Business line service

“Business line service” means flat or measured rate service for business lines or business trunk lines.

<http://www.leg.state.nv.us/Nrs/NRS-704.html#NRS704Sec008> - General Provisions: 704.008

Local exchange carrier

The term “local exchange carrier” means any person that is engaged in the provision of telephone exchange service or exchange access. Such term does not include a person insofar as such person is engaged in the provision of a commercial mobile service under section 332(c) of this title, except to the extent that the Commission finds that such service should be included in the definition of such term.

<https://www.gpo.gov/fdsys/pkg/USCODE-2011-title47/html/USCODE-2011-title47-chap5-subchapl-sec153.htm> - Definitions: (32)

Public utility

Any person, other than a provider of commercial mobile radio service, that provides a telecommunication service to the *public*, but only with regard to those operations which consist of providing a telecommunication service to the *public*.

<http://www.leg.state.nv.us/Nrs/NRS-704.html#NRS704Sec020> - General Provisions: 704.020

Small-scale provider of last resort

“Small-scale provider of last resort” means an incumbent local exchange carrier that is a provider of last resort of basic network service and business line service to customers through less than 60,000 access lines.

<http://www.leg.state.nv.us/Nrs/NRS-704.html#NRS704Sec023> - General Provisions: 704.023

Telecommunication

“Telecommunication” means the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information sent and received, regardless of the facilities, equipment or technology used.

<http://www.leg.state.nv.us/Nrs/NRS-704.html#NRS704Sec025> - General Provisions: 704.025

Telephone exchange service

The term “telephone exchange service” means (A) service within a telephone exchange, or within a connected system of telephone exchanges within the same exchange area operated to furnish to subscribers intercommunicating service of the character ordinarily furnished by a single exchange, and which is covered by the exchange service charge, or (B) comparable service provided through a system of switches, transmission equipment, or other facilities (or combination thereof) by which a subscriber can originate and terminate a telecommunications service.

<https://www.gpo.gov/fdsys/pkg/USCODE-2011-title47/html/USCODE-2011-title47-chap5->

[subchapl-sec153.htm](#) - Definitions: (54)

Telephone toll service

The term “telephone toll service” means telephone service between stations in different exchange areas for which there is made a separate charge not included in contracts with subscribers for exchange service.

<https://www.gpo.gov/fdsys/pkg/USCODE-2011-title47/html/USCODE-2011-title47-chap5-subchapl-sec153.htm> - Definitions: (55)

Voice over Internet Protocol service

“Voice over Internet Protocol service” means any service that:

1. Enables real-time, two-way voice communication originating from or terminating at the user’s location in Internet Protocol or a successor protocol;
2. Uses a broadband connection from the user’s location; and
3. Permits a user to receive a call that originates on the public switched telephone network and to terminate a call to the public switched telephone network.

<http://www.leg.state.nv.us/Nrs/NRS-704.html#NRS704Sec685> - Internet Protocol-enabled service and Voice over Internet Protocol service: 704.685 - 3. (b)

VoIP Service

Limitations on regulation of Voice over Internet Protocol service; exceptions

Except as otherwise provided in subsection 2, a state agency or political subdivision of the State may not, directly or indirectly, regulate the rates charged for, service or contract terms for, conditions for, or requirements for entry for Internet Protocol-enabled service or Voice over Internet Protocol service.

<http://www.leg.state.nv.us/Nrs/NRS-704.html#NRS704Sec685> - Internet Protocol-enabled service and Voice over Internet Protocol service

Telecommunication Service

Standards and Practices

Customer entitled to written notice of duration of certain calls

1. Except as otherwise provided in subsection 2, each telecommunication provider shall provide timely written notice to a customer of the duration of each call that is billed to the customer, reported in minutes, seconds or any fraction thereof, if the charges for the telecommunication services are calculated, in whole or in part, on the basis of the duration of the call.
2. The provisions of this section do not apply to [measured rate service](#).

<http://www.leg.state.nv.us/Nrs/NRS-704.html#NRS704Sec6875> - Telecommunication Service:

704.6875

Adoption of regulations regarding incumbent local exchange carriers and the obligations of providers of last resort

The Commission shall adopt regulations that establish the obligations of incumbent local exchange carriers as providers of last resort giving due consideration to the status of the incumbent local exchange carriers as either competitive suppliers or small-scale providers of last resort.

<http://www.leg.state.nv.us/Nrs/NRS-704.html#NRS704Sec6878> - Telecommunication Service: 704.6878

Competitive Suppliers

Applicability

1. Except as otherwise provided in this section, any telecommunication provider operating within this State is a competitive supplier that is subject to the provisions of NRS 704.68861 to 704.68887, inclusive.
2. A small-scale provider of last resort is not a competitive supplier that is subject to the provisions of NRS 704.68861 to 704.68887, inclusive, unless the small-scale provider of last resort is authorized by the Commission pursuant to NRS 704.68869 to be regulated as a competitive supplier.

<http://www.leg.state.nv.us/Nrs/NRS-704.html#NRS704Sec68861> - Telecommunication Service: 704.68861

Appendix C

Build of Material Sheets

Note: The tables below are static and may not be up to date, for the most recent updates refer to the [Cisco BoMs Worksheet](https://docs.google.com/a/unlv.edu/spreadsheets/d/1ZjZgqiUxlzVHfpPaG5ZvmuZVTN5RzwhqmfPdRwA8ZaY/edit?usp=sharing) (<https://docs.google.com/a/unlv.edu/spreadsheets/d/1ZjZgqiUxlzVHfpPaG5ZvmuZVTN5RzwhqmfPdRwA8ZaY/edit?usp=sharing>)

Also of note is the pricing on the following BoMs is MSRP pricing from Cisco that does not reflect UNLV discounts. These costs are included for architecture and design purposes and are not reflective of UNLV Telecom's cost of the phone for our customers.

Cisco 8811

Line Number	Part Number	Description	Service Duration (Months)	Lead Time	Unit List Price
-------------	-------------	-------------	---------------------------	-----------	-----------------

1	CP-8811-K9=	Cisco IP Phone 8811	---	21	\$445.00
2	R-UCL-UCM-LIC-K9	Top Level SKU For 9.x/10.x User License - eDelivery	---	2	\$0.00
2.0.1	CON-ECMU-RUCLUCK9	SWSS UPGRADES Top Level SKU For 9.	12	N/A	\$0.00
2.1	LIC-CUCM-10X-ESS-A	UC Manager-10.x Essential User License User	---	21	\$40.00
2.1.0.1	CON-ECMU-LIC0ESSA	SWSS UPGRADES UC Manager-10.x Essential User License	12	N/A	\$6.00
2.2	CUCM-VERS-10.X-XU	CUCM Software Version 10.X Unrestricted	---	21	\$0.00

Cisco 8845

Line Number	Part Number	Description	Service Duration (Months)	Lead Time	Unit List Price
1	CP-8845-K9=	Cisco IP Phone 8845	---	21	\$575.00
2	R-UCL-UCM-LIC-K9	Top Level SKU For 9.x/10.x User License - eDelivery	---	2	\$0.00
2.0.1	CON-ECMU-RUCLUCK9	SWSS UPGRADES Top Level SKU For 9.	12	N/A	\$0.00
2.1	LIC-CUCM-10X-ENH-A	UC Manager-10.x Enhanced Single User License	---	21	\$210.00
2.1.0.1	CON-ECMU-LIC0ENHA	SWSS UPGRADES UC Manager-10.x Enhanced Single User-Und	12	N/A	\$33.00
2.2	CUCM-VERS-10.X	CUCM Software Version 10.X	---	21	\$0.00

Cisco 8861

Line Number	Part Number	Description	Service Duration (Months)	Lead Time	Unit List Price
1	CP-8861-K9=	Cisco IP Phone 8861	---	21	\$695.00
2	R-UCL-UCM-LIC-K9	Top Level SKU For 9.x/10.x User License - eDelivery	---	2	\$0.00
2.0.1	CON-ECMU-RUCLUCK9	SWSS UPGRADES Top Level SKU For 9.	12	N/A	\$0.00
2.1	LIC-CUCM-10X-ENH-A	UC Manager-10.x Enhanced Single User License	---	21	\$210.00
2.1.0.1	CON-ECMU-LIC0ENHA	SWSS UPGRADES UC Manager-10.x Enhanced Single User-Und	12	N/A	\$33.00
2.2	CUCM-VERS-10.X	CUCM Software Version 10.X	---	21	\$0.00

Cisco 8865

Line Number	Part Number	Description	Service Duration (Months)	Lead Time	Unit List Price
1	CP-8865-K9=	Cisco IP Phone 8865	---	21	\$795.00
2	R-UCL-UCM-LIC-K9	Top Level SKU For 9.x/10.x User License - eDelivery	---	2	\$0.00
2.0.1	CON-ECMU-RUCLUCK9	SWSS UPGRADES Top Level SKU For 9.	12	N/A	\$0.00
2.1	LIC-CUCM-10X-ENH-A	UC Manager-10.x Enhanced Single User License	---	21	\$210.00
2.1.0.1	CON-ECMU-LIC0ENHA	SWSS UPGRADES UC Manager-10.x Enhanced Single User-Und	12	N/A	\$33.00
2.2	CUCM-VERS-10.X	CUCM Software Version 10.X	---	21	\$0.00

Cisco 8800 Key Module Expansion

Line Number	Part Number	Description	Service Duration (Months)	Lead Time	Unit List Price
1	CP-BEKEM=	Cisco IP Phone 8800 Key Expansion Module	---	21	\$490.00
2	CP-PWR-CUBE-4=	IP Phone power transformer for the 89/9900 phone series	---	14	\$65.00
3	CP-PWR-CORD-NA=	Power Cord, North America	---	14	\$10.00

Cisco VG204XM Voice Gateway

<TBD>

Cisco VG310 Voice Gateway

Line Number	Part Number	Description	Service Duration (Months)	Lead Time	Unit List Price
1	VG310	Modular 24 FXS Port VoIP Gateway with PVDM3-64	--	21	\$5,400.00
2	SVG3XUK9-15403M	Cisco VG3X0 UNIVERSAL	--	N/A	\$0.00
3	MEM-CF-256MB	256MB Compact Flash for Cisco 1900, 2900, 3900 ISR	--	21	\$0.00
4	CAB-AC	AC Power Cord (North America), C13, NEMA 5-15P, 2.1m	--	14	\$0.00
5	CON-SNT-	SNTC-8X5XNBD Cisco VG310 -	12	N/A	\$449.00

	VG310ICV	Modular 24 FXS Port Voice			
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Useful Life

Product	End of Sale	End of Support	End of Life at UNLV
Cisco IP Phone 8811	None Announced	None Announced	None Announced
Cisco IP Phone 8845	None Announced	None Announced	None Announced
Cisco IP Phone 8861	None Announced	None Announced	None Announced
Cisco IP Phone 8865	None Announced	None Announced	None Announced
Cisco IP Phone 8800 Key Expansion Module (KEM)	None Announced	None Announced	None Announced
Cisco VG310 Analog Gateway	None Announced	None Announced	None Announced

Product specifications

The most recent specifications can be found on <http://www.cisco.com>