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Your Cisco product has been designed to give you many years of safe, reliable operation.

This part of the product documentation is aimed at administrators working with the setup of the Quick Set C20/C20 Plus and Profiles using Codec C20.

Our main objective with this Administrator guide is to address your goals and needs. Please let us know how well we succeeded!

May we recommend that you visit the Cisco web site regularly for updated versions of this guide.

The user documentation can be found on http://www.cisco. com/go/telepresence/docs.

How to use this guide

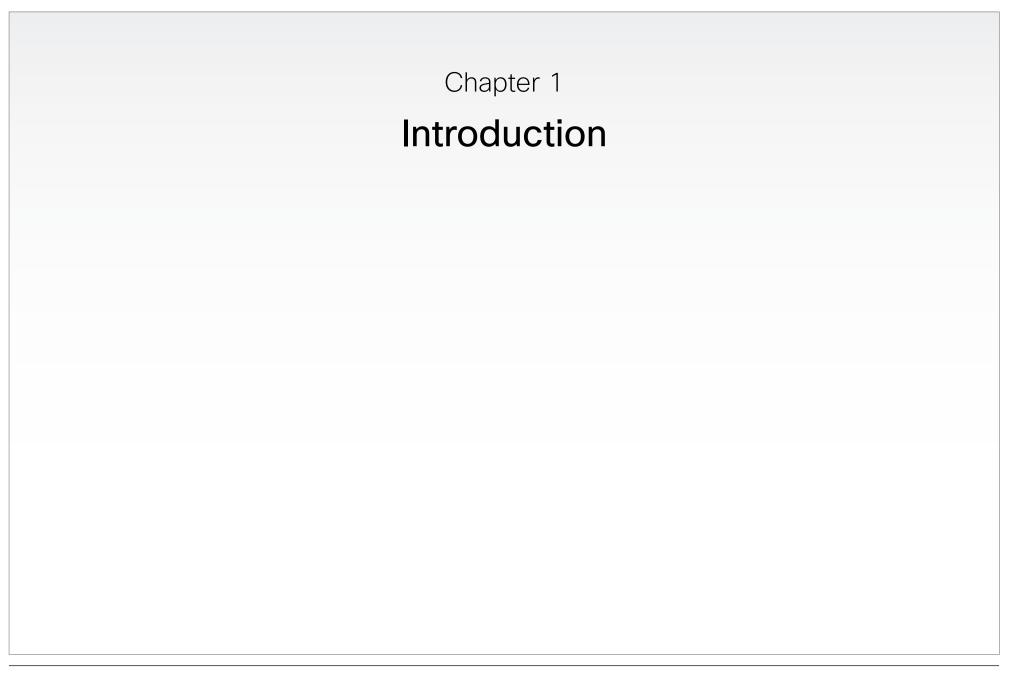
The top menu bar and the entries in the Table of contents are all hyperlinks. You can click on them to go to the topic.

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This document provides you with the information required to administrate your product at an advanced level.

Products covered in this guide:

- Profile 42" using C20
- Quick Set C20 / C20 Plus

User documentation

The user documentation for the Cisco TelePresence systems, running the **TC software**, has several guides suitable for various user groups.

- Video conference room primer
- Video conference room acoustics guidelines
- · Installation guides for the TelePresence systems
- Software release notes for the TC software
- Getting started guide for the TelePresence systems
- User guide for the TelePresence systems
- with Touch controller
- with Remote Control
- Quick reference guides for the TelePresence systems
- Administrator guides for the TelePresence systems
- Camera user guide for the PrecisionHD cameras
- · API reference guides for the Codec C Series
- TC Console user guide for the Codec C Series
- Physical interfaces guides for the Codec C Series
- Regulatory compliance and safety information guides
- Legal & license information for products using TC software

Downloading the user documentation

We recommend you visit the Cisco web site regularly for updated versions of the user documentation.

Go to: ▶ http://www.cisco.com/go/telepresence/docs.

Guidelines how to find the documentation on the Cisco web site are included in the > User documentation on the Cisco web site Appendix.

Software

You can download the software for your product from the Cisco web site, go to:

http://www.cisco.com/cisco/software/navigator.html

Cisco contacts

On our web site you will find an overview of the worldwide Cisco contacts.

Go to: ▶ http://www.cisco.com/web/siteassets/contacts

Corporate Headquarters Cisco Systems, Inc. 170 West Tasman Dr. San Jose, CA 95134 USA

What's new in this version

This section provides an overview of the new and changed advanced settings and new features in the TC5.0 software version.

Software release notes

For a complete overview of the news and changes, we recommend reading the Software Release Notes (TC5).

Go to:
http://www.cisco.com/en/US/products/ps11422/tsd_products_support_series_home.html

Software download

For software download go to: ► http://www.cisco.com/cisco/ software/navigator.html

New features and improvements

Support for native Cisco UCM registration

With TC5 the video systems are able to register to the Cisco Unified Communications Manager (UCM) version 8.6 as a native Cisco device. Supported features are:

- Basic telephony features like call, hold/resume, transfer
- Cisco UCM provisioning
- Cisco UCM phonebook
- Software upgrade

Encrypted calls are not supported.

Support for Cisco TelePresence Multipoint Switch (CTMS)

In TC5 interoperability with CTMS version 1.8 is achieved. The following features are supported:

- Multipoint conferences hosted on CTMS
- Unrestricted 720p/1080p conferences (unrestricted 1080p is not available when there is a CTS system in the conference)
- H.264 GDR (Gradual Decoder Refresh)
- Legacy stream (CIF/360p) to WebEX and MXE
- Informational Black Screen Codes

Encryption is not supported. CTMS calls must be SIP only.

Support for One Button To Push (OBTP) meetings

Both the Touch controller and the OSD (On Screen Display) menu will display scheduled OBTP meetings from CTS-MAN (version 1.8 or later) or TelePresence Management Suite (TMS, version 13.1 or later). Supported features are:

- A reminder for scheduled meetings will appear on screen. Press one button to start the meeting
- Press the Meetings button to see a list of all scheduled meetings
- WebEx indication
- Meeting extension if the meeting is booked using CTS-MAN

Web interface enhancements

New call application with support for:

- Making calls and start/stop presentation
- Selecting source for both main source and presentation
- Volume control
- Microphone mute
- · Local camera control including preset selection
- Layout control
- Diagnostics information
- · Web snapshots of any local source

Cisco Touch enhancements

The user interface has been changed:

- Call rate button. If changed from default, the new call rate is displayed on the button
- Meetings button on the main menu
- Possibility to enable/disable web snapshots when the Touch controller is connected directly to the system/codec (direct pairing).
- · Local camera control, including preset selection

New languages supported:

- Finnish
- French
- German
- Japanese
- Russian
- · Simplified Chinese
- Swedish

Other enhancements

- Local presentation only mode (the presentation is only displayed locally; it is not sent to the remote sites)
- FIPS (The Federal Information Processing Standards) mode is introduced to facilitate FIPS 140-2 certification

Advanced configuration menu changes

New settings

Conference [1..1] Presentation Policy Experimental SystemUnit CrashReporting Mode Experimental SystemUnit CrashReporting URI Experimental CTMSSupport Mode Experimental PacketOverloadHandling WhenDetected Experimental CustomSoftbuttons HoldResume Network [1..1] VLAN Voice Mode Network [1..1] VLAN Voice Vlanld Network [1..1] IEEE8021X TIsVerify Network [1..1] IEEE8021X UseClientCertificate Network [1..1] IEEE8021X Eap TIs Provisioning Connectivity UserInterface TouchPanel DefaultPanel

Settings that are modified

Phonebook Server [1..1] Type OLD: <VCS/TMS/CallWay> NEW: <VCS/TMS/CallWay/CUCM> Provisioning Mode OLD: <Off/TMS/VCS/CallWay/Auto> NEW: <Off/TMS/VCS/CallWay/CUCM/Auto> Video Wallpaper OLD: <None/Growing/Summersky/Custom> NEW: <None/Growing/Summersky/Custom/Waves>

Profile 42" using Codec C20 at a glance

See the installation sheet for your Profile system for instructions on how to install the system.

Codec C20

- Full HD video.
- · High resolution data sharing.
- Rich I/O capabilities.

PrecisionHD 1080p camera

Full HD Camera designed for visual communication with:

- 12 × optical zoom.
- Fast and precise pan, tilt and zoom.

Monitor

42" Full HD LCD, 16:9, 1080 × 1920 resolution.

Audio module

Wide band audio module supporting:

- 20 kHz AAC-LD.
- 1 echo canceller.

Audio amplifier

Optimized DNAM for the Profile system, providing crystal clear and natural audio.

Microphones

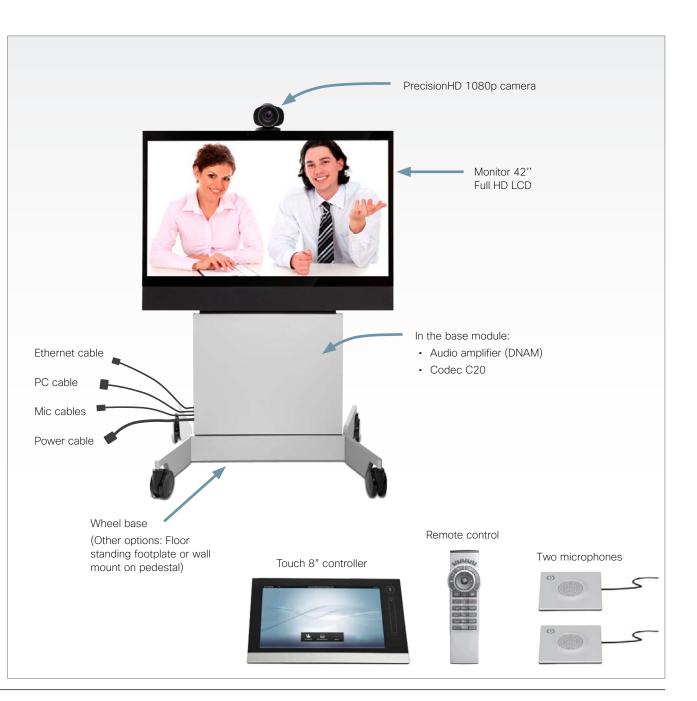
Two microphones with cables.

Operating devices

- Touch 8" controller.
- Remote control with AAA batteries.

Base options

Floor standing footplate, wheel base, or wall mount on pedestal.



Quick Set C20 / C20 Plus at a glance

The Quick Set C20 packs the rich user experience of larger systems into a compact room based solution. Quick Set C20 is a high definition video collaboration system that has options for 1080p30 or 720p60 resolution, while being easy to deploy, simple to manage and intuitive to use. The Quick Set C20 is uniquely positioned to enable small scale deployment of a first time video solution, as well as allowing the enterprise scale an existing video conferencing solution to hundreds of locations throughout the entire organization.

Quick Set C20

The Quick Set C20 includes a Codec C20, PrecisionHD 1080p 4X zoom camera, Table Mic 20 microphone, and remote control. Simply add to any HD display and be ready to meet!

Quick Set C20 Plus

The Quick Set C20 includes a Codec C20, PrecisionHD 1080p 12X zoom camera, Table Mic 20 microphone, and remote control. Simply add to any HD display and be ready to meet!

Design features

- Transforms a flat panel display into a 1080p high definition meeting space.
- Simple, intuitive connections make setup as easy as connecting a DVD player.
- Quick Set C20 provides up to 1080p30 resolution with a 4x zoom camera.
- Quick Set C20 Plus provides up to 1080p30 and 720p60 resolution with a 12x zoom camera.
- Standards-compliant 1080p solution compatible with standards-based video without loss of features.
- Sleek, compact design.

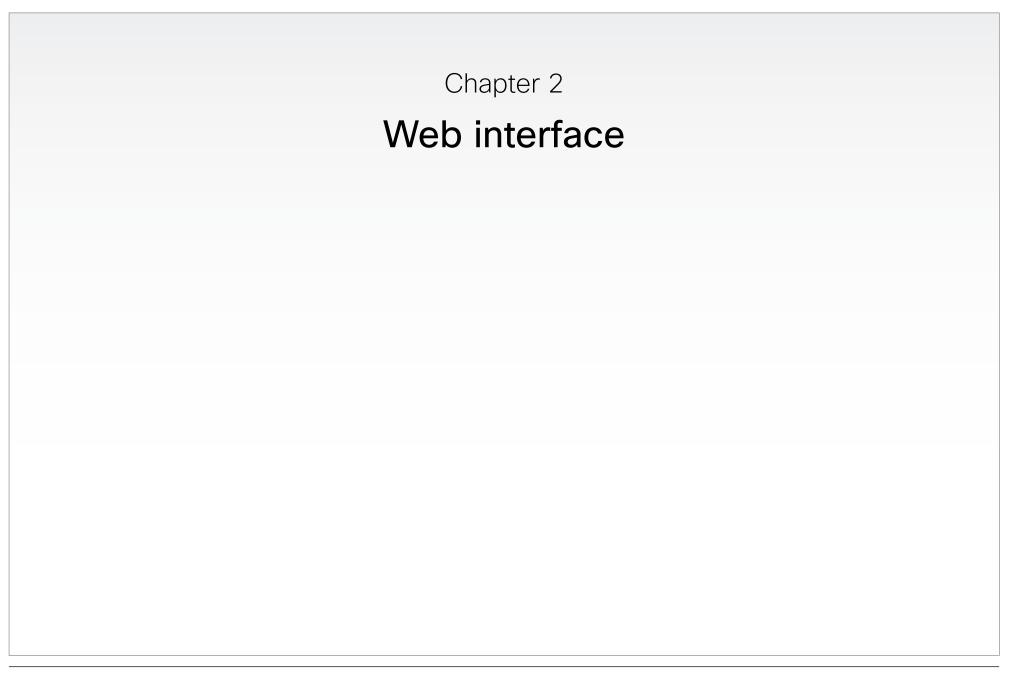
Application features

- · Share multimedia and presentations at the touch of a button.
- Basic API available over IP (Telnet or SSH).
- Dual-display option available.
- HD content sharing with 720p and WXGA.

Performance features

- Optimal definition up to 1080p30.
- H.323/SIP up to 6 Mbps.





Starting the web interface

The web interface provides full configuration access to your video conference system.

You can connect from a computer and administer the system remotely.

In the following you will find information how to use the web interface for system configuration and maintenance.

	🔇 🔊 C 🗙 🏠 🏙	http://192.168.1.128		W .
	cISCO Codec: MySystem	*		-
		Please Sign In		
		Username: Password:		
		Sign In		
		Recommended browsen	rs: Firefox 3.x and Internet Explorer 8	
				-
. Connect to th	ne video system		2. Si	gn i
	ser and enter the	_	Enter the user name and passwo	
address of the	video system in the		your video system and click S	
ldress bar.			The system is delivered with a c	
find the IP add			user named admin with no pas	
	Settings > System ouch controller; or		(i.e. leave the <i>Password</i> field when signing in for the first	
	> Settings > System		NOTE: We strongly recommen	
<i>formation</i> when ontrol and the or			you set a password for the a	
	Screen menu.		user to restrict access to s	-
			configuration, see the next	page
👑 CISCO Codec: MySy	stem +		-	
dife CISCO Codec: MySy (CISCO.	stem +		-	
ahah	(finite)	ontrol () Maintenance	User: admin •	
رالیرالی cisco. ای Diagnostics	Configuration	ontrol () Maintenance		n ou
cisco.	Configuration	ontrol () Maintenance	Sign out Sig Change password Click on you	r use
uluulu cisco. ♪ Diagnostics	Configuration	ontrol () Maintenance H323	Sign out Sig Change password Click on you name and	r use selec
CISCO.	Configuration		Sign out Sig Change password Click on you	r use selec m th

Changing the system/codec password

You sign in to the web interface with the same user name and password as for the video conference system.

NOTE: We strongly recommend that you set a password for the default **admin** user, and any other users with ADMIN rights, to restrict access to system configuration.

CISCO Codec: MySyst								
cisco.							1 Oliaka	
A Diagnostics	% Configuration	着 Call Control	() Maintenand	C9	Liear	admin +	1. Click y user na	-
an Diagnostics	A configuration	and concron	127 Maintenant			ign out	user na	anne
System Informatio	n				Change pas			
General		НЗ	23					
System name:	MySystem		mber:	123456				
Software version:	TC5.0.0	ID:		firstname.lastname@	company.con	n		
						Selec	sword dialog t <i>Change passu</i> e drop down m	word
Current password New password: Repeat new	rd: admin					Selec	t Change passv	word
Change Password Current password New password: Repeat new password: Change password				Enter		Selec in the	t Change passv	ords

The interactive menu

The web interface provides access to tasks and configurations grouped in four categories, which are available from the main menu.

The main menu appears near the top of the page when you have signed in.

The sub-pages for the different tasks are described on the following pages.

Menu availability and user roles

A user possesses one or more user roles. Three user roles are defined: ADMIN, AUDIT and USER. Note that the default admin user holds all three roles. $^{\rm 1}$

The table below shows which menus are available for users holding the different roles.

	ADMIN	AUDIT	USER
Diagnostics			
System Information	\checkmark	\checkmark	\checkmark
Log Files	\checkmark		
XML Files	\checkmark		
Configuration			
Advanced Configuration	\checkmark	\checkmark	
Wallpaper	\checkmark		
Sign In Banner	\checkmark		
Call Control			\checkmark
Maintenance			
Software Upgrade	\checkmark		
Certificate Management	\checkmark		
Audit Certificate		\checkmark	
User Administration	\checkmark		
Restart			~

	dista CISCO Codec: MySyst	em 🗼		
	cisco.			
ain menu	A Diagnostics	% Configuration	쇼울 Call Control () Mainter	nance User: admin •
Diagnostics Configuration	System Information	n		
Call Control	General		H323	
Maintenance	System name.	MySystem	Number.	123456
	Software version:	TC5.0.0	ID:	firstname.lastname@company.com

Diagnostics	Configuration	Call Control	Maintenance
System Information	Advanced Configuration		Software Upgrade
Log Files	Wallpaper		Certificate Management
XML Files	Sign In Banner		Audit Certificate
			User Administration
			Restart

Open sub-pages

When you hover the mouse over a main menu item, the titles of related sub-pages appear. $^{\rm 2}$

Click a sub-page's title to open it. If there are no related sub-pages, click the main menu item itself.

² The illustration lists all the sub-menus. A user not possessing all user roles will only see the sub-set relevant for his type of user.

The system information page

You can find an overview of your video system set-up on the System Information page.

General	X	H323	
System name:	MySystem	Number:	123456
Software version:	TC5.0.0	ID:	firstname.lastname@company.com
Product:	Cisco TelePresence Codec C20	Gatekeeper:	192.168.1.1
Serial number:	ABCD12345678	Status:	Registered
IP address:	192.168.1.128	SIP	
MAC address:	01:23:45:67:89:AB	SIF	
Valid release key:	Yes	URI:	firstname.lastname@company.com
Installed options:	PremiumResolution	Proxy:	192.168.1.1
		Status:	Registered
Last successful logi	n: Sat Oct 1 09:00:00 2011	Unsuccessful logir	n attempts since last logon: 0
Password expires in	: Never		
Password expires in	System information	Login	information
Password expires in		Informa	information ation about recent login ts and password expiry.
Password expires in	System information Information about system name, product type, software version,	Informa	ation about recent login
	System information Information about system name, product type, software version,	Informa	ation about recent login

Log files

The log files are Cisco specific debug files which may be requested by the Cisco support organization if you need technical support.

The current log files are time stamped event log files.

All current log files are archived in a time stamped historical log file each time the system reboots.

Click on a log file and follow the instructions in the dialog box to save or open the file (left or right click depending on your browser).

You can also download all log files as a bundle; click the corresponding link on the web page and follow the instructions.

File Name	Size	Last Modified
all.log	423 KB	Fri Sep 9 14:59:18 2011
application.log	318 KB	Fri Sep 9 14:59:18 2011
audio0.log	1 KB	Thu Sep 8 14:52:47 2011
audio1.log	1 KB	Mon Sep 5 13:50:23 2011
audio2.log		0 0 5 13:50:23 2011
	1 KB	Weu Jep
vpe4.log	1 KB	Fri Sep 9 13:23:27 2011
Dow storical Logs	nload all log files as bundle (tar.gz format)	
File Name	Size	Last Modified
log.tar.gz	39 KB	Tue Aug 30 12:36:11 2011
log.tar.gz.0	92 KB	Tue Jun 14 13:42:41 2011
log.tar.gz.1	61 KB	Fri Jul 8 10:14:00 2011
log.tar.gz.2	77 KB	Mon Jul 11 13:08:08 2011
log.tar.gz.3	39 KB	Tue Aug 30 12:36:11 2011
log.tar.gz.4	62 KB	Thu Apr 14 16:16:35 2011
log.tar.gz.5	253 KB	Fri May 20 12:39:02 2011
log.tar.gz.6	243 KB	Wed May 25 11:46:44 2011
log.tar.gz.7	48 KB	Wed Jun 8 09:28:54 2011
log.tar.gz.8	56 KB	Fri Jun 10 12:24:25 2011
log.tar.gz.9	127 KB	Tue Jun 14 09:56:03 2011
Dow	nload all log files as bundle (tar.gz format)	6

XML Files

XML files

The XML files are structured in a hierarchy building up a database of information about the codec.

Click the file names to open the corresponding file.

- Select configuration.xml to see an overview of the system settings, which are controlled from the web interface or from the API (Application Programmer Interface).
- The information in *status.xml* is constantly updated by the system to reflect system and process changes. The status information is normally monitored from the API.
- Select *command.xml* to see an overview of the commands available to instruct the system to perform an action. The commands are issued from the API.
- Select valuespace.xml to see an overview of all the value spaces used in the system settings, status information, and commands.

XML Files

The XML files are a part of the codecs Application Programmable Interface (API) and contain all current configurations, state etc. on the codec.

The files are protected using Basic Authentication, thus you may be prompted for a user name and password to access the files. Note that this is not necessarily the same user name/password used for accessing the web-interface.

File Name	Description
configuration.xml	List out all configurations
status.xml	List out all statuses
command.xml	Lists all commands
valuespace.xml	Lists all the valuespaces refered to in the XML files

Advanced configuration

The system settings are structured in a hierarchy, and you can navigate to each setting. Click a folder to open or close it, and change a value as explained to the right.

Each system setting is further described in the > Advanced settings chapter.

ipstack Search	Clear	Search functionality	
Audio Cameras Conference 1 Experimental GPIO H323 Network 1		 When searching for words such as ipstack, H323 or SIP, all settings containing these letters will be highlighted. Folders are opened as required. Search: Enter as many characters as needed to get the desired result and click the <i>Search</i> button to initiate the search. 	
Network 1 NetworkPort 2	Network 1	Clear: Click the <i>Clear</i> button to remove the highlighting.	
NetworkServices	Assignment		
Phonebook			
Provisioning	IPStack		
RTP	IPv4 🗸 ok		
SIP	IPv4 IPv6		
Security	1500 ok	(Valid from 576 to 1500)	
SerialPort	Speed		
Standby	Auto 🗸 ok	Changing system settings	
SystemUnit	DNS	Value space: The value space is	
Time	EEE8021X	specified for each setting, either as a	
UserInterface	🖻 IPv4	drop down list or with explanatory text	
🖬 Video	🖻 IPv6	following a text input field.	
	QoS	Edit: Enter a new value in the text input field or select a value from the drop	
nfiguration	RemoteAccess	down list. Press the <i>ok</i> button to save	
avanced Configuration	TrafficControl	the new value.	

Selecting a wallpaper

You can select between a set of predefined wallpapers as background on your display.

If you want the company logo or a custom picture to be displayed on the main display, you may also upload and use a custom wallpaper.

If you use the Touch controller: The custom wallpaper applies to the main display only and will not appear on the Touch controller. When you choose a new predefined wallpaper on the Touch controller, it will replace your custom wallpaper on the main display as well.

Γ	
	Set Active Wallpaper Image
Select a wallpaper	Waves
Select a wallpaper from the drop down list.	
	Upload New Custom Wallpaper
Upload a custom	Only .png files with a maximum resolution of 1920x1280 are supported.
wallpaper file	BrowseUpload
1. Click <i>Browse</i> and	
locate your custom	Current Custom Wallpaper:
wallpaper image file.	
The file format must	
be .png and the	
maximum image size is 1920 × 1280 pixels.	
2. Click Upload to save	
the file to the codec.	
The custom	Sct Active Wallpaper Image
wallpaper is selected	
automatically upon upload.	Custon
apioua.	Upload New Custom Wallpaper
	Only pag files with a maximum resolution of 1920s 1280 are supported Browne Upbad
	New wallpaper image uploaded successfully
	Current Custom Walipaper:
	and the second
	the second s
Configuration	
Advanced Configuration	
Wallpaper	
Sign In Banner	

Sign in banner

If a system administrator wants to provide initial information to all users, he can create a sign in banner. A sign in banner is a message that is displayed to the user before signing in.

The message will be shown when the user signs in using the web interface or the command line interface.

	be displayed as a warning information at log ill be shown to all users before	
Save Sign In Banner	Please Sign Username: Password: Sign In	In that will be shown to all users before they sign in.
	2. Activate the sig	gn in banner
	Press Save Sign In Banner	to activate it.
Enter the text m	er the text message essage, which you want user prior to signing in.	An active sign in banner When a sign in banner is active, it is displayed here.
nfiguration		

Placing calls

You can use the Call Control page of the web interface to initiate a call.

NOTE: Even if the web interface is used to initiate the call it is the video system (display, microphones and loudspeakers) that is used for the call; not the PC running the web interface.

Calling someone

Enter one or more characters in the address input field until the name you want to call appears in the dynamic search list or, enter the complete name or number. Then click *Dial*.

Click End all to disconnect the call.

Sharing contents

Select a Presentation Source from the drop down list, and click the *Start Presentation* button.

Normally a PC is used as presentation source, but other options may be available depending on your system setup.

To stop the content sharing, click the *Stop Presentation* button that becomes visible while sharing.

Main camera Image: Main c	Main Source	Presentation Source	
Call Participant@company.com Participants Layout family: Auto Participant - Connected Call Rate: 768 kbps Show detail	Main camera	PC	V
Call Participant@company.com Total Total Total Total Total Total Total Volume: Mute Mute Mute Participants Layout family: Auto Call Rate: 768 kbps Show detail	Live snapshots	Start Pre	esentation
768 kbps SIP Mute Participants Layout family: Auto participant - Connected Call Rate: 768 kbps Show detail	Call		
participant - Connected Call Rate: 768 kbps Show detai		Volume:	
	Participants Layout family: Auto		
			Show detai
	Address input field		
	Address input field		
Address input field			

Controlling and monitoring a call

You can control and monitor several call features using the Call Control page.

Adjusting the sound volume

Use + and - on the volume control bar to adjust the sound volume of your system (not the keyboard + and - keys).

Deactivating the microphone

Use the *Mute* button when you want to deactivate the microphone for privacy reasons.

When the microphone is muted, the button is replaced by an *Unmute* button. Use this button to re-activate the microphone.

Controlling the camera

First, click the *Camera Control* button. Then, in the window that opens, use + and - to adjust the zoom and the arrow keys to adjust the camera's angle.

If a camera preset is defined it is listed to the right. Apply the preset by clicking its name.

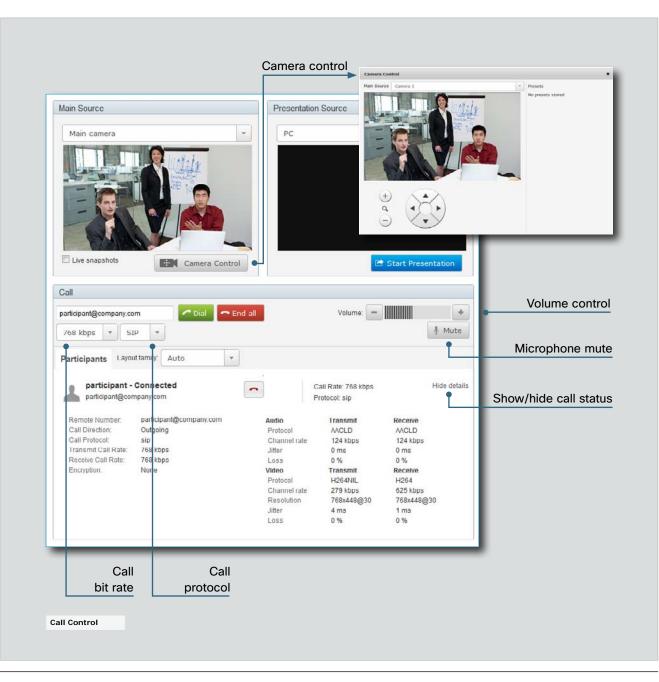
Call settings

When you load the Call Control page, the default call bit rate and the default call protocol are shown in the *Call bit rate* and *Call protocol* boxes, respectively. If preferred, you can select another bit rate or another protocol from the drop down lists. You can not change these settings during a call.

Call status

Click *Show details* to provide information on call rate, encryption, as well as important video and audio parameters.

Hide details removes the information.



Local layout control

You can select a local layout using the Call Control page.

The term layout is used to describe the various ways a video conversation appear on screen. Different types of meetings will require different layouts.

Each layout will typically specify a screen layout well suited when you are not in a meeting or you are in a meeting with one, two or three parties; when the meeting does or does not involve a second video stream for presentations; when the screen aspect ratio is 4:3 or 16:9.

lain Source	Pi	resentation Source	
Main camera	• amera Control	PC	resentation
Call 768 kbps SIP Participants Layout family: Auto	Dial	Volume: –	+ J Mute
lo calls connected			
ect a layout ect your preferred layout in the			
o down menu. The layout may be changed while in a call.			

Taking snapshots

Snapshots of what the video system's camera captures can be obtained from the Call Control page, provided that the feature has been enabled on the video system.

This feature might come in handy when administering the video system from a remote location, e.g. to check the camera view.

To use web snapshots you have to sign in with ADMIN credentials.

Enabling the live snapshot feature

NOTE: The live snapshot feature is disabled by default.

The live snapshot feature can be enabled using the Touch controller, the remote control and on screen menu, or the command line interface.

- Touch controller: Tap More > Settings > Administrator Settings > Web Snapshots and select On.
- Remote control and on screen menu: Go to the Advanced configuration menu, navigate to Video > AllowWebSnapshots and select On.
- Command line interface: Enter the following command: xConfiguration Video AllowWebSnapshots <Off/On>

	Presentation Sourc		Main Source
-	PC	-	Main camera
Start Presentation		Camera Control	Live snapshots
			Call
e: - +	v	Dial	768 kbps 🔻 SIP
		ly: Auto 💌	Participants Layout fam
			No calls connected
	ake live snapshots		Main source display area
	While the <i>Live snapshots</i> box is checked, a snapshot is taken approximately every two seconds. The snapshots are displayed in the Main source display area.		Snapshots are displayed here.
a snapshot is taken approximately every two seconds. The snapshots are displayed			

Upgrading the system software

From the Upgrade Software page you can initiate software upgrades and add a release key and option keys.

Software versions

This video conference system is using TC software.

NOTE: Contact your system administrator if you have questions about the software version.

Software release notes and upgrade files

For a complete overview of the news and changes, we recommend reading the Software Release Notes (TC5).

Go to: http://www.cisco.com/en/US/products/ps11422/ tsd_products_support_series_home.html

Downloading new software

For software download, go to: > http://www.cisco.com/cisco/ software/navigator.html

Release key

The release key is required to be able to use the released software. A new release key is required for every major software release (e.g. from TC4.x to TC5.x).

Contact your Cisco representative to obtain the release key.

Option keys

Option keys allow for extended functionality of the system. The keys are required to activate the optional functionality. You may have several option keys in your system.

The available options are:

- Premium resolution
- High definition
- Dual display

Contact your Cisco representative to obtain the option keys.

Upgrade Software		
Current software version: TC5	.0.0	
	Browse_	
Upgrade		
If you are upgrading from one	e major software version to another (e.g. from TC 4.x to TC 5.x) please ensu	ure that you have added a new release
key for this software version added.	before you do the upgrade. Failing to do so will leave the device in an unus	able state until a correct release key is
Add Release Key		
A	vdd	
	I for every major software version. Make sure you have this key available p	
	tative to obtain the required release key for this codec. Release keys are ba r software version number. The serial number for this codec is	
Option keys allow for extend	dd ed functionality of the codec. Contact Your Cisco representative for informa n keys are based on the unique serial number of the codec. The serial number	
	1. Add the release and option keys	2. Upgrade the software on the code
	T. Add the release and option keys	
	Contact your Cisco representative to	i. Before you can start the upgrade you
	Contact your Cisco representative to obtain the required key(s). If you will add	must download the software upgrade fi
	Contact your Cisco representative to obtain the required key(s). If you will add both a release key and one or more option	must download the software upgrade fi The file format is "s52000tc5_0_0.pkg
	Contact your Cisco representative to obtain the required key(s). If you will add both a release key and one or more option keys, the correct procedure will be:	must download the software upgrade fi The file format is "s52000tc5_0_0.pkg
	Contact your Cisco representative to obtain the required key(s). If you will add both a release key and one or more option keys, the correct procedure will be: i. Enter the <i>release key</i> and press <i>Add</i> .	must download the software upgrade fi The file format is "s52000tc5_0_0.pkg (each software version has a unique file name).
	Contact your Cisco representative to obtain the required key(s). If you will add both a release key and one or more option keys, the correct procedure will be: i. Enter the <i>release key</i> and press <i>Add</i> . Key format: "1TC001-1-0C22E348"	 must download the software upgrade f The file format is "s52000tc5_0_0.pkg (each software version has a unique file name). ii. Press <i>Browse</i> and select the .PKG file
	Contact your Cisco representative to obtain the required key(s). If you will add both a release key and one or more option keys, the correct procedure will be: i. Enter the <i>release key</i> and press <i>Add</i> . Key format: "1TC001-1-0C22E348" (each system will have a unique key).	 must download the software upgrade fi The file format is "s52000tc5_0_0.pkg (each software version has a unique file name). ii. Press <i>Browse</i> and select the .PKG file iii. Press the <i>Upgrade</i> button to start the
aintenance	Contact your Cisco representative to obtain the required key(s). If you will add both a release key and one or more option keys, the correct procedure will be: i. Enter the <i>release key</i> and press <i>Add</i> . Key format: "1TC001-1-0C22E348" (each system will have a unique key). ii. Enter the <i>option key</i> and press <i>Add</i> .	 must download the software upgrade f The file format is "s52000tc5_0_0.pkg (each software version has a unique file name). ii. Press <i>Browse</i> and select the .PKG file iii. Press the <i>Upgrade</i> button to start the installation.
aintenance oftware Upgrade	Contact your Cisco representative to obtain the required key(s). If you will add both a release key and one or more option keys, the correct procedure will be: i. Enter the <i>release key</i> and press <i>Add</i> . Key format: "1TC001-1-0C22E348" (each system will have a unique key).	 must download the software upgrade f The file format is "s52000tc5_0_0.pkg (each software version has a unique file name). ii. Press <i>Browse</i> and select the .PKG file iii. Press the <i>Upgrade</i> button to start the

iii. If you have more than one option key,

add the remaining keys.

process to complete. You can follow the progress on this page. When the upgrade is successfully completed a message will appear. The installation process may take up to 30 minutes.

Audit Certificate

Restart

User Administration

Certificate management

The SSL certificate is a text file which verifies the authenticity of your video conference system. The certificate may be issued by a certificate authority (CA). Other parties can check this certificate before setting up communication with you.

The list of trusted CA certificates is a list containing the SSL certificates of all parties that you want your system to trust.

SSL Certificate		
HTTPS certificate (PEM format):	Browse_	
Private key (PEM format):	Browse_	
Passphrase:		
Upload		
rusted CA Certificates		
rusted CA list file (PEM format):	Browse_	

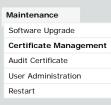
Uploading the trusted CA certificates list

To install the trusted CA certificates list, you will need the following:

• Trusted CA list file (.PEM format).

Contact your system administrator to obtain the required file.

- 1. Press *Browse...* and locate the file with the Trusted CA list (.PEM format).
- 2. Press *Upload* to upload the certificate list to your system.



Uploading the SSL certificate

To install the SSL certificate, you will need the following:

- HTTPS certificate (.PEM format)
- Private key (.PEM format)
- Passphrase (optional)

Contact your system administrator to obtain the required files.

- 1. Press *Browse...* and locate the HTTPS certificate file (.PEM format).
- 2. Press *Browse...* and locate the Private key file (.PEM format).
- 3. Enter the Passphrase.
- 4. Press *Upload* to upload the certificate to your system.

The audit certificate list

If you want to use the ExternalSecure audit logging mode, you must upload a list of trusted audit certificates to the video conference system. This list covers all audit servers that your system shall trust.

In the ExternalSecure audit logging mode audit logging information will only be sent to entities holding a valid audit certificate.

NOTE: You should always upload the audit certificate list before enabling secure audit logging.

About audit logging

Audit logging records all sign in activity and configuration changes on the system.

Audit logging is disabled by default. You can enable audit logging using the on-screen menu or the web interface.

1. Upload the audit certificate list

To install the audit certificate, you will need:

Audit list file (.PEM format)

Contact your system administrator to obtain the required file.

- i. Press *Browse...* and locate the file with the audit list file (.PEM format).
- ii. Press *Upload* to upload the certificate to your system.

rusted CA list file (PEM f	format):	Browse_
rusted CA list file (PEM f	format):	Browse_

2. Enable secure audit logging

When you have uploaded the audit certificate list you must enable secure audit logging:

- Navigate to Advanced Configuration
 Security > Audit > Server and enter the IP address and Port number of the audit server.
- Navigate to Advanced Configuration > Security > Audit > Logging > Mode and select ExternalSecure.

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Software Upgrade
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SIP Security Audit Cogging Mode ExtematiScore Server Address (Length must be from 0 to 64) Port	Advanced Configuration	
Cameras Conference 1 Experimental SIP Security Category Mode ExternatSecure Server Address Contror Category Contro Category Contro Category Contro Category Catego	audit	Search Dear.
Conference 1 Experimental SIP Security Addit Congoing Mode ExternatScore K Conterior Server Address (Length must be from 0 to 64) Port	Audio	
Experimental SIP Security Audit Congang Mode ExternetScove • • • • ConError Server Address dets (Length must be from 0 to 64) Port	Cameras	
SIP Security Audit Logging Mode ExternatSoure + sk OnError Server Address (Length must be from 0 to 64) Port	Conference 1	
Security Audit Logging Mode Extensibecture Mode Extensibecture (Length must be from 0 to 64) Port	Experimental	
Audit Logging Mode Extensibecture Mode Extensibecture Address (Length must be from 0 to 64) Port	SIP SIP	
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Mode ExternalSecure • • • • • • • • • • • • • • • • • • •	adit 🚰 Audit	
ExternetCoure) v ek OnError Server Address Lek (Length must be from 0 to 64) Port	Cogging	
Conterror Server Address Length must be from 0 to 64) Port		
Address (Length must be from 0 to 64) Port	ExternalSecure +	ok
Address (Length must be from 0 to 64) Port	ConError	
(Length must be from 0 to 64) Port	Server	
Port	Address	100 M-10
		(Length must be from 0 to 64)
	Port	
\$14 (Valid from 0 to 65535)	514	ek (Valid from 0 to 65535)
Ca Session	Ca Session	
Carl SerialPort	SerialPort	
Standby	Standby	

User administration

From this page you can manage the user accounts of your video conference system. You can create new user accounts, edit the details of existing users, and delete users.

The default user account

The system comes with a default administrator user account with username admin and no password set. The admin user has full access rights, and it is highly recommended to set a password for this user.

Read more about passwords in the $\,\blacktriangleright\,$ Password protection chapter.

About user roles

A user account must hold one or a combination of several **user roles**. Three user roles exist, representing different rights:

- ADMIN: A user holding this role can create new users and change all settings, except the security audit settings. He cannot upload audit certificates.
- USER: A user holding this role can make calls and search the phonebook.
- AUDIT: A user holding this role can change the security audit configurations and upload audit certificates.

It is important to note that these three roles have nonoverlapping rights.

An administrator user account with full access rights, like the default **admin** user, must possess all the three roles.

Security mode

You can enable/disable the strong security mode from this page.

Strong security mode sets very strict password requirements, and requires all users to change their password on next sign in.

Software upload from TMS, web snapshots and making calls from the web interface are prohibited in strong security mode.

User Management User Roles admin ADMIN,USER,AUD	ТІС	Default user account
user1 USER Create new user Security Mode Enable strong security mode		The system comes with admin as the default user account. This user has full access rights.
Maintenance Software Upgrade Certificate Management Audit Certificate	Strong Security Mode WARNING You are now about to enter Strong Security mode, required to adhere to DoD JITC regulations. This will introduce the following: * All users must change their passord/PIN on the next login (including admin) * All new password must meet the following criterias • Minimum 15 characters • Minimum 2 uppercase alphabetic character • Minimum 2 lowercase alphabetic character • Minimum 2 non-alphanumeric (special) character • Not more than 2 consecutive same characters • Be different from the previous 10 password used • Not more than two characters from the previous password can be in the same position * New passwords must be changed at least every 30 days * Passwords per user cannot be changed more than once within 24 hours * 3 failed logins will set the user inactive until an administrator activates him again * SW upload from TMS is not longer possible * Web snapshots is no longer available Cancel without changes I understand the risks of Strong Security Mode Enable Strong Security Mode	Ē

Creating a new user account

1. Press Create new user.

2. Fill in the Username, Password and PIN code, and select the user role(s) for this user account.

As a default the user have to change the password and PIN code when signing in for the first time.

Do not fill in the Distinguished Name (DN) Subject field unless you want to use certificate login on https.

3. Set the *Status* to **Active** to activate the user.

4. Press *Save* to save the changes.

Editing user details

- 1. Select the name of an existing user to open the Editing user window.
- 2. Edit the details.
- 3. Press *Save* to save the changes or *Cancel* to go back one step without storing the information.

Deactivating a user account

- 1. Select the name of an existing user to open the Editing user window.
- 2. Set the Status to Inactive.
- 3. Press Save to save the changes.

NOTE: Always keep at least one user with ADMIN rights Active.

Deleting a user account

- 1. Select the name of the user to open the Editing user window.
- ii. Press Delete.

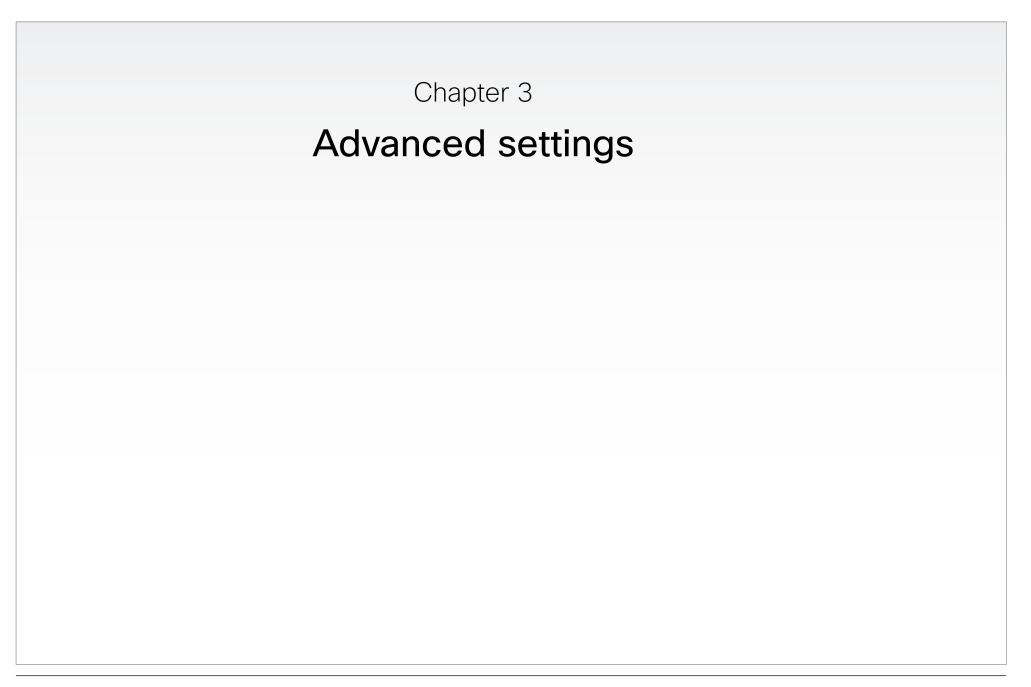
NOTE: Always keep at least one user with ADMIN rights.

User Management User Roles admin ADMIN,U User1 USER	SER,AUDIT			
			- Editing use	er: user1
Create new user			Password:	
			PIN:	
	_		DN Subject:	
	Create			
	Create net	w user		
	Username:			
	Password:			
	PIN:			
			Roles:	
	DN Subject:			☑ USER
			Status:	
				 Active
	Roles:	_		Inactive
		USER		bassword change on next user logon
		AUDIT	Require F	PIN change on next user logon
	Status:	C Active	Save	Delete Cancel
		Inactive		
	Require (password change on next user logon		
		PIN change on next user logon		
Maintenance				
Software Upgrade	Save	Cancel		
Certificate Management				
Audit Certificate	_			
User Administration				

Restarting the system

To restart the system, press *Restart now*. Restarting the system takes a few minutes.

Restart			
You may restart the system	by clicking the restart button		
Restart now			
Maintenance			
Software Upgrade			



Overview of the advanced settings

In the following pages you will find a complete list of the system settings which are configured from the Advanced configuration menu on screen or from the Advanced Configuration page on the web interface. The examples show either the default value or an example of a value.

If you use the menu on screen, open the *Home* menu with the remote control and go to *Settings > Administrator settings > Advanced configuration*.

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Cameras PowerLine Frequency	
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Conference [11] Encryption Mode	
Conference [11] FarEndControl Mode	
Conference [11] FarEndControl SignalCapability	

 If you use the web interface, open a web browser and enter the IP address of your system, sign in, open the *Configuration* tab and select *Advanced Configuration*.

You will find the IP address on the System Information page, which you can access either using the Touch controller (*More > Settings > System Information*) or using the remote control and on-screen menu (*Home > Settings > System Information*).

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The Audio settings

Audio Microphones Mute Enabled

Determine whether audio-mute is allowed or not. The default value is True.

Requires user role: ADMIN

Value space: <True/InCallOnly>

True: Muting of audio is always available.

InCallOnly: Muting of audio is only available when the device is in a call. When Idle it is not possible to mute the microphone. This is useful when an external telephone service/audio system is connected via the codec and is to be available when the codec is not in a call. When set to InCallOnly this will prevent the audio-system from being muted by mistake.

Example: Audio Microphones Mute Enabled: True

Audio SoundsAndAlerts KeyTones Mode

The system can produce a sound every time a key on the remote control is pressed.

Requires user role: USER

Value space: <On/Off>

On: There will be a sound indicator when pressing keys on the remote control. *Off:* The remote control Key Tones is switched off.

Example: Audio SoundsAndAlerts KeyTones Mode: Off

Audio SoundsAndAlerts RingTone

Select the ring tone for incoming calls.

Requires user role: USER

Value space: <Marbles/IceCrystals/Polaris/Alert/Discreet/Fantasy/Jazz/ Nordic/Echo/Rhythmic>

Range: Select a tone from the list of ring tones.

Example: Audio SoundsAndAlerts RingTone: Jazz

Audio SoundsAndAlerts RingVolume

Sets the ring tone volume for an incoming call. Requires user role: USER Value space: <0..100> *Range:* The value goes in steps of 5 from 0 to 100 (from -34.5 dB to 15 dB). Volume 0 = Off. Example: Audio SoundsAndAlerts RingVolume: 50

Audio Volume

Set the volume on the loudspeaker.

Requires user role: USER

Value space: <0..100>

Range: The value goes in steps of 5 from 0 to 100 (from -34.5 dB to 15 dB). Value 0 = Off. **Example:** Audio Volume: 70

The Cameras settings

Cameras PowerLine Frequency

Applies to cameras supporting PowerLine frequency anti-flickering, i.e PrecisionHD 1080p cameras.

Requires user role: ADMIN

Value space: <Auto/50Hz/60Hz>

Auto: Set to Auto to enable power frequency auto detection in the camera. *50Hz:* Set to 50 Hz. *60Hz:* Set to 60 Hz.

Example: Cameras PowerLine Frequency: Auto

Cameras Camera [1..1] Backlight

The backlight functionality compensates for light shining directly at the camera (usually the sun entering the window) to avoid a too dark image from the room.

Requires user role: ADMIN

Value space: <On/Off> On: Turn on the camera backlight. Off: Turn off the camera backlight.

Example: Cameras Camera 1 Backlight: Off

Cameras Camera [1..1] Brightness Mode

Set the camera brightness mode.

Requires user role: ADMIN

Value space: <Auto/Manual>

Auto: The camera brightness is automatically set by the system. *Manual:* Enable manual control of the camera brightness, e.g. the level of the brightness level setting will be used for the camera.

Example: Cameras Camera 1 Brightness Mode: Auto

Cameras Camera [1..1] Brightness Level

Set the brightness level. NOTE: Requires the Camera Brightness Mode to be set to Manual.

Requires user role: ADMIN

Value space: <1..31>

Range: Select a value from 1 to 31.

Example: Cameras Camera 1 Brightness Level: 1

Cameras Camera [1..1] Flip

With Flip mode (vertical flip) you can flip the image upside down.

Requires user role: ADMIN

Value space: <Auto/On/Off>

Auto: When the camera is placed upside down the image is automatically flipped upside down. Use this setting with cameras that can be mounted upside down, and that can auto detect that the camera is mounted upside down.

On: When enabled the video on screen is flipped. This setting is used with cameras that can be mounted upside down, but cannot auto detect that the camera is mounted upside down. *Off:* Display the video on screen the normal way.

Example: Cameras Camera 1 Flip: Off

Cameras Camera [1..1] Focus Mode

Set the camera focus mode.

Requires user role: ADMIN

Value space: <Auto/Manual>

Auto: When set to Auto the focus will be updated throughout the call. When moving the camera, the system will use auto focus for a few seconds to set the right focus of the new camera position. After a few seconds auto focus is turned off to prevent continuous focus adjustments of the camera.

Manual: Turn the autofocus off and adjust the camera focus manually.

Example: Cameras Camera 1 Focus Mode: Auto

Cameras Camera [1..1] Gamma Mode

Applies to cameras which supports gamma mode. The Gamma Mode setting enables for gamma corrections. Gamma describes the nonlinear relationship between image pixels and monitor brightness. The Cisco TelePresence PrecisionHD 720p camera supports gamma mode. The PrecisionHD 1080p camera does not support gamma mode.

Requires user role: ADMIN

Value space: <Auto/Manual>

Auto: Auto is the default and the recommended setting.

Manual: In severe light conditions, you may switch mode to manual and specify explicitly which gamma table to use by setting the Gamma Level.

Example: Cameras Camera 1 Gamma Mode: Auto

Cameras Camera [1..1] Gamma Level

By setting the Gamma Level you can select which gamma correction table to use. This setting may be useful in difficult lighting conditions, where changes to the brightness setting does not provide satisfactory results. NOTE: Requires the Gamma Mode to be set to Manual.

Requires user role: ADMIN

Value space: <0..7> Range: Select a value from 0 to 7.

Example: Cameras Camera 1 Gamma Level: 0

Cameras Camera [1..1] IrSensor

The IR sensor LED is located in the front of the camera and flickers when the IR sensor is activated from the remote control. Both the Codec C Series and PrecisionHD camera have IR sensors, and only one of them needs to be enabled at the time.

Requires user role: ADMIN

Value space: <On/Off>

On: Enable the IR sensor on the camera.

Off: Disable the IR sensor on the camera.

Example: Cameras Camera 1 IrSensor: On

Cameras Camera [1..1] Mirror

With Mirror mode (horizontal flip) you can mirror the image on screen.

Requires user role: ADMIN

Value space: <Auto/On/Off>

Auto: When the camera is placed upside down the image is automatically mirrored. Use this setting with cameras that can be mounted upside down, and that can auto detect that the camera is mounted upside down.

On: See the selfview in mirror mode, e.g. the selfview is reversed and the experience of selfview is as seeing yourself in a mirror.

Off: See the selfview in normal mode, e.g. the experience of selfview is as seeing yourself as other people see you.

Example: Cameras Camera 1 Mirror: Off

Cameras Camera [1..1] Whitebalance Mode

Set the camera whitebalance mode.

Requires user role: ADMIN

Value space: <Auto/Manual>

Auto: The camera will continuously adjust the whitebalance depending on the camera view. *Manual:* Enables manual control of the camera whitebalance, e.g. the level of the whitebalance level setting will be used for the camera.

Example: Cameras Camera 1 Whitebalance Mode: Auto

Cameras Camera [1..1] Whitebalance Level

Set the whitebalance level. NOTE: Requires the Camera Whitebalance Mode to be set to manual.

Requires user role: ADMIN

Value space: <1..16> Range: Select a value from 1 to 16.

Example: Cameras Camera 1 Whitebalance Level: 1

Cameras Camera [1..1] DHCP

Applies to cameras which supports DHCP. The Cisco TelePresence PrecsisionHD 1080p camera supports DHCP. The camera must be connected to a LAN. When set, the command enables support for SW upgrade of daisy chained cameras. It will enable the camera's DHCP function and force start of MAC and IP address retrieval. Remember to reset the DHCP when the camera is no longer connected to a LAN.

Requires user role: ADMIN

Value space: <On/Off>

On: Enable DHCP in the camera. The camera is automatically re-booted. After re-boot the DHCP is started and the IP address will be retrieved. Run the commnand "xStatus Camera" for result.

Off: Disable DHCP in the camera. NOTE: This setting should be applied when the camera is not connected to a LAN.

Example: Cameras Camera 1 DHCP: Off

The Conference settings

Conference [1..1] AutoAnswer Mode

Set the AutoAnswer mode.

Requires user role: ADMIN

Value space: <On/Off>

On: Enable AutoAnswer to let the system automatically answer all incoming calls.

Off: The incoming calls must be answered manually by pressing the OK key or the green Call key on the remote control.

Example: Conference 1 AutoAnswer Mode: Off

Conference [1..1] AutoAnswer Mute

Determine if the microphone shall be muted when an incoming call is automatically answered. NOTE: Requires the AutoAnswer Mode to be enabled.

Requires user role: ADMIN

Value space: <On/Off>

On: The incoming call will be muted when automatically answered. *Off:* The incoming call will not be muted.

Example: Conference 1 AutoAnswer Mute: Off

Conference [1..1] AutoAnswer Delay

Define how long (in seconds) an incoming call has to wait before it is answered automatically by the system. NOTE: Requires the AutoAnswer Mode to be enabled.

Requires user role: ADMIN

Value space: <0..50>

Range: Select a value from 0 to 50 seconds.

Example: Conference 1 AutoAnswer Delay: 0

Conference [1..1] MicUnmuteOnDisconnect Mode

Determine if the microphones shall be unmuted automatically when all calls are disconnected. In a meeting room or other shared resources this could be done to prepare the system for the next user.

Requires user role: ADMIN

Value space: <On/Off>

- On: Un-mute the microphones after the call is disconnected.
- Off: If muted, let the microphones remain muted after the call is disconnected.

Example: Conference 1 MicUnmuteOnDisconnect Mode: On

Conference [1..1] DoNotDisturb Mode

Determine if there should be an alert on incoming calls.

Requires user role: USER

Value space: <On/Off>

On: All incoming calls will be rejected, with no alert. The calling side will receive a busy signal when trying to call the codec. A message will display on screen, telling that Do not disturb is turned on, together with an option to turn off the Do not disturb. When turning off the Do not disturb mode you will see a list of the calls that have been rejected. *Off:* The incoming calls will be alerted.

Uff: The incoming calls will be alerted

Example: DoNotDisturb Mode: Off

Conference [1..1] FarEndControl Mode

Lets you decide if the remote side (far end) should be allowed to select your video sources and control your local camera (pan, tilt, zoom).

Requires user role: ADMIN

Value space: <On/Off>

On: Allows the far end to be able to select your video sources and control your local camera (pan, tilt, zoom). You will still be able to control your camera and select your video sources as normal.

Off: The far end is not allowed to select your video sources or to control your local camera (pan, tilt, zoom).

Example: Conference 1 FarEndControl Mode: On

Conference [1..1] FarEndControl SignalCapability

Set the far end control (H.224) signal capability mode.

Requires user role: ADMIN

Value space: <On/Off>

On: Enable the far end control signal capability. *Off:* Disable the far end control signal capability.

Example: Conference 1 FarEndControl SignalCapability: On

Conference [1..1] Encryption Mode

Set the conference encryption mode. A padlock with the text "Encryption On" or "Encryption Off" displays on screen for a few seconds when the conference starts.

Requires user role: ADMIN

Value space: <BestEffort/On/Off>

BestEffort: The system will use encryption whenever possible.

> *In Point to point calls:* If the far end system supports encryption (AES-128), the call will be encrypted. If not, the call will proceed without encryption.

> *In MultiSite calls*: In order to have encrypted MultiSite conferences, all sites must support encryption. If not, the conference will be unencrypted.

On: The system will only allow calls that are encrypted.

Off: The system will not use encryption.

Example: Conference 1 Encryption Mode: BestEffort

Conference [1..1] DefaultCall Protocol

Set the Default Call Protocol to be used when placing calls from the system.

Requires user role: ADMIN

Value space: <H323/Sip>

H.323: Select H.323 to ensure that calls are set up as H.323 calls. *Sip:* Select SIP to ensure that calls are set up as SIP calls.

Example: Conference 1 DefaultCall Protocol: H323

Conference [1..1] DefaultCall Rate

Set the Default Call Rate to be used when placing calls from the system.

Requires user role: ADMIN

Value space: <64..6000>

Range: Select a value between 64 and 6000 kbps

Example: Conference 1 DefaultCall Rate: 768

Conference [1..1] MaxTransmitCallRate

Specify the maximum transmit call rate to be used when placing or receiving calls. Requires user role: ADMIN Value space: <64..6000> Range: Select a value between 64 and 6000 kbps.

Example: Conference 1 MaxTransmitCallRate: 6000

Conference [1..1] MaxReceiveCallRate

Specify the maximum receive call rate to be used when placing or receiving calls.

Requires user role: ADMIN

Value space: <64..6000>

Range: Select a value between 64 and 6000 kbps.

Example: Conference 1 MaxReceiveCallRate: 6000

Conference [1..1] VideoBandwidth Mode

Set the conference video bandwidth mode.

Requires user role: ADMIN

Value space: <Dynamic/Static>

Dynamic: The available transmit bandwidth for the video channels are distributed among the currently active channels. If there is no presentation, the main video channels will use the bandwidth of the presentation channel.

Static: The available transmit bandwidth is assigned to each video channel, even if it is not active.

Example: Conference 1 VideoBandwidth Mode: Dynamic

Conference [1..1] VideoBandwidth MainChannel Weight

The available transmit video bandwidth is distributed on the main channel and presentation channel according to "MainChannel Weight" and "PresentationChannel Weight". If the main channel weight is 2 and the presentation channel weight is 1, then the main channel will use twice as much bandwidth as the presentation channel.

Requires user role: ADMIN

Value space: <1..10> *Range:* 1 to 10.

Example: Conference 1 VideoBandwidth MainChannel Weight: 5

Conference [1..1] VideoBandwidth PresentationChannel Weight

The available transmit video bandwidth is distributed on the main channel and presentation channel according to "MainChannel Weight" and "PresentationChannel Weight". If the main channel weight is 2 and the presentation channel weight is 1, then the main channel will use twice as much bandwidth as the presentation channel.

Requires user role: ADMIN

Value space: <1..10> *Range:* 1 to 10.

Example: Conference 1 VideoBandwidth PresentationChannel Weight: 5

Conference [1..1] PacketLossResilience Mode

Set the packetloss resilience mode. This configuration will only take effect for calls initiated after the configuration is set.

Requires user role: ADMIN

Value space: <0n/0ff> On: Enable the packetloss resilience. Off: Disable the packetloss resilience.

Example: Conference 1 PacketLossResilience Mode: On

Conference [1..1] Presentation Policy

Control how the presentation service is to be performed.

Requires user role: ADMIN

Value space: <LocalRemote/LocalOnly>

LocalRemote: The presentation will be shown locally and sent to remote side. *LocalOnly:* The presentation will only be shown locally.

Example: Conference 1 Presentation Policy: LocalRemote

The H323 settings

H323 NAT Mode

The firewall traversal technology creates a secure path through the firewall barrier, and enables proper exchange of audio/video data when connected to an external video conferencing system (when the IP traffic goes through a NAT router). NOTE: NAT does not work in conjunction with gatekeepers.

Requires user role: ADMIN

Value space: <Auto/On/Off>

Auto: The system will determine if the "NAT Address" or the real IP-address should be used within signalling. This is done to make it possible to place calls to endpoints on the LAN as well as endpoints on the WAN.

On: The system will signal the configured "NAT Address" in place of its own IP-address within Q.931 and H.245. The NAT Server Address will be shown in the startup-menu as: "My IP Address: 10.0.2.1".

Off: The system will signal the real IP Address.

Example: H323 NAT Mode: Off

H323 NAT Address

Enter the external/global IP-address to the router with NAT support. Packets sent to the router will then be routed to the system.

In the router, the following ports must be routed to the system's IP-address:

- * Port 1720
- * Port 5555-5574
- * Port 2326-2485

Requires user role: ADMIN

Value space: <S: 0, 64>

Format: String with a maximum of 64 characters.

Example: H323 NAT Address: ""

H323 Profile [1..1] Authentication Mode

Set the authenticatin mode for the H.323 profile.

Requires user role: ADMIN

Value space: <On/Off>

On: If the H.323 Gatekeeper Authentication Mode is set to On and a H.323 Gatekeeper indicates that it requires authentication, the system will try to authenticate itself to the gatekeeper. NOTE: Requires the Authentication LoginName and Authentication Password to be defined on both the codec and the Gatekeeper.

Off: If the H.323 Gatekeeper Authentication Mode is set to Off the system will not try to authenticate itself to a H.323 Gatekeeper, but will still try a normal registration.

Example: H323 Profile 1 Authentication Mode: Off

H323 Profile [1..1] Authentication LoginName

The system sends the Authentication Login Name and the Authentication Password to a H.323 Gatekeeper for authentication. The authentication is a one way authentication from the codec to the H.323 Gatekeeper, i.e. the system is authenticated to the gatekeeper. If the H.323 Gatekeeper indicates that no authentication is required, the system will still try to register. NOTE: Requires the H.323 Gatekeeper Authentication Mode to be enabled.

Requires user role: ADMIN

Value space: <s: 0, 50> Format: String with a maximum of 50 characters.

Example: H323 Profile 1 Authentication LoginName: ""

H323 Profile [1..1] Authentication Password

The system sends the Authentication Login Name and the Authentication Password to a H.323 Gatekeeper for authentication. The authentication is a one way authentication from the codec to the H.323 Gatekeeper, i.e. the system is authenticated to the gatekeeper. If the H.323 Gatekeeper indicates that no authentication is required, the system will still try to register. NOTE: Requires the H.323 Gatekeeper Authentication Mode to be enabled.

Requires user role: ADMIN

Value space: <S: 0, 50> Format: String with a maximum of 50 characters.

Example: H323 Profile 1 Authentication Password:

H323 Profile [1..1] CallSetup Mode

The H.323 Call Setup Mode defines whether to use a Gatekeeper or Direct calling when establishing H323 calls.

NOTE: Direct H.323 calls can be made even though the H.323 Call Setup Mode is set to Gatekeeper.

Requires user role: ADMIN

Value space: <Direct/Gatekeeper>

Direct: An IP-address must be used when dialling in order to make the H323 call. *Gatekeeper:* The system will use a Gatekeeper to make a H.323 call. When selecting this option the H323 Profile Gatekeeper Address and H323 Profile Gatekeeper Discovery settings must also be configured.

Example: H323 Profile 1 CallSetup Mode: Gatekeeper

H323 Profile [1..1] Gatekeeper Discovery

Determine how the system shall register to a H.323 Gatekeeper.

Requires user role: ADMIN

Value space: <Manual/Auto>

Manual: The system will use a specific Gatekeeper identified by the Gatekeeper's IP-address. *Auto:* The system will automatically try to register to any available Gatekeeper. If a Gatekeeper responds to the request sent from the codec within 30 seconds this specific Gatekeeper will be used. This requires that the Gatekeeper is in auto discovery mode as well. If no Gatekeeper responds, the system will not use a Gatekeeper for making H.323 calls and hence an IP-address must be specified manually.

Example: H323 Profile 1 Gatekeeper Discovery: Manual

H323 Profile [1..1] Gatekeeper Address

Enter the IP address of the Gatekeeper. NOTE: Requires the H.323 Call Setup Mode to be set to Gatekeeper and the Gatekeeper Discovery to be set to Manual.

Requires user role: ADMIN

Value space: <S: 0, 255>

Format: Only the valid IP address format is accepted. An IP address that contains letters (192.a.2.0) or unvalid IP addresses (192.0.1234.0) will be rejected.

Example: H323 Profile 1 Gatekeeper Address: "192.0.2.0"

H323 Profile [1..1] H323Alias E164

The H.323 Alias E.164 defines the address of the system, according to the numbering plan implemented in the H.323 Gatekeeper. The E.164 alias is equivalent to a telephone number, sometimes combined with access codes.

Requires user role: ADMIN

Value space: <S: 0, 30>

Format: Compact string with a maximum of 30 characters. Valid characters are 0-9, * and #.

Example: H323 Profile 1 H323Alias E164: "90550092"

H323 Profile [1..1] H323Alias ID

Lets you specify the H.323 Alias ID which is used to address the system on a H.323 Gatekeeper and will be displayed in the call lists. Example: " firstname.surname@company.com", " My H.323 Alias ID"

Requires user role: ADMIN

Value space: <S: 0, 49>

Format: String with a maximum of 49 characters

Example: H323 Profile 1 H323Alias ID: "firstname.surname@company.com"

H323 Profile [1..1] PortAllocation

The H.323 Port Allocation setting affects the H.245 port numbers used for H.323 call signalling.

Requires user role: ADMIN

Value space: <Dynamic/Static>

Dynamic: The system will allocate which ports to use when opening a TCP connection. The reason for doing this is to avoid using the same ports for subsequent calls, as some firewalls consider this as a sign of attack. When Dynamic is selected, the H.323 ports used are from 11000 to 20999. Once 20999 is reached they restart again at 11000. For RTP and RTCP media data, the system is using UDP ports in the range 2326 to 2487. Each media channel is using two adjacent ports, ie 2330 and 2331 for RTP and RTCP respectively. The ports are automatically selected by the system within the given range. Firewall administrators should not try to deduce which ports are used when, as the allocation schema within the mentioned range may change without any further notice.

Static: When set to Static the ports are given within a static predefined range [5555-6555].

Example: H323 Profile 1 PortAllocation: Dynamic

The Network settings

Network [1..1] Assignment

Define whether to use DHCP or Static IPv4 assignment.

Requires user role: ADMIN

Value space: <Static/DHCP>

Static: Set the network assignment to Static and configure the static IPv4 settings (IP Address, SubnetMask and Gateway).

DHCP: The system addresses are automatically assigned by the DHCP server.

Example: Network 1 Assignment: DHCP

Network [1..1] DNS Domain Name

DNS Domain Name is the default domain name suffix which is added to unqualified names.

Example: If the DNS Domain Name is "company.com" and the name to lookup is "MyVideoSystem", this will result in the DNS lookup "MyVideoSystem.company.com".

Requires user role: ADMIN

Value space: <S: 0, 64> Format: String with a maximum of 64 characters.

Example: Network 1 DNS Domain Name: ""

Network [1..1] DNS Server [1..5] Address

Define the network addresses for DNS servers. Up to 5 addresses may be specified. If the network addresses are unknown, contact your administrator or Internet Service Provider.

Requires user role: ADMIN

Value space: <S: 0, 64> Format: String with a maximum of 64 characters.

Example: Network 1 DNS Server 1 Address: ""

Network [1..1] IPStack

Select which internet protocols the system will support.

Requires user role: ADMIN

Value space: <IPv4/IPv6>

IPv4: IP version 4 is supported.

IPv6: IP version 6 is supported. The IPv4 settings (IP Address, IP Subnet Mask and Gateway) will be disabled.

Example: Network 1 IPStack: IPv4

Network [1..1] IPv4 Address

Enter the static IPv4 network address for the system. Only applicable if the Network Assignment is set to Static.

Requires user role: ADMIN

Value space: <S: 0, 64>

Format: Only the valid IP address format is accepted. An IP address that contains letters (192.a.2.0) or unvalid IP addresses (192.0.1234.0) will be rejected.

Example: Network 1 IPv4 Address: "192.0.2.0"

Network [1..1] IPv4 Gateway

Define the IPv4 network gateway. Only applicable if the Network Assignment is set to Static. Requires user role: ADMIN

Value space: <S: 0, 64>

Format: Compact string with a maximum of 64 characters.

Example: Network 1 IPv4 Gateway: "192.0.2.0"

Network [1..1] IPv4 SubnetMask

Define the IPv4 network subnet mask. Only applicable if the Network Assignment is set to Static.

Requires user role: ADMIN

Value space: <S: 0, 64> Format: Compact string with a maximum of 64 characters.

Example: Network 1 IPv4 SubnetMask: "255.255.25.0"

Network [1..1] IPv6 Address

Enter the static IPv6 network address for the system. Only applicable if the Network IPv6 Assignment is set to Static.

Requires user role: ADMIN

Value space: <S: 0, 64> Format: The IPv6 address of host name.

Network [1..1] IPv6 Gateway

Define the IPv6 network gateway address. Only applicable if the Network IPv6 Assignment is set to Static.

Requires user role: ADMIN

Value space: <S: 0, 64> Format: The IPv6 address of host name.

Network [1..1] IPv6 Assignment

Define whether to use Autoconf or Static IPv6 assignment.

Requires user role: ADMIN

Value space: <Static/Autoconf>

Static: Set the network assignment to Static and configure the static IPv6 settings (IP Address and Gateway).

Autoconf: Enable IPv6 stateless autoconfiguration of the IPv6 network interface. See RFC4862 for a detailed description.

Example: Network 1 IPv6 Assignment: Autoconf

Network [1..1] IPv6 DHCPOptions

Retrieves a set of DHCP options from a DHCPv6 server.

Requires user role: ADMIN

Value space: <On/Off>

On: Enable the retrieval of a selected set of DHCP options from a DHCPv6 server. *Off:* Set to Off when IPv6 Assignment is set to Static.

Example: Network 1 IPv6 Gateway: On

Network [1..1] QoS Mode

The QoS (Quality of Service) is a method which handles the priority of audio, video and data in the network. The QoS settings must be supported by the infrastructure. Diffserv (Differentiated Services) is a computer networking architecture that specifies a simple, scalable and coarsegrained mechanism for classifying, managing network traffic and providing QoS priorities on modern IP networks.

Requires user role: ADMIN

Value space: <Off/Diffserv>

Off: No QoS method is used.

Diffserv: When you set the QoS Mode to Diffserv you must configure the Diffserv sub menu settings (Audio, Data, Signalling and Video).

Example: Network 1 QoS Mode: diffserv

Network [1..1] QoS Diffserv Audio

The Diffserv Audio defines which priority Audio packets should have in an IP network. Enter a priority, which ranges from 0 to 63 for the packets. The higher the number, the higher the priority. These priorities might be overridden when packets are leaving the network controlled by the local network administrator. NOTE: Requires the Network QoS Mode to be set to Diffserv.

Requires user role: ADMIN

Value space: <0..63>

Audio: A recommended value is Diffserv Code Point (DSCP) AF41, which equals the value 34. If in doubt, contact your network administrator. *Range:* Select a value from 0 to 63.

Example: Network 1 QoS Diffserv Audio: 0

Network [1..1] QoS Diffserv Data

The Diffserv Data defines which priority Data packets should have in an IP network. Enter a priority, which ranges from 0 to 63 for the packets. The higher the number, the higher the priority. These priorities might be overridden when packets are leaving the network controlled by the local network administrator. NOTE: Requires the Network QoS Mode to be set to Diffserv.

Requires user role: ADMIN

Value space: <0..63>

Data: A recommended value is Diffserv Code Point (DSCP) AF23, which equals the value 22. If in doubt, contact your network administrator. *Range:* Select a value from 0 to 63.

Example: Network 1 QoS Diffserv Data: 0

Network [1..1] QoS Diffserv Signalling

The Diffserv Signalling defines which priority Signalling packets should have in an IP network. Enter a priority, which ranges from 0 to 63 for the packets. The higher the number, the higher the priority. These priorities might be overridden when packets are leaving the network controlled by the local network administrator. NOTE: Requires the Network QoS Mode to be set to Diffserv.

Requires user role: ADMIN

Value space: <0..63>

Signalling: A recommended value is Diffserv Code Point (DSCP) AF31, which equals the value 26. If in doubt, contact your network administrator.

Range: Select a value from 0 to 63.

Example: Network 1 QoS Diffserv Signalling: 0

Network [1..1] QoS Diffserv Video

The Diffserv Video defines which priority Video packets should have in an IP network. Enter a priority, which ranges from 0 to 63 for the packets. The higher the number, the higher the priority. These priorities might be overridden when packets are leaving the network controlled by the local network administrator. NOTE: Requires the Network QoS Mode to be set to Diffserv.

Requires user role: ADMIN

Value space: <0..63>

Video: A recommended value is Diffserv Code Point (DSCP) AF41, which equals the value 34. If in doubt, contact your network administrator.

Range: Select a value from 0 to 63.

Example: Network 1 QoS Diffserv Video: 0

Network [1..1] IEEE8021X Mode

The system can be connected to an IEEE 802.1X LAN network, with a port-based network access control that is used to provide authenticated network access for Ethernet networks.

Requires user role: ADMIN

Value space: <On/Off> On: The 802.1X authentication is enabled.

Off: The 802.1X authentication is enabled.

Example: Network 1 IEEE8021X Mode: Off

Network [1..1] IEEE8021X TIsVerify

Verification of the server-side certificate of an IEEE802.1x connection against the certificates in the local CA-list when TLS is used. The CA-list must be uploaded to the video system / codec.

This setting takes effect only when Network [1..1] IEEE8021X Eap TIs is enabled (On).

Requires user role: ADMIN

Value space: <Off/On>

Off: When set to Off, TLS connections are allowed without verifying the server-side X.509 certificate against the local CA-list. This should typically be selected if no CA-list has been uploaded to the codec.

On: When set to On, the server-side X.509 certificate will be validated against the local CA-list for all TLS connections. Only servers with a valid certificate will be allowed.

Example: xConfiguration Network 1 IEEE8021X TlsVerify: Off

Network [1..1] IEEE8021X UseClientCertificate

Authentication using a private key/certificate pair during an IEEE802.1x connection. The authentication X.509 certificate must be uploaded to the video system / codec.

Requires user role: ADMIN

Value space: <Off/On>

Off: When set to Off client-side authentication is not used (only server-side).

On: When set to On the client (codec) will perform a mutual authentication TLS handshake with the server.

Example: Network 1 IEEE8021X UseClientCertificate: Off

Network [1..1] IEEE8021X Identity

The 802.1X Identity is the user name needed for 802.1X authentication.

Requires user role: ADMIN

Value space: <S: 0, 64> Format: String with a maximum of 64 characters.

Example: Network 1 IEEE8021X Identity: ""

Network [1..1] IEEE8021X Password

The 802.1X Password is the password needed for 802.1X authentication.

Requires user role: ADMIN Value space: <s: 0, 32> *Format:* String with a maximum of 32 characters.

Example: Network 1 IEEE8021X Password: "***"

Network [1..1] IEEE8021X AnonymousIdentity

The 802.1X Anonymous ID string is to be used as unencrypted identity with EAP (Extensible Authentication Protocol) types that support different tunneled identity, like EAP-PEAP and EAP-TTLS. If set, the anonymous ID will be used for the initial (unencrypted) EAP Identity Request.

Requires user role: ADMIN

Value space: <S: 0, 64>

Format: String with a maximum of 64 characters.

Example: Network 1 IEEE8021X AnonymousIdentity: ""

Network [1..1] IEEE8021X Eap Md5

Set the Md5 (Message-Digest Algorithm 5) mode. This is a Challenge Handshake Authentication Protocol that relies on a shared secret. Md5 is a Weak security.

Requires user role: ADMIN

Value space: <On/Off>

On: The EAP-MD5 protocol is enabled (default). *Off:* The EAP-MD5 protocol is disabled.

Example: Network 1 IEEE8021X Eap Md5: On

Network [1..1] IEEE8021X Eap Ttls

Set the TTLS (Tunneled Transport Layer Security) mode. Authenticates LAN clients without the need for client certificates. Developed by Funk Software and Certicom. Usually supported by Agere Systems, Proxim and Avaya.

Requires user role: ADMIN

Value space: <On/Off>

On: The EAP-TTLS protocol is enabled (default). *Off:* The EAP-TTLS protocol is disabled.

Example: Network 1 IEEE8021X Eap Ttls: On

Network [1..1] IEEE8021X Eap TIs

Enable or disable the use of EAP-TLS (Transport Layer Security) for IEEE802.1x connections. The EAP-TLS protocol, defined in RFC5216, is considered one of the most secure EAP standards. LAN clients are authenticated using client certificates.

Requires user role: ADMIN

Value space: <Off/On>

Off: The EAP-TLS protocol is disabled. *On:* The EAP-TLS protocol is enabled (default)

Example: Network 1 IEEE8021X Eap Tls: On

Network [1..1] IEEE8021X Eap Peap

Set the Peap (Protected Extensible Authentication Protocol) mode. Authenticates LAN clients without the need for client certificates. Developed by Microsoft, Cisco and RSA Security.

Requires user role: ADMIN

Value space: <On/Off>

On: The EAP-PEAP protocol is enabled (default). *Off:* The EAP-PEAP protocol is disabled.

Example: Network 1 IEEE8021X Eap Peap: On

Network [1..1] MTU

Set the Ethernet MTU (Maximum Transmission Unit).

Requires user role: ADMIN

Value space: <576..1500> Range: Select a value from 576 to 1500 bytes.

Example: Network 1 MTU: 1500

Network [1..1] Speed

Set the Ethernet link speed.

Requires user role: ADMIN

Value space: <Auto/10half/10full/100half/100full/1000full> *Auto:* Autonegotiate link speed. *10half:* Force link to 10 Mbps half-duplex. *10full:* Force link to 10 Mbps full-duplex. *100half:* Force link to 100 Mbps half-duplex. *100full:* Force link to 100 Mbps full-duplex.

1000full: Force link to 1 Gbps full-duplex.

Example: Network 1 Speed: Auto

Network [1..1] TrafficControl Mode

Set the network traffic control mode to decide how to control the video packets transmission speed.

Requires user role: ADMIN

Value space: <On/Off>

On: Transmit video packets at maximum 20 Mbps. Can be used to smooth out bursts in the outgoing network traffic.

Off: Transmit video packets at link speed.

Example: Network 1 TrafficControl: On

Network [1..1] RemoteAccess Allow

Filter IP addresses for access to ssh/telnet/HTTP/HTTPS.

Requires user role: ADMIN

Value space: <S: 0, 255>

Format: String with a maximum of 255 characters, comma separated IP adresses or IP range. **Example:** Network 1 RemoteAccess Allow: "192.168.1.231, 192.168.1.182"

Network [1..1] VLAN Voice Mode

Set the VLAN voice mode.

Requires user role: ADMIN

Value space: <Auto/Manual/Off>

Auto: The Cisco Discovery Protocol (CDP), if available, assigns an id to the voice VLAN. If CDP is not available, VLAN is not enabled. The VLAN Voice Mode automatically will be set to Auto when the GUI is used to set the Provisioning Mode to CUCM.

Manual: The VLAN id is set manually using the Network VLAN Voice Vlanld setting. If CDP is available, the manually set value will be overruled by the value assigned by CDP. *Off:* VLAN is not enabled.

Example: Network 1 VLAN Voice Mode: Off

Network [1..1] VLAN Voice VlanId

Set the VLAN voice ID. This setting will only take effect if VLAN Voice Mode is set to Manual.

Requires user role: ADMIN

Value space: <1..4094>

Range: Select a value from 1 to 4094.

Example: Network 1 VLAN Voice VlanId: 1

The NetworkServices settings

NetworkServices Multiway Address

The Multiway address must be equal to the Conference Factory Alias, as configured on the Video Communication Server. The Multiway™ conferencing enables video endpoint users to introduce a 3rd party into an existing call.

Multiway™ can be used in the following situations:

1) When you want to add someone else in to your existing call.

2) When you are called by a 3rd party while already in a call and you want to include that person in the call.

Requirements: The Codec C20 must be running TC3.0 (or later), Codec C90/C60/C40 must be running TC4.0 (or later), EX90/EX60/MX200/MX300 must be running TC4.2 (or later), Video Communication Server (VCS) version X5 (or later) and Codian MCU version 3.1 (or later). Endpoints invited to join the Multiway™ conference must support the H.323 routeToMC facility message if in an H.323 call, or SIP REFER message if in a SIP call.

Requires user role: ADMIN

Value space: <S: 0, 255> Format: String with a maximum of 255 characters.

Example: NetworkServices Multiway Address: "h323:multiway@company.com"

NetworkServices Multiway Protocol

Determine the protocol to be used for Multiway calls. NOTE: Requires a restart of the codec.

Requires user role: ADMIN

Value space: <Auto/H323/Sip>

Auto: The system will select the protocol for Multiway calls. *H323:* The H323 protocol will be used for Multiway calls. *Sip:* The SIP protocol will be used for Multiway calls.

Example: NetworkServices Multiway Protocol: Auto

NetworkServices H323 Mode

Determine whether the system should be able to place and receive H.323 calls or not. NOTE: Requires a restart of the codec.

Requires user role: ADMIN

Value space: <On/Off>

On: Enable the possibility to place and receive H.323 calls (default). *Off:* Disable the possibility to place and receive H.323 calls.

Example: NetworkServices H323 Mode: On

NetworkServices HTTP Mode

Set the HTTP mode to enable/disable access to the system through a web browser. The web interface is used for system management, call management such as call transfer, diagnostics and software uploads.

Requires user role: ADMIN

Value space: <on/Off> On: The HTTP protocol is enabled. Off: The HTTP protocol is disabled.

Example: NetworkServices HTTP Mode: On

NetworkServices HTTPS Mode

HTTPS is a web protocol that encrypts and decrypts user page requests as well as the pages that are returned by the web server.

Requires user role: ADMIN

Value space: <On/Off>

On: The HTTPS protocol is enabled.

Off: The HTTPS protocol is disabled.

Example: NetworkServices HTTPS Mode: On

NetworkServices HTTPS VerifyServerCertificate

When the system connects to an external HTTPS server (like a phonebook server or an external manager), this server will present a certificate to the system to identify itself.

Requires user role: ADMIN

Value space: <On/Off>

On: Requires the system to verify that the server certificate is signed by a trusted Certificate Authority (CA). This requires that a list of trusted CAs are uploaded to the system in advance. *Off:* Do not verify server certificates.

Example: NetworkServices HTTPS VerifyServerCertificate: Off

NetworkServices HTTPS VerifyClientCertificate

When the system connects to a HTTPS client (like a web browser), the client can be asked to present a certificate to the system to identify itself.

Requires user role: ADMIN

Value space: <On/Off>

On: Requires the client to present a certificate that is signed by a trusted Certificate Authority (CA). This requires that a list of trusted CAs are uploaded to the system in advance. *Off:* Do not verify client certificates.

Example: NetworkServices HTTPS VerifyClientCertificate: Off

NetworkServices HTTPS OCSP Mode

Define the support for OCSP (Online Certificate Status Protocol) responder services. The OCSP feature allows users to enable OCSP instead of certificate revocation lists (CRLs) to check certificate status.

Requires user role: ADMIN

Value space: <On/Off> On: Enable OCSP support. Off: Disable OCSP support.

Example: NetworkServices HTTPS OCSP Mode: Off

NetworkServices HTTPS OCSP URL

Specify the URL of an OCSP server. Requires user role: ADMIN Value space: <S: 0, 255> Format: String with a maximum of 255 characters.

Example: NetworkServices HTTPS OCSP URL: "http://ocspserver.company.com:81"

NetworkServices NTP Mode

The Network Time Protocol (NTP) is used to synchronize the time of the system to a reference time server. The time server will subsequently be queried every 24th hour for time updates. The time will be displayed on the top of the screen. The system will use the time to timestamp messages transmitted to Gatekeepers or Border Controllers requiring H.235 authentication. The system will use the time to timestamp messages transmitted to Gatekeepers or Border Controllers that requires H.235 authentication. It is also used for timestamping Placed Calls, Missed Calls and Received Calls.

Requires user role: ADMIN

Value space: <Off/Auto/Manual>

Off: The system will not use an NTP server.

Auto: The system will use the NTP server, by which address is supplied from the DHCP server in the network. If no DHCP server is used, or the DHCP server does not provide the system with a NTP server address, the system will use the static defined NTP server address specified by the user.

Manual: The system will always use the static defined NTP server address specified by the user.

Example: NetworkServices NTP Mode: Manual

NetworkServices NTP Address

Enter the NTP Address to define the network time protocol server address. This address will be used if NTP Mode is set to Manual, or if set to Auto and no address is supplied by a DHCP server.

Requires user role: ADMIN

Value space: <S: 0, 64>

Format: String with a maximum of 64 characters.

Example: NetworkServices NTP Address: "1.ntp.tandberg.com"

NetworkServices SIP Mode

Determine whether the system should be able to place and receive SIP calls or not. NOTE: Requires a restart of the codec.

Requires user role: ADMIN

Value space: <On/Off>

On: Enable the possibility to place and receive SIP calls (default). *Off:* Disable the possibility to place and receive SIP calls.

Example: NetworkServices SIP Mode: On

NetworkServices SNMP Mode

SNMP (Simple Network Management Protocol) is used in network management systems to monitor network-attached devices (routers, servers, switches, projectors, etc) for conditions that warrant administrative attention. SNMP exposes management data in the form of variables on the managed systems, which describe the system configuration. These variables can then be queried (set to ReadOnly) and sometimes set (set to ReadWrite) by managing applications.

Requires user role: ADMIN

Value space: <Off/ReadOnly/ReadWrite>

Off: Disable the SNMP network service. *ReadOnly:* Enable the SNMP network service for queries only. *ReadWrite:* Enable the SNMP network service for both queries and commands.

Example: NetworkServices SNMP Mode: ReadWrite

NetworkServices SNMP Host [1..3] Address

Enter the address of up to three SNMP Managers.

The system's SNMP Agent (in the codec) responds to requests from SNMP Managers (a PC program etc.), e.g. about system location and system contact. SNMP traps are not supported.

Requires user role: ADMIN

Value space: <S: 0, 64> Format: String with a maximum of 64 characters.

Example: NetworkServices SNMP Host 1 Address: ""

NetworkServices SNMP CommunityName

Enter the name of the Network Services SNMP Community. SNMP Community names are used to authenticate SNMP requests. SNMP requests must have a password (case sensitive) in order to receive a response from the SNMP Agent in the codec. The default password is "public". If you have the Cisco TelePresence Management Suite (TMS) you must make sure the same SNMP Community is configured there too. NOTE: The SNMP Community password is case sensitive.

Requires user role: ADMIN

Value space: <S: 0, 50>

Format: String with a maximum of 50 characters.

Example: NetworkServices SNMP CommunityName: "public"

NetworkServices SNMP SystemContact

Enter the name of the Network Services SNMP System Contact. Requires user role: ADMIN Value space: <5: 0, 50> Format: String with a maximum of 50 characters. Example: NetworkServices SNMP SystemContact: ""

NetworkServices SNMP SystemLocation

Enter the name of the Network Services SNMP System Location.

Requires user role: ADMIN

Value space: <S: 0, 50> Format: String with a maximum of 50 characters.

Example: NetworkServices SNMP SystemLocation: ""

NetworkServices SSH Mode

SSH (or Secure Shell) protocol can provide secure encrypted communication between the codec and your local computer.

Requires user role: ADMIN

Value space: <on/Off> On: The SSH protocol is enabled. Off: The SSH protocol is disabled.

Example: NetworkServices SSH Mode: On

NetworkServices SSH AllowPublicKey

Secure Shell (SSH) public key authentication can be used to access the codec.

Requires user role: ADMIN

Value space: <0n/Off> On: The SSH public key is allowed. Off: The SSH public key is not allowed.

Example: NetworkServices SSH AllowPublicKey: On

NetworkServices Telnet Mode

Telnet is a network protocol used on the Internet or Local Area Network (LAN) connections. Requires user role: ADMIN

Value space: <On/Off>

On: The Telnet protocol is enabled.

Off: The Telnet protocol is disabled. This is the factory setting.

Example: NetworkServices Telnet Mode: Off

The Phonebook settings

Phonebook Server [1..1] ID

Enter a name for the external phonebook. Requires user role: ADMIN Value space: <S: 0, 64> *Format:* String with a maximum of 64 characters. Example: Phonebook Server 1 ID: ""

Phonebook Server [1..1] Type

Select the phonebook server type.

Requires user role: ADMIN

Value space: <VCS/TMS/Callway/CUCM>

 $\ensuremath{\textit{VCS}}$: Select VCS if the phonebook is located on the Cisco TelePresence Video Communication Server.

 $\mathit{TMS:}$ Select TMS if the phonebook is located on the Cisco TelePresence Management Suite server.

Callway: Select Callway if the phonebook is to be provided by the Callway subscription service. Contact your Callway provider for more information.

 $\ensuremath{\textit{CUCM}}$ Select CUCM if the phonebook is located on the Cisco Unified Communications Manager.

Example: Phonebook Server 1 Type: TMS

Phonebook Server [1..1] URL

Enter the address (URL) to the external phonebook server.

Requires user role: ADMIN

Value space: <s: 0, 255> Format: String with a maximum of 255 characters.

Example: Phonebook Server 1 URL: "http://tms.company.com/tms/public/ external/phonebook/phonebookservice.asmx"

The Provisioning settings

Provisioning Connectivity

This setting controls how the device discovers whether it should request an internal or external configuration from the provisioning server.

Requires user role: ADMIN

Value space: <Internal/External/Auto>

Internal: Request internal configuration.

External: Request external configuration.

Auto: Automatically discover using NAPTR queries whether internal or external configurations should be requested. If the NAPTR responses have the " e" flag, external configurations will be requested. Otherwise internal configurations will be requested.

Example: Provisioning Connectivity: Auto

Provisioning Mode

It is possible to configure the codec (video system) using a provisioning system / an external manager. This allows video conferencing network administrators to manage many video systems simultaneously.

With this setting you choose which type of provisioning system to use. Provisioning can also be switched off. Contact your provisioning system provider/representative for more information.

Requires user role: ADMIN

Value space: <Off/TMS/VCS/CallWay/CUCM/Auto>

Off: The video system will not be configured by a provisioning system.

TMS: The video system will be configured using TMS (Cisco TelePresence Management System).

VCS: The video system will be configured using VCS (Cisco TelePresence Video Communication Server).

Callway: The video system will be configured using Callway (subscription service). *CUCM:* The video system will be configured using CUCM (Cisco Unified Communications Manager).

Auto: The provisioning server will automatically be selected by the video system.

Example: Provisioning Mode: TMS

Provisioning LoginName

This is the user name part of the credentials used to authenticate the video system with the provisioning server. This setting must be used when required by the provisioning server. If Provisioning Mode is Callway, enter the video number.

Requires user role: ADMIN

Value space: <s: 0, 80> Format: String with a maximum of 80 characters.

Example: Provisioning LoginName: ""

Provisioning Password

This is the password part of the credentials used to authenticate the video system with the provisioning server. This setting must be used when required by the provisioning server. If Provisioning Mode is Callway, enter the activation code.

Requires user role: ADMIN

Value space: <S: 0, 64> Format: String with a maximum of 64 characters. Example: Provisioning Password: ""

Provisioning HttpMethod

Select the HTTP method to be used for the provisioning.

Requires user role: ADMIN

Value space: <GET/POST>

GET: Select GET when the provisiong server supports GET. *POST:* Select POST when the provisiong server supports POST.

Example: Provisioning HttpMethod: POST

Provisioning ExternalManager Address

Enter the IP Address or DNS name of the external manager / provisioning system.

If an External Manager Address (and Path) is configured, the system will send a message to this address when starting up. When receiving this message the external manager / provisioning system can return configurations/commands to the unit as a result.

When using CUCM or TMS provisioning, the DHCP server can be set up to provide the external manager address automatically (DHCP Option 242 for TMS, and DHCP Option 150 for CUCM). An address set in the Provisioning ExternalManager Address setting will override the address provided by DHCP.

Requires user role: ADMIN

Value space: <S: 0, 64>

Format: A valid IP address format or DNS name; a compact string with a maximum of 64 characters.

Example: Provisioning ExternalManager Address: ""

Provisioning ExternalManager Protocol

Determine whether to use secure management or not.

Requires user role: ADMIN

Value space: <http/https>

HTTP: Set to HTTP to disable secure management. Requires HTTP to be enabled in the xConfiguration NetworkServices HTTP Mode setting. *HTTPS:* Set to HTTPS to enable secure management. Requires HTTPS to be enabled in the xConfiguration NetworkServices HTTPS Mode setting.

Example: Provisioning ExternalManager Protocol: HTTP

Provisioning ExternalManager Path

Set the Path to the external manager / provisioning system. This setting is required when several management services reside on the same server, i.e. share the same External Manager address.

Requires user role: ADMIN

Value space: <S: 0, 255> Format: String with a maximum of 255 characters.

Example: Provisioning ExternalManager Path: "tms/public/external/ management/SystemManagementService.asmx"

Provisioning ExternalManager Domain

Enter the SIP domain for the VCS provisioning server.

Requires user role: ADMIN

Value space: <S: 0, 64> Format: String with a maximum of 64 characters.

Example: Provisioning ExternalManager Domain: "any.domain.com"

The RTP settings

RTP Ports Range Start

Specify the first port in the range of RTP ports. See also the "H323 Profile [1..1] PortAllocation" command.

Requires user role: USER Value space: <1024..65502> Range: Select a value from 1024 to 65502. Example: RTP Ports Range Start: 2326

RTP Ports Range Stop

Specify the last RTP port in the range. See also the "H323 Profile [1..1] PortAllocation" command. Requires user role: USER Value space: <1056..65535> Range: Select a value from 1056 to 65535. Example: RTP Ports Range Stop: 2486

The Security settings

Security Audit Server Address

Enter the external/global IP-address to the audit syslog server. IPv6 is not supported. NOTE: Requires a restart of the system for any change to take effect. **Requires user role:** AUDIT **Value space:** <S: 0, 64> *Format:* String with a maximum of 64 characters. **Example:** Security Audit Server Address: ""

Security Audit Server Port

Enter the port of the syslog server that the system shall send its audit logs to. The default port is 514. NOTE: Requires a restart of the system for any change to take effect.

Requires user role: AUDIT

Value space: <0..65535> Range: Select a value from 0 to 65535.

Example: Security Audit Server Port: 514

Security Audit OnError Action

Describes what actions will be taken if connection to the syslog server is lost. This setting is only relevant if Security Audit Logging Mode is set to ExternalSecure.

NOTE: Requires a restart of the system for any change to take effect.

Requires user role: AUDIT

Value space: <Halt/Ignore>

Halt: If a halt condition is detected the unit is rebooted and only the auditor is allowed to operate the unit until the halt condition has passed. When the halt condition has passed the audit logs are re-spooled to the external server. Halt conditions are: A network breach (no physical link), no external syslog server running (or wrong server address or port), TLS authentication failed (if in use), local backup (re-spooling) log full.

Ignore: The system will continue its normal operation, and rotate internal logs when full. When connection is restored it will again send its audit logs to the syslog server.

Example: Security Audit OnError Action: Ignore

Security Audit Logging Mode

Describes where the audit logs are recorded or transmitted.

NOTE: Requires a restart of the system for any change to take effect.

Requires user role: AUDIT

Value space: <Off/Internal/External/ExternalSecure>

Off: No audit logging is performed.

Internal: The system records the audit logs to internal logs, and rotates logs when they are full. *External:* The system sends the audit logs to an external audit syslog server. The external server must support TCP.

ExternalSecure: The system sends encrypted audit logs to an external audit server that is verified by a certificate in the Audit CA list. The Audit CA list file must be uploaded to the codec using the web interface. The common_name parameter of a certificate in the CA list must match the IP address of the syslog server.

Example: Security Audit Logging Mode: Off

Security Session ShowLastLogon

When logging in to the system using SSH or Telnet you will see the Userld, time and date of the last session that did a successful login.

Requires user role: ADMIN

Value space: <Off/On>

On: Set to On to enable the possibility to show information about the last session. *Off:* Set to Off to disable the possibility to show information about the last session.

Example: Security Session ShowLastLogon: Off

Security Session InactivityTimeout

Determines how long the system will accept inactivity from the user before he is automatically logged out.

Requires user role: ADMIN

Value space: <0..10000>

Range: Select a value from 0 to 10000 seconds. 0 means that inactivity will not enforce automatically logout.

Example: Security Session InactivityTimeout: 0

The SerialPort settings

SerialPort Mode

Set the COM 1 serial port to be enabled/disabled.

Requires user role: ADMIN

Value space: <On/Off> On: Enable the COM 1 serial port. Off: Disable the COM 1 serial port.

Example: SerialPort Mode: On

SerialPort BaudRate

Specify the baud rate (data transmission rate, bits per second) for the COM 1 port on the codec. The default value is 38400.

Connection parameters for the COM port: Data bits: 8; Parity: None; Stop bits: 1; Flow control: None.

Requires user role: $\ensuremath{\mathsf{ADMIN}}$

Value space: <9600/19200/38400/57600/115200> Range: Select a baud rate from the baud rates listed (bps).

Example: SerialPort BaudRate: 38400

SerialPort LoginRequired

Determine if login shall be required when connecting to the COM 1 port at the codec.

Requires user role: ADMIN

Value space: <On/Off>

On: Login is required when connecting to the codec through COM 1 port. *Off:* The user can access the codec through COM 1 port without any login.

Example: SerialPort LoginRequired: On

The SIP settings

SIP Profile [1..1] URI

The SIP URI or number is used to address the system. This is the URI that is registered and used by the SIP services to route inbound calls to the system. A Uniform Resource Identifier (URI) is a compact string of characters used to identify or name a resource.

Requires user role: ADMIN

Value space: <S: 0, 255> Format: Compact string with a maximum of 255 characters.

Example: SIP Profile 1 URI: "sip:firstname.lastname@company.com"

SIP Profile [1..1] DisplayName

When configured the incoming call will report the DisplayName instead of the SIP URI. Requires user role: ADMIN

Value space: <s: 0, 255> Format: String with a maximum of 255 characters.

Example: SIP Profile 1 DisplayName: ""

SIP Profile [1..1] Authentication [1..1] LoginName

This is the user name part of the credentials used to authenticate towards the SIP proxy.

Requires user role: ADMIN

Value space: <S: 0, 128> Format: String with a maximum of 128 characters.

Example: SIP Profile 1 Authentication 1 LoginName: ""

SIP Profile [1..1] Authentication [1..1] Password

This is the password part of the credentials used to authenticate towards the SIP proxy.

Requires user role: ADMIN

Value space: <S: 0, 128> Format: String with a maximum of 128 characters.

Example: SIP Profile 1 Authentication 1 Password:

SIP Profile [1..1] DefaultTransport

Select the transport protocol to be used over the LAN.

Requires user role: ADMIN

Value space: <UDP/TCP/Tls/Auto>

UDP: The system will always use UDP as the default transport method.

TCP: The system will always use TCP as the default transport method.

Tls: The system will always use TLS as the default transport method. For TLS connections a SIP CA-list can be uploaded to the video system. If no such CA-list is available on the system then anonymous Diffie Hellman will be used.

Auto: The system will try to connect using transport protocols in the following order: TLS, TCP, UDP.

Example: SIP Profile 1 DefaultTransport: Auto

SIP Profile [1..1] TIsVerify

For TLS connections a SIP CA-list can be uploaded to the video system.

Requires user role: ADMIN

Value space: <On/Off>

On: Set to On to verify TLS connections. Only TLS connections to servers, whose x.509 certificate is validated against the CA-list, will be allowed.

Off: Set to Off to allow TLS connections without verifying them. The TLS connections are allowed to be set up without verifying the x.509 certificate received from the server against the local CA-list. This should typically be selected if no SIP CA-list has been uploaded.

Example: SIP Profile 1 TlsVerify: Off

SIP Profile [1..1] Outbound

The client initiated connections mechanism for firewall traversal, connection reuse and redundancy. The current version supports http://tools.ietf.org/html/draft-ietf-sip-outbound-20.

Requires user role: ADMIN

Value space: <On/Off>

On: Set up multiple outbound connections to servers in the Proxy Address list. *Off:* Connect to the single proxy configured first in Proxy Address list.

Example: SIP Profile 1 Outbound: Off

SIP Profile [1..1] Proxy [1..4] Address

The Proxy Address is the manually configured address for the outbound proxy. It is possible to use a fully qualified domain name, or an IP address. The default port is 5060 for TCP and UDP but another one can be provided. If Outbound is enabled, multiple proxies can be addressed.

Requires user role: ADMIN

Value space: <S: 0, 255>

Format: Compact string with a maximum of 255 characters. An IP address that contains letters (192.a.2.0) or unvalid IP addresses (192.0.1234.0) will be rejected.

Example: SIP Profile 1 Proxy 1 Address: ""

SIP Profile [1..1] Proxy [1..4] Discovery

Select if the SIP Proxy address is to be obtained manually or by using Dynamic Host Configuration Protocol (DHCP).

Requires user role: ADMIN

Value space: <Auto/Manual>

Auto: When Auto is selected, the SIP Proxy address is obtained using Dynamic Host Configuration Protocol (DHCP).

Manual: When Manual is selected, the manually configured SIP Proxy address will be used.

Example: SIP Profile 1 Proxy 1 Discovery: Manual

SIP Profile [1..1] Type

Enables SIP extensions and special behaviour for a vendor or provider.

Requires user role: ADMIN

Value space: <Standard/Alcatel/Avaya/Cisco/Microsoft/Nortel>

- $\it Standard:$ To be used when registering to standard SIP Proxy (tested with Cisco TelePresence VCS and Broadsoft)
- *Alcatel:* To be used when registering to Alcatel-Lucent OmniPCX Enterprise. NOTE: This mode is not fully supported.
- *Avaya:* To be used when registering to Avaya Communication Manager. NOTE: This mode is not fully supported.

Cisco: To be used when registering to Cisco Unified Communication Manager.

Microsoft: To be used when registering to Microsoft LCS or OCS. NOTE: This mode is not fully supported.

Nortel: To be used when registering to Nortel MCS 5100 or MCS 5200 PBX. NOTE: This mode is not fully supported.

Example: SIP Profile 1 Type: Standard

The Standby settings

Standby Control

Determine whether the system should go into standby mode or not.

Requires user role: ADMIN

Value space: <On/Off>

On: Enter standby mode when the Standby Delay has timed out. NOTE: Requires the Standby Delay to be set to an appropriate value. *Off:* The system will not enter standby mode.

Example: Standby Control: On

Standby Delay

Define how long (in minutes) the system shall be in idle mode before it goes into standby mode. NOTE: Requires the Standby Control to be enabled.

Requires user role: ADMIN

Value space: <1..480>

Range: Select a value from 1 to 480 minutes.

Example: Standby Delay: 10

Standby BootAction

Define the camera position after a restart of the codec.

Requires user role: ADMIN

Value space: <None/Preset1/Preset2/Preset3/Preset4/Preset5/Preset6/Preset7/ Preset8/Preset9/Preset10/Preset11/Preset12/Preset13/Preset14/Preset15/ RestoreCameraPosition/DefaultCameraPosition>

None: No action.

Preset1 to Preset15: After a reboot the camera position will be set to the position defined by the selected preset.

RestoreCameraPosition: After a reboot the camera position will be set to the position it had before the last boot.

DefaultCameraPosition: After a reboot the camera position will be set to the factory default position.

Example: Standby BootAction: DefaultCameraPosition

Standby StandbyAction

Define the camera position when going into standby mode.

Requires user role: ADMIN

Value space: <None/PrivacyPosition> *None:* No action. *PrivacyPosition:* Turns the camera to a sideways position for privacy.

 $\label{eq:constraint} Example: \texttt{Standby StandbyAction: PrivacyPosition}$

Standby WakeupAction

Define the camera position when leaving standby mode.

Requires user role: ADMIN

Value space: <None/Preset1/Preset2/Preset3/Preset4/Preset5/Preset6/Preset7/
Preset8/Preset9/Preset10/Preset11/Preset12/Preset13/Preset14/Preset15/
RestoreCameraPosition/DefaultCameraPosition>

None: No action.

Preset1 to Preset15: When leaving standby the camera position will be set to the position defined by the selected preset.

RestoreCameraPosition: When leaving standby the camera position will be set to the position it had before entering standby.

DefaultCameraPosition: When leaving standby the camera position will be set to the factory default position.

Example: Standby WakeupAction: RestoreCameraPosition

The SystemUnit settings

SystemUnit Name

Enter a System Name to define a name of the system unit. If the H.323 Alias ID is configured on the system then this ID will be used instead of the system name. The system name will be displayed:

1) When the codec is acting as an SNMP Agent.

2) Towards a DHCP server.

Requires user role: ADMIN

Value space: <s: 0, 50> Format: String with a maximum of 50 characters.

Example: SystemUnit Name: "Meeting Room"

SystemUnit MenuLanguage

Select the language to be used in the menus on screen.

Requires user role: USER

Value space: <English/ChineseSimplified/ChineseTraditional/Czech/Danish/ Dutch/Finnish/French/German/Hungarian/Italian/Japanese/Korean/Norwegian/ Polish/PortugueseBrazilian/Russian/Spanish/SpanishLatin/Swedish/Turkish>

Example: SystemUnit MenuLanguage: English

SystemUnit ContactInfo Type

Describes which parameter to put in the status field in the upper left corner on the screen display. The information can also be read with the command xStatus SystemUnit ContactInfo.

Requires user role: ADMIN

Value space: <Auto/None/IPv4/IPv6/H323Id/E164Alias/SipUri/SystemName>

Auto: Shows the address which another system can dial to reach this system, depending on the default call protocol and system registration.

None: Do not show any contact information.

IPv4: Shows the IPv4 address as the contact information.

IPv6: Shows the IPv6 address as the contact information.

H323Id: Shows the H323 ID as the contact information.

E164Alias: Shows the H323 E164 Alias as the contact information.

SipUri: Shows the SIP URI as the contact information.

SystemName: Shows the system name as the contact information.

Example: SystemUnit ContactInfo Type: Auto

SystemUnit Type

Select whether the video system is for personal use or to be used in a multiuser environment. It is highly recommended not to use the default setting.

Requires user role: ADMIN

Value space: <Personal/Shared>

Personal: Set to Personal when the system is for personal use.

Shared: Set to Shared when the system is used in a multiuser environment.

Example: SystemUnit Type: Shared

SystemUnit CallLogging Mode

Set the call logging mode for calls that are received or placed by the system. The call logs may then be viewed via the web interface or using the xHistory command.

Requires user role: ADMIN

Value space: <On/Off>

On: Enable logging. *Off:* Disable logging.

Example: SystemUnit CallLogging Mode: On

SystemUnit IrSensor

Both the Codec C Series and PrecisionHD camera have IR sensors, and only one of them needs to be enabled at the time. The IR sensor LED is located on the front of the codec and the camera and flickers when an IR signal is received from the remote control.

Requires user role: ADMIN

Value space: <On/Off/Auto>

On: Enable the IR sensor on the codec.

Off: Disable the IR sensor on the codec.

Auto: The system will automatically disable the IR sensor on the codec if the IR sensor at camera is enabled. Otherwise, the IR sensor on the codec will be enabled.

Example: SystemUnit IrSensor: Auto

The Time settings

Time Zone

Set the time zone where the system is located, using Windows time zone description format.

Requires user role: USER

Value space: <GMT-12:00 (International Date Line West)/GMT-11:00 (Midway Island, Samoa)/GMT-10:00 (Hawaii)/GMT-09:00 (Alaska)/GMT-08:00 (Pacific Time (US & Canada); Tijuana)/GMT-07:00 (Arizona)/GMT-07:00 (Mountain Time (US & Canada))/GMT-07:00 (Chihuahua, La Paz, Mazatlan)/GMT-06:00 (Central America)/GMT-06:00 (Saskatchewan)/GMT-06:00 (Guadalajara, Mexico City, Monterrey)/GMT-06:00 (Central Time (US & Canada))/GMT-05:00 (Indiana (East))/GMT-05:00 (Bogota, Lima, Quito)/GMT-05:00 (Eastern Time (US & Canada))/GMT-04:30 (Caracas)/GMT-04:00 (La Paz)/GMT-04:00 (Santiago)/ GMT-04:00 (Atlantic Time (Canada))/GMT-03:30 (Newfoundland)/GMT-03:00 (Buenos Aires, Georgetown)/GMT-03:00 (Greenland)/GMT-03:00 (Brasilia)/ GMT-02:00 (Mid-Atlantic)/GMT-01:00 (Cape Verde Is.)/GMT-01:00 (Azores)/ GMT (Casablanca, Monrovia)/GMT (Coordinated Universal Time)/GMT (Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London)/GMT+01:00 (West Central Africa)/GMT+01:00 (Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna)/ GMT+01:00 (Brussels, Copenhagen, Madrid, Paris)/GMT+01:00 (Sarajevo, Skopje, Warsaw, Zagreb)/GMT+01:00 (Belgrade, Bratislava, Budapest, Ljubljana, Praque)/GMT+02:00 (Harare, Pretoria)/GMT+02:00 (Jerusalem)/ GMT+02:00 (Athens, Istanbul, Minsk)/GMT+02:00 (Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius)/GMT+02:00 (Cairo)/GMT+02:00 (Bucharest)/ GMT+03:00 (Nairobi)/GMT+03:00 (Kuwait, Riyadh)/GMT+03:00 (Moscow, St. Petersburg, Volgograd)/GMT+03:00 (Baghdad)/GMT+03:30 (Tehran)/GMT+04:00 (Abu Dhabi, Muscat)/GMT+04:00 (Baku, Tbilisi, Yerevan)/GMT+04:30 (Kabul)/ GMT+05:00 (Islamabad, Karachi, Tashkent)/GMT+05:00 (Ekaterinburg)/ GMT+05:30 (Chennai, Kolkata, Mumbai, New Delhi)/GMT+05:45 (Kathmandu)/ GMT+06:00 (Sri Jayawardenepura)/GMT+06:00 (Astana, Dhaka)/GMT+06:00 (Almaty, Novosibirsk)/GMT+06:30 (Rangoon)/GMT+07:00 (Bangkok, Hanoi, Jakarta)/GMT+07:00 (Krasnoyarsk)/GMT+08:00 (Perth)/GMT+08:00 (Taipei)/ GMT+08:00 (Kuala Lumpur, Singapore)/GMT+08:00 (Beijing, Chongqing, Hong Kong, Urumqi)/GMT+08:00 (Irkutsk, Ulaan Bataar)/GMT+09:00 (Osaka, Sapporo, Tokyo)/GMT+09:00 (Seoul)/GMT+09:00 (Yakutsk)/GMT+09:30 (Darwin)/ GMT+09:30 (Adelaide)/GMT+10:00 (Guam, Port Moresby)/GMT+10:00 (Brisbane)/ GMT+10:00 (Vladivostok)/GMT+10:00 (Hobart)/GMT+10:00 (Canberra, Melbourne, Sydney)/GMT+11:00 (Magadan, Solomon Is., New Caledonia)/GMT+12:00 (Fiji, Kamchatka, Marshall Is.)/GMT+12:00 (Auckland, Wellington)/GMT+13:00 (Nuku alofa)>

Range: Select a time zone from the list time zones. If using a command line interface; watch up for typos.

Example: Time Zone: "GMT (Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London)"

Time TimeFormat

Set the time format.

Requires user role: USER

Value space: <24H/12H> 24H: Set the time format to 24 hours. 12H: Set the time format to 12 hours (AM/PM).

Example: Time TimeFormat: 24H

Time DateFormat

Set the date format.

Requires user role: USER

Value space: <DD_MM_YY/MM_DD_YY/YY_MM_DD> DD_MM_YY: The date January 30th 2010 will be displayed: 30.01.10 MM_DD_YY: The date January 30th 2010 will be displayed: 01.30.10 YY_MM_DD: The date January 30th 2010 will be displayed: 10.01.30

Example: Time DateFormat: DD_MM_YY

The UserInterface settings

UserInterface TouchPanel DefaultPanel

Select whether to display the list of contacts or the list of scheduled meetings on the Touch panel as default.

Requires user role: USER

Value space: <ContactList/MeetingList>

ContactList: The contact list (favorites, directory and history) will appear as default on the Touch panel.

MeetingList: The list of scheduled meetings will appear as default on the Touch panel.

Example: UserInterface TouchPanel DefaultPanel: ContactList

The Video settings

Video Input Source [1..2] Name
Enter a name for the video input source.
Requires user role: ADMIN
Value space: <s: 0, 50>
 Format: String with a maximum of 50 characters.
Example: Video Input Source 1 Name: ""

Video Input Source [1] Connector

Select which video input connector to be active on video input source 1. Requires user role: ADMIN Value space: <hDMI>

HDMI: Select HDMI when you want to use the HDMI as input source 1. Example: Video Input Source 1 Connector: HDMI

Video Input Source [2] Connector

Select which video input connector to be active on video input source 2.

Requires user role: ADMIN

Value space: <DVI>

DVI: Select DVI-I when you want to use the DVI-I 2 as input source 2. Example: Video Input Source 2 Connector: DVI

Video Input Source [1..2] Type

Set which type of input source is connected to the video input.

Requires user role: ADMIN

Value space: <other/camera/PC/DVD/document_camera>

Other: Select Other when some other type of equipment is connected to the selected video input.

Camera: Select Camera when you have a camera connected to the selected video input. *PC:* Select PC when you have a PC connected to the selected video input.

DVD: Select DVD when you have a DVD player connected to the selected video input.

Document_Camera: Select Document_Camera when you have a document camera connected to the selected video input.

Example: Video Input Source 1 Type: PC

Video Input Source [1..2] CameraControl Mode

Set the camera control mode for the camera associated with the video source.

Requires user role: ADMIN Value space: <On/Off> On: Enable camera control.

Off: Disable camera control.

Example: Video Input Source 1 CameraControl Mode: On

Video Input Source [1..2] CameraControl Camerald

Select the ID of the camera in the Visca chain that is connected to this camera source. The Camerald setting represents the camera's position in the Visca chain.

Requires user role: ADMIN

Value space: <1> Range: Set the ID of the camera.

Example: Video Input Source 1 CameraControl CameraId: 1

Video Input Source [1..2] OptimalDefinition Profile

Adjust how rapidly the system will increase the transmitted resolution when increasing the bandwidth. NOTE: Requires that the Video Input Source Quality is set to Motion.

Normal: Use this setting for normal to poorly lit environment. If the source is a camera with 1920x1080p60, the system will transmit 1920x720p60 at about 2.2Mb/sec and above with this setting set to normal.

Medium: Requires better than normal and consistent lighting and good quality video inputs. If the source is a camera with 1920x1080p60, the system will transmit 1920x720p60 at about 1.4Mb/ sec and above with this setting set to medium.

High: Requires good lighting conditions for a good overall experience and good quality video inputs. If the source is a camera with 1920x1080p60, the system will transmit 1920x720p60 at about 1.1Mb/sec and above with this setting set to high.

Requires user role: ADMIN

Value space: <Normal/Medium/High>

Ref: Table 1 and Table 2.

Example: Video Input Source 1 OptimalDefinition Profile: Normal

Table 1: Optimal definition for systems supporting 1080p						
	w288p30	w448p30	w576p30	720p30	1080p30	
Normal	256 kbit/s	512 kbit/s	768 kbit/s	1152 kbit/s	2560 kbit/s	
Medium	128 kbit/s	384 kbit/s	512 kbit/s	1152 kbit/s	1920 kbit/s	
High	128 kbit/s	256 kbit/s	512 kbit/s	768 kbit/s	1472 kbit/s	

Table 2: Optimal definition for systems supporting 720p60						
	w144p60	w288p60	w448p60	w576p60	720p60	
Normal	128 kbit/s	512 kbit/s	1152 kbit/s	1472 kbit/s	2240 kbit/s	
Medium	128 kbit/s	384 kbit/s	768 kbit/s	1152 kbit/s	1920 kbit/s	
High	128 kbit/s	256 kbit/s	512 kbit/s	768 kbit/s	1152 kbit/s	

Video Input Source [1..2] OptimalDefinition Threshold60fps

For each video input, this setting tells the system the lowest resolution where it should transmit 60fps. So for all resolutions lower than this, the maximum transmitted framerate would be 30fps, while above this resolution 60fps would also be possible, if the available bandwidth is adequate.

Requires user role: ADMIN

Value space: <512_288/768_448/1024_576/1280_720/Never>

512_288: Set the threshold to 512x288. 768_448: Set the threshold to 768x448. 1024_576: Set the threshold to 1024x576. 1280 720: Set the threshold to 1280x720.

Never: Do not set a threshold for transmitting 60fps.

Example: Video Input Source 1 OptimalDefinition Threshold60fps: 1280_720

Video Input Source [1..2] Quality

When encoding and transmitting video there will be a tradeoff between high resolution and high framerate. For some video sources it is more important to transmit high framerate than high resolution and vice versa. The Quality setting specifies whether to give priority to high frame rate or to high resolution for a given source.

Requires user role: ADMIN

Value space: <Motion/Sharpness>

Motion: Gives the highest possible framerate. Used when there is a need for higher frame rates, typically when a large number of participants are present or when there is a lot of motion in the picture.

Sharpness: Gives the highest possible resolution. Used when you want the highest quality of detailed images and graphics.

Example: Video Input Source 1 Quality: Motion

Video DefaultPresentationSource

Define which video input source shall be used as the default presentation source (when you press the Presentation key on the remote control). The input source is configured to a video input connector.

Requires user role: USER

Value space: <1..2>

Range: Select the video source to be used as the presentation source.

Example: Video DefaultPresentationSource: 2

Video Input DVI [2] Type

The official DVI standard supports both digital and analog signals. In most cases the default AutoDetect setting can detect whether the signal is analog RGB or digital. However, in some rare cases when DVI-I cables are used (these cables can carry both the analog and digital signals) the auto detection fails. This setting makes it possible to override the AutoDetect and select the correct DVI video input.

Requires user role: ADMIN

Value space: <AutoDetect/Digital/AnalogRGB>

AutoDetect: Set to AutoDetect to automatically detect if the signal is analog RGB or digital. *Digital:* Set to Digital to force the DVI video input to Digital when using DVI-I cables with both analog and digital pins and AutoDetect fails.

AnalogRGB: Set to AnalogRGB to force the DVI video input to AnalogRGB when using DVI-I cables with both analog and digital pins and AutoDetect fails.

Example: Video Input DVI 2 Type: AutoDetect

Video Layout Scaling

Define how the system shall adjust the aspect ratio for images or frames when there is a difference between the image and the frame it is to be placed in.

Requires user role: ADMIN

Value space: <On/Off> On: Let the system automatically adjust aspect ratio. Off: No adjustment of the aspect ratio.

Example: Video Layout Scaling: On

Video Layout ScaleToFrame

Define what to do if the aspect ratio of a video input source doesn't match the aspect ratio of the corresponding image frame in a composition. For example if you have a 4:3 input source (like XGA) to be displayed on a 16:9 output (like HD720).

Requires user role: ADMIN

Value space: <Manual/MaintainAspectRatio/StretchToFit>

Manual: If the difference in aspect ratio between the video input source and the target image frame is less than the ScaleToFrameThreshold configuration (in percent), the image is stretched to fit. If not, the system will maintain the original aspect ratio.

MaintainAspectRatio: Will maintain the aspect ratio of the input source, and fill in black in the rest of the frame (letter boxing or pillar boxing).

StretchToFit: Will stretch (horizontally or vertically) the input source to fit into the image frame. NOTE: The general limitation is that you cannot upscale in one direction and at the same time downscale in the other direction. In such situations the codec will apply letterboxing.

Example: Video Layout ScaleToFrame: MaintainAspectRatio

Video Layout ScaleToFrameThreshold

Only applicable if the ScaleToFrame configuration is set to manual. If the difference in aspect ratio between the video input source and the target image frame is less than the ScaleToFrameThreshold configuration (in percent), the image is stretched to fit. If not, the system will maintain the original aspect ratio.

Requires user role: ADMIN

Value space: <0..100>

Range: Select a value from 0 to 100 percent.

Example: Video Layout ScaleToFrameThreshold: 5

Video SelfviewPosition

Select where the small selfview PiP (Picture-in-Picture) will appear on screen.

Requires user role: ADMIN

Value space: <UpperLeft/UpperRight/LowerLeft/LowerRight/CenterRight> UpperLeft: The selfview PiP will appear in the upper left corner of the screen. UpperRight: The selfview PiP will appear in the lower left corner of the screen. LowerLeft: The selfview PiP will appear in the lower right corner of the screen. LowerRight: The selfview PiP will appear in the lower right corner of the screen. CenterRight: The selfview PiP will appear in to the right side of the screen, in center.

Example: Video SelfviewPosition: LowerRight

Video Layout LocalLayoutFamily

Select which video layout family to be used locally.

Requires user role: ADMIN

Value space: <Auto/FullScreen/Equal/PresentationSmallSpeaker/

PresentationLargeSpeaker>

Auto: The default layout family, as given by the layout database, will be used as the local layout. For more information about the layout database, see the command: xCommand Video Layout LoadDb.

FullScreen: The FullScreen layout family will be used as the local layout.

Equal: The Equal layout family will be used as the local layout.

PresentationSmallSpeaker: The PresentationSmallSpeaker layout family will be used as the local layout.

PresentationLargeSpeaker: The PresentationLargeSpeaker layout family will be used as the local layout.

Example: Video Layout LocalLayoutFamily: Auto

Video Layout RemoteLayoutFamily

Select which video layout family to be used for the remote participants.

Requires user role: ADMIN

Value space: <Auto/FullScreen/Equal/PresentationSmallSpeaker/

PresentationLargeSpeaker>

Auto: The default layout family, as given by the local layout database, will be used as the remote layout. For more information about the layout database, see the command: xCommand Video Layout LoadDb.

FullScreen: The FullScreen layout family will be used as the remote layout.

Equal: The Equal layout family will be used as the remote layout.

PresentationSmallSpeaker: The PresentationSmallSpeaker layout family will be used as the remote layout.

PresentationLargeSpeaker: The PresentationLargeSpeaker layout family will be used as the remote layout.

Example: Video Layout RemoteLayoutFamily: Auto

Video MainVideoSource

Define which video input source shall be used as the main video source. The video input source is configured with the "Video Input Source [1..2] Connector" setting.

Requires user role: USER

Value space: <1..2>

Range: Select the source to be used as the main video source.

Example: Video MainVideoSource: 1

Video Monitors

Set the monitor layout mode.

Requires user role: ADMIN

Value space: <Single/Dual/DualPresentationOnly>

Single: The same layout is shown on all monitors.

Dual: The layout is distributed on two monitors.

DualPresentationOnly: All participants in the call will be shown on the first monitor, while the presentation (if any) will be shown on the second monitor.

Example: Video Monitors: Single

Video OSD Mode

The Video OSD (On Screen Display) Mode lets you define if information and icons should be displayed on screen.

Requires user role: ADMIN

Value space: <On/Off/Disabled>

On: Display the on screen menus, icons and indicators.

Off: Hide the on screen menus, icons and indicators.

Disabled: When set to disabled, the C20 can use the additional resources usually used by the GUI to do 1080p30 at the same time as sharing a presentation. The C20 must then be controlled by a Cisco TelePresence Touch or and external control panel as the GUI will be disabled.

Example: Video OSD Mode: On

Video OSD AutoSelectPresentationSource

Determine if the presentation source should be automatically selected.

Requires user role: ADMIN

Value space: <On/Off>

On: Enable automatic selection of the presentation source.

Off: Disable automatic selection of the presentation source.

Example: Video OSD AutoSelectPresentationSource: Off

Video OSD TodaysBookings

This setting can be used to display the systems bookings for today on the main OSD menu. This requires that the system is bookable by an external booking system, like Cisco TelePresence Management Suite (TMS).

Requires user role: ADMIN

Value space: <On/Off>

On: Displays information about this systems bookings on screen. *Off:* Do not display todays bookings.

Example: Video OSD TodaysBookings: Off

Video OSD MyContactsExpanded

Set how the local contacts will be displayed in the phone book dialog in the OSD (On Screen Display).

Requires user role: ADMIN

Value space: <On/Off>

On: The local contacts in the phone book will be shown in the top level of the phonebook dialog. *Off:* The local contacts will be placed in a separate folder called MyContacts in the phonebook dialog.

Example: Video OSD MyContactsExpanded: Off

Video OSD Output

The Video OSD (On Screen Display) Output lets you define which monitor should display the on screen menus, information and icons. By default the OSD is sent to the monitor connected to the Video OSD Output 1. If you cannot see the OSD on screen, then you must re-configure the OSD Output. You can do this by entering a key sequence on the remote control, from the web interface, or by a command line interface.

Using the remote control: Press the Disconnect key followed by: * # * # 0 x # (where x is output 1 to 2).

Using the web interface: Open a web browser and enter the IP address of the codec. Open the Advanced Configuration menu and navigate to Video OSD Output and select the video output.

Using a command line interface: Open a command line interface and connect to the codec (if in doubt of how to do this, see the API Guide for the codec). Enter the command: xConfiguration Video OSD Output [1..2] (select the OSD Output)

Requires user role: ADMIN

Value space: <1..2>

Range: Select 1 for HDMI output, or select 2 for DVI-I output.

Example: Video OSD Output: 1

Video OSD InputMethod InputLanguage

The codec can be enabled for Cyrillic input characters in the menus on screen. NOTE: Requires that xConfiguration Video OSD inputMethod Cyrillic is set to On.

Requires user role: ADMIN

Value space: <Latin/Cyrillic>

Latin: Latin characters can be entered when using the remote control (default). *Cyrillic:* Cyrillic characters can be entered using the remote control. NOTE: Requires a Cisco TelePresence Remote Control with Cyrillic fonts.

Example: Video OSD InputMethod InputLanguage: Latin

Video OSD InputMethod Cyrillic

Set the Cyrillic mode for the menu input language in the menus on screen.

Requires user role: ADMIN

Value space: <On/Off>

- *On:* Cyrillic mode is available as a menu input language in the menus on screen. This will enable the setting xConfiguration Video OSD InputMethod InputLanguage.
- Off: Cyrillic mode is NOT available as a menu input language in the menus on screen.

Example: Video OSD InputMethod Cyrillic: Off

Video OSD LoginRequired

Determine if the system should require the user to login before accessing the On Screen Display (OSD). If enabled, the user must enter his username and his PIN. After the user has logged in he can only execute to the configurations changes and commands allowed by his Role.

Requires user role: ADMIN

Value space: <On/Off>

On: The user must log in to access the On Screen Display (OSD).

Off: No login to the OSD is required.

Example: Video OSD LoginRequired: Off

Video AllowWebSnapshots

Allow or disallow that snapshots captured by the video input main source can be displayed in the web interface Call Control page.

NOTE: This feature is disabled by default, and must be enabled from the On Screen Display (OSD), from a directly connected Touch controller, or when connected directly to the serial port (COM 1 port) on the codec.

Requires user role: ADMIN

Value space: <On/Off>

- On: If set to on, a web snapshot can be generated and displayed on the web interface.
- Off: The generation of web snapshots is not allowed.

Example: Video AllowWebSnapshots: Off

Video Output HDMI [1..2] CEC Mode

The HDMI outputs support Consumer Electronics Control (CEC). When set to on (default is off), and the monitor connected to the HDMI output is CEC compatible and CEC is configured, the system will use CEC to set the monitor in standby when the system enters standby. Likewise the system will wake up the monitor when the system wakes up from standby. Please note that the different manufacturers uses different marketing names for CEC: Anynet+ (Samsung); Aquos Link (Sharp); BRAVIA Sync (Sony); HDMI-CEC (Hitachi); Kuro Link (Pioneer); CE-Link and Regza Link (Toshiba); RIHD (Onkyo); SimpLink (LG); HDAVI Control, EZ-Sync, VIERA Link (Panasonic); EasyLink (Philips); and NetCommand for HDMI (Mitsubishi).

Requires user role: ADMIN

Value space: <On/Off>

On: Enable CEC control. *Off:* Disable CEC control.

Example: Video Output HDMI 1 CEC Mode: Off

Video Output HDMI [1..2] MonitorRole

The HDMI monitor role describes what video stream will be shown on the monitor connected to the video output HDMI connector. Applicable only if the "Video > Monitors" configuration is set to dual.

Requires user role: ADMIN

Value space: <First/Second/PresentationOnly>

First: Show main video stream.

Second: Show presentation video stream if active, or other participants. *PresentationOnly:* Show presentation video stream if active, and nothing else.

Example: Video Output HDMI 1 MonitorRole: First

Video Output HDMI [1..2] OverscanLevel

Some TVs or other monitors may not display the whole image sent out on the systems video output, but cuts the outer parts of the image. In this case this setting can be used to let the system not use the outer parts of video resolution. Both the video and the OSD menu will be scaled in this case.

Requires user role: ADMIN

Value space: <Medium/High/None>

Medium: The system will not use the outer 3% of the output resolution. *High:* The system will not use the outer 6% of the output resolution *None:* The system will use all of the output resolution.

Example: Video Output HDMI 1 OverscanLevel: None

Video Output HDMI [1..2] Resolution

Select the preferred resolution for the monitor connected to the video output HDMI connector. This will force the resolution on the monitor.

Requires user role: ADMIN

Value space: <Auto/640_480_60/800_600_60/1024_768_60/1280_1024_60/1280_720_5 0/1280_720_60/1920_1080_50/1920_1080_60/1280_768_60/1360_768_60/1366_768_6 0/1600_1200_60/1920_1200_60>

Auto: The system will automatically try to set the optimal resolution based on negotiation with the connected monitor.

Range: 640x480@60p, 800x600@60p, 1024x768@60p, 1280x1024@60p, 1280x720@50p, 1280x720@60p, 1920x1080@50p, 1920x1080@60p, 1280x768@60p, 1360x768@60p, 1366x768@60p, 1600x1200@60p, 1920x1200@60p

Example: Video Output HDMI 1 Resolution: 1920_1080_60

Video Selfview

Determine if the main video source (selfview) shall be displayed on screen.

Requires user role: USER

Value space: <On/Off>

On: Display selfview on screen.

Off: Do not display selfview on screen.

Example: Video Selfview: On

Video WallPaper

Determine if a background picture should be displayed on screen when idle.

Requires user role: USER

Value space: <None/Growing/Summersky/Custom/Waves>

None: No wallpaper will be displayed on screen.

Summersky, Growing, Waves: Select one of the predefined wallpapers to be displayed on screen.

Custom: The custom wallpaper must be uploaded to the codec from the web interface before selecting Custom. The maximum supported resolution is 1920x1280.

1) On the video system: Find the IP address of the codec. Open the menu on screen and go to Home > Settings > System information to find the IP Address.

2) On your computer: Open a web browser and enter the IP address of the codec. Select "Wallpaper" from the menu, browse for the file, and press the "Upload" button.

3) On the video system: Open the menu on screen and go to Home > Settings > Wallpaper > Custom. Give it a few seconds to display the new picture. If the picture does not show, toggle once between "None" and "Custom" wallpaper to make the change take effect.

Example: Video Wallpaper: Summersky

The Experimental settings

The Experimental settings are beta preview features and can be used 'as is.' They are not fully documented.

NOTE: The Experimental settings are likely to change without further notice.

Experimental Audio EcReferenceDelay

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <0..300>

Example: Experimental Audio EcReferenceDelay: 0

Experimental CapsetFilter

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <S: 0, 100>

Example: Experimental CapsetFilter: ""

Experimental CapsetReduction

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <Auto/Reduced>

Example: Experimental CapsetReduction: Auto

Experimental Conference [1..1] PacketLossResilience ForwardErrorCorrection

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Will enable ForwardErrorCorrection (RFC5109) mechanism as part of the PacketLossResilience mechanism. Default value is On.

On: Forward error correction will be used as part of the PacketLossResilience mechanism.

Off: Forward error correction will NOT be used as part of the PacketLossResilience mechanism.

Requires user role: ADMIN

Value space: <On/Off>

Example: Experimental Conference 1 PacketLossResilience
ForwardErrorCorrection: On

Experimental Conference [1..1] PacketLossResilience RateAdaption

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Will use the a RateAdaption algorithm adapted to the PacketLossResilience mechanism. Default value is On.

Requires user role: ADMIN

Value space: <On/Off>

On: RateAdaption will be used as part of the PacketLossResilience mechanism.

Off: RateAdaption will NOT be used as part of the PacketLossResilience mechanism.

Example: Experimental Conference 1 PacketLossResilience RateAdaption: On

Experimental Conference [1..1] ReceiverBasedDownspeeding

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <On/Off>

Example: Experimental Conference 1 ReceiverBasedDownspeeding: Off

Experimental CustomSoftbuttons HoldResume

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

This configuration is used to enable Call Hold and Resume in the OSD. Note that Call Hold and Resume will be available even if this setting is set to Off, if Multiway is configured.

Requires user role: ADMIN

Value space: <Off/On>

Off: Call Hold and Resume is not available (unless Multiway is configured).

On: Call Hold/Resume is available while the system is in a call. It will be available on softbuttons, and when receiving incoming calls the user will have the option of holding any current calls while accepting the new call.

Example: Experimental CustomSoftbuttons HoldResume: Off

Experimental CustomSoftbuttons State [1..2] Softbutton [1..5] Type

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <NotSet/MainSource/PresentationSource/CameraPreset/Actions/ SpeedDial>

Example: Experimental CustomSoftbuttons State 1 Softbutton 1 Type: NotSet

Experimental CustomSoftbuttons State [1..2] Softbutton [1..5] Value

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <S: 0, 255>

Example: Experimental CustomSoftbuttons State 1 Softbutton 1 Value: ""

Experimental NetworkServices UPnP Mode

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <On/Off>

Example: Experimental NetworkServices UPnP Mode: Off

Experimental NetworkServices UPnP Timeout

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <0..3600>

Example: Experimental NetworkServices UPnP Timeout: 0

Experimental CTMSSupport Mode

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

This configuration tells whether CTMS (Cisco TelePresence Multipoint Switch) is supported or not.

Requires user role: ADMIN

Value space: <Off/On> Off: CTMS is not supported.

On: CTMS is supported.

Example: Experimental CTMSSupport Mode: On

Experimental PacketOverloadHandling WhenDetected

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <Off/CallRate2256/CallRate768/ReduceTo576p/ReduceTo360p/ Unencrypted/Disconnect>

Example: Experimental PacketOverloadHandling WhenDetected: Off

Experimental SystemUnit MenuType

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <Indicators/Full>

Example: Experimental SystemUnit MenuType: Full

Experimental SystemUnit SoftwareUpgrade RequireAuthentication

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <On/Off>

Example: Experimental SystemUnit SoftwareUpgrade RequireAuthentication: Off

Experimental SystemUnit CrashReporting Mode

NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <Off/On>

Example: Experimental SystemUnit CrashReporting Mode: Off

Experimental SystemUnit CrashReporting URI

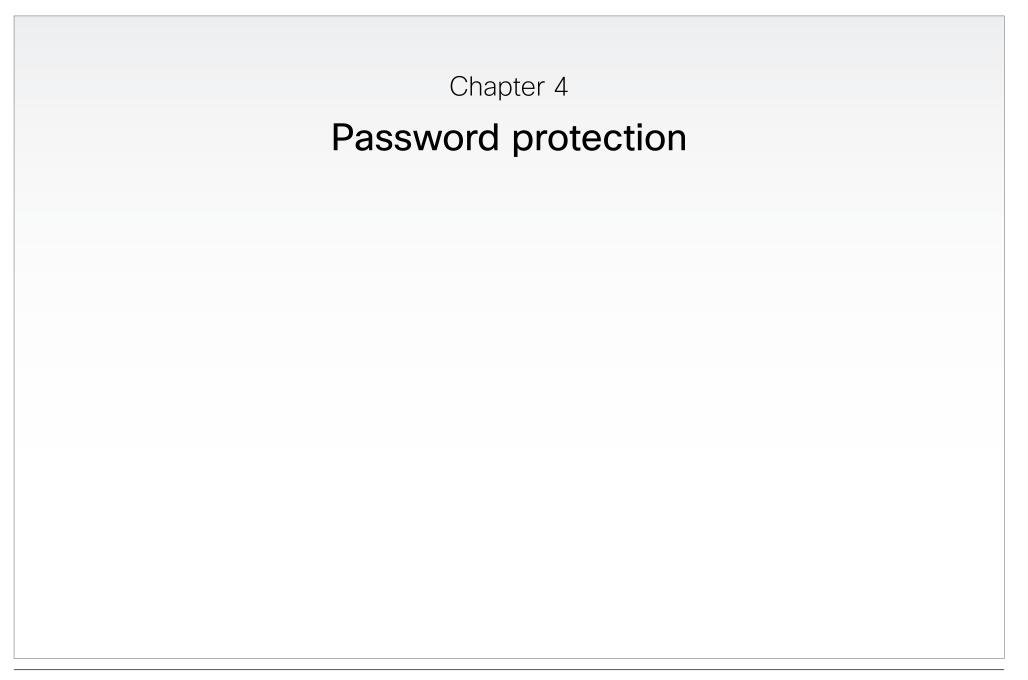
NOTE: This Experimental command can be used 'as is' and will not be further documented. The Experimental settings WILL change.

Requires user role: ADMIN

Value space: <S: 0, 255>

Example: Experimental SystemUnit CrashReporting URI: ""

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Password protection

The system is password protected in the following ways:

 The System/Codec is password protected. You always need to enter a username to sign in to the web and command line interfaces.

You can also configure the system/codec to prompt for a PIN-code before accessing all the on screen menus.

- The Administrator settings menu can be password protected with a menu password.
- You can protect the File system of the codec by setting a password for the root user. The root user is disabled by default.

NOTE: We strongly recommend that you set the passwords to protect your video conference system.

Changing the system/codec password

The system is delivered with a default user account with username admin and no password set. This user has full access rights to the system.

NOTE: We strongly recommend that you set a password for the admin user to restrict access to system configuration.

Make sure to keep a copy of the password in a safe place. You have to contact your Cisco representative if you have forgotten the admin password.

A user can change his system/codec password using the web interface or the command line interface.

Changing the password using the web interface

If a password is currently not set, use a blank *Current password*; to remove a password, leave the *New password* fields blank.

- 1. Sign in to the web interface with your username and current password.
- 2. Click your username in the upper right corner and select *Change password* in the drop down menu.
- Enter the *Current password*, the *New password*, and repeat the new password in the appropriate input fields.
 The password format is a string with 0–64 characters.
- 4. Click Change password.

Changing the password using the command line interface

If a password is currently not set, use a blank current password; to remove a password, leave the new password entries blank.

- 1. Connect to the system/codec through the network or the serial data port, using a command line interface (SSH or Telnet).
- 2. Sign in to the codec with your username and current password.
- 3. Run the following API command and when prompted enter the current password, the new password, and confirm the new password:
 - systemtools passwd

The password format is a string with 0-64 characters.

Changing another user's password

If you have ADMIN rights, you can change all users' passwords by performing the following steps:

- 1. Sign in to the web interface with your username and password.
- 2. Go to the Maintenance tab and select User Administration.
- 3. Select the appropriate user from the list.
- 4. Enter a new password and PIN code.
- 5. Click Save.

You can read more about creating user accounts in the $\,\blacktriangleright\,$ User administration section.

Setting the Administrator settings menu password

When starting up the system for the first time the Administrator Settings menu password is not set.

NOTE: We strongly recommend that you define a password to protect the Administrator Settings menu, since these settings affect the behavior of the video conference system.

When you set a password for the Administrator settings menu, all users must enter the password to get access to this menu, either on screen when using the remote control, or on the touch screen if you are using a Touch controller.

The menu password can be set from the on-screen menu, using the remote control or from the command line interface; you neither can use a Touch controller nor the web interface.

Setting the menu password using the remote control

1. In the on screen menu, go to Home > Settings > Administrator settings > Set menu password.

The password format is a string with 0–255 characters. To deactivate the password leave the password input field empty.

 Enter the menu password in the input field. The password you enter is hidden; each character is replaced with a star (*).

On the remote control, press the # key to toggle between lower or upper case characters and numbers: abc/ ABC/123.

- 3. Select *Save* to save the changes, or *Cancel* to leave without saving.
- 4. Press *Home* () to exit.

Setting the menu password from a command line interface

- 1. Connect to the system through the network or the serial data port, using a command line interface (SSH or Telnet).
- 2. Type the following command:

xCommand SystemUnit MenuPassword Set Password: <password>

The password format is a string with 0–255 characters. To deactivate the password leave the password field empty.

Setting a root password

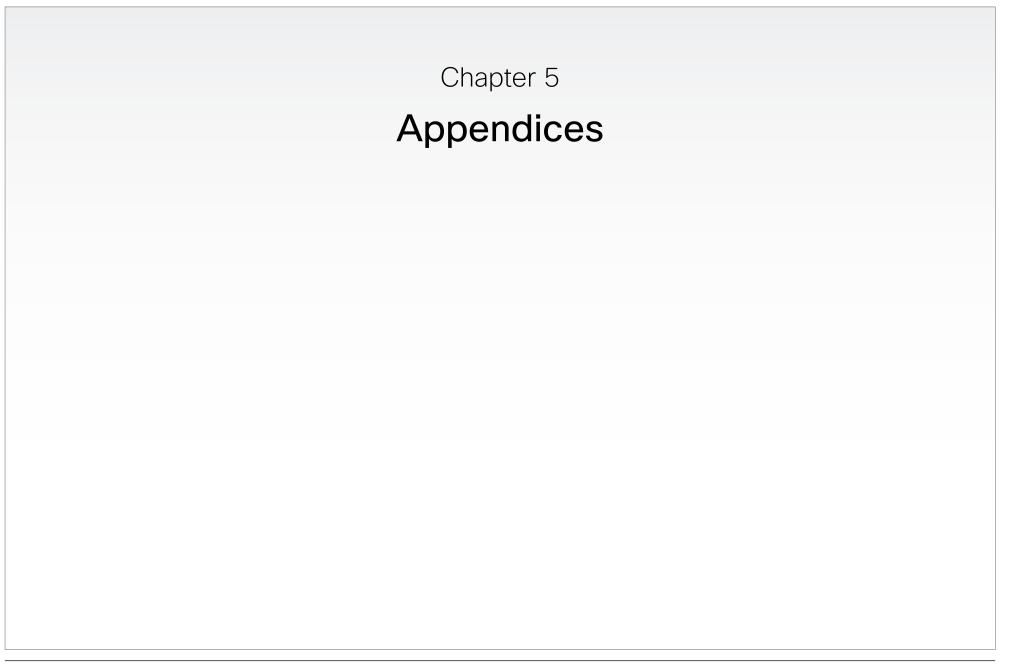
If you sign in to the command line interface as root, you can access the system/codec's file system.

The root user is disabled by default.

Perform the following steps to activate the root user and set a password:

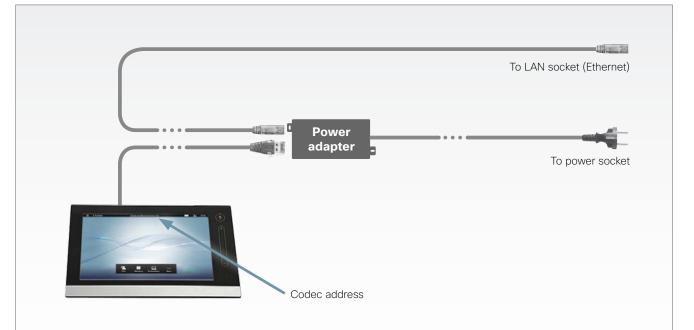
- 1. Connect to the system/codec through the network or the serial data port, using a command line interface (SSH or Telnet).
- 2. Sign in to the system/codec with the username (admin) and password. You need ADMIN rights.
- 3. Run the following API command:
- systemtools rootsettings on <password>

NOTE: The root password is not the same as the administrator password.



Connecting the Cisco TelePresence Touch 8" controller

A C Series codec running software version TC4.1 or later can be controlled using the Cisco TelePresence Touch 8" controller (as alternative to the remote control.)



Connecting the Touch controller

The Touch controller must be connected to the codec via LAN. The connection is via the provided power adapter, as illustrated above.

The process of associating the Touch controller to the codec is called paring. Note that the codec is signalling that it is available for pairing for only 30 minutes after it is switched on.

Touch controller set-up

Once the Touch controller is connected to power, the set-up procedure begins. Follow the instructions on screen.

If the codec is not in the list of available codecs displayed on the Touch controller, you can select a codec manually by entering its IP address.

If the Touch controller needs software upgrade, new software will be downloaded from the codec and installed on the unit automatically as part of the set-up procedure. The Touch controller restarts after the upgrade.

You can verify that the Touch controller is successfully paired to the codec by checking that the codec address is displayed in the top banner.

If you want more details on Touch installation, please read the *Cisco TelePresence Touch 8 inch Installation Guide*, which is available on the Cisco web site.

About monitors when you have a Codec C20

Connecting the monitor

The monitor can be connected to video output HDMI 1 (default) or HDMI 2*. The default resolution for HDMI is 1280x720@60Hz.

Connecting to HDMI 1

When connecting the monitor to HDMI 1, which is the default video output on Codec C20, the menu, icons and other information on screen (OSD – on screen display) will be displayed on this monitor.

Connecting to HDMI 2

When connecting the monitor to HDMI 2* output on Codec C20 the menus and icons is not automatically displayed on screen. The OSD must be moved to this output by running a key sequence on the remote control.

NOTE: There is no audio on HDMI 2.

Moving the OSD using the remote control

When connecting the main monitor to the HDMI 2 output, you must move the OSD to this output. If you cannot see any menu on screen you must run a key sequence on the remote control. The menu on screen, icons and other information (OSD - on screen display) will be moved to the selected output.

Check which connector the monitor is connected to, and run the following key sequence on the remote control.

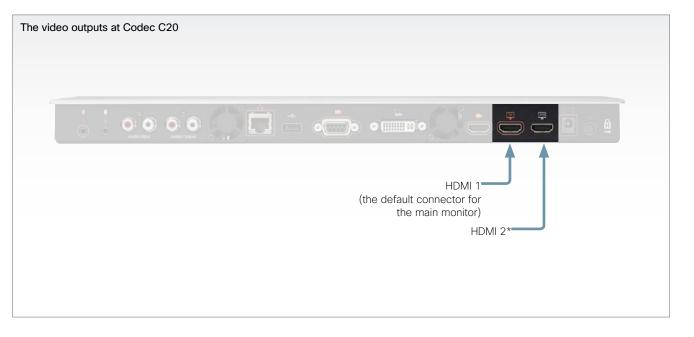
Disconnect * # * # 0 x # x=1 (HDMI 1) x=2 (HDMI 2)

Example 1: Set HDMI 1 as the OSD output:

Example 2: Set HDMI 2 as the OSD output:

<u>- * - # - * - # - 0 - 2 - #</u>

* Use of HDMI 2 requires the Dual Display option.



Moving the OSD using the web interface

Go to the Advanced Configuration page and navigate to *Video > OSD > Output* and select the video output connector for the main mointor.

Dual monitors

NOTE: Requires the Dual Display option.

When you want to run a dual monitor setup, connect the main monitor to video output HDMI 1 and the second monitor to video output HDMI 2 on Codec C20.

Dual monitor configuration

Go to Advanced configuration (menu on screen or web interface) to set the monitor to dual:

1. Navigate to Video > Output > Monitor and set the Monitor to Dual.

Optimal definition profiles

Under ideal lighting conditions the bandwidth requirements can be substantially reduced with the optimal definitions profiles.

Generally, we recommend the Optimal Definition set at Normal.

If lighting conditions are good we recommend that you test the endpoint on the various Optimal Definition settings before deciding on a profile.

Go to Advanced configuration (menu on screen or web interface) to set the optimal definition profile:

 Navigate to Video > Input > Source [1..n] > OptimalDefinition > Profile and select a profile.

You can set a resolution threshold below which the maximum frame rate will be 30 fps.

Go to Advanced configuration (menu on screen or web interface) to set the threshold:

 Navigate to Video > Input > Source [1...] > OptimalDefinition > Threshold60fps and select a threshold.

The video input quality settings must be set to Motion to ensure the Optimal Definition to work. With the video input quality set to Sharpness, the endpoint will transmit the highest resolution possible, regardless of frame rate.

Go to Advanced configuration (menu on screen or web interface) to set the input quality:

• Navigate to *Video > Input > Source* [1..*n*] > *Quality* and set the video quality parameter.

You can read more about the video settings in the $\,\blacktriangleright\,$ Advanced settings chapter.



High (720p60)

Typically used in dedicated video conferencing rooms. Requires good lighting conditions for a good overall experience.

Under ideal conditions the bandwidth requirements can be reduced by up to 50%.



Medium (w576p60)

Typically used in rooms with better than normal, and consistent lighting.

The bandwidth requirements can be reduced by up to 25%.



Normal (w448p60)

This setting is typically used in office environments where the environment is normal to poorly lit.

Generally, we recommend the Optimal Definition set at Normal.

	Optimal definition profiles for systems supporting 1080p					
	w288p30	w448p30	w576p30	720p30	1080p30	
Normal	256 kbit/s	512 kbit/s	768 kbit/s	1152 kbit/s	2560 kbit/s	
Medium	128 kbit/s	384 kbit/s	512 kbit/s	1152 kbit/s	1920 kbit/s	
High	128 kbit/s	256 kbit/s	512 kbit/s	768 kbit/s	1472 kbit/s	

Optimal definition profiles for systems supporting 720p60						
	w144p60	w288p60	w448p60	w576p60	720p60	
Normal	128 kbit/s	512 kbit/s	1152 kbit/s	1472 kbit/s	2240 kbit/s	
Medium	128 kbit/s	384 kbit/s	768 kbit/s	1152 kbit/s	1920 kbit/s	
High	128 kbit/s	256 kbit/s	512 kbit/s	768 kbit/s	1152 kbit/s	

ClearPath – Packet loss resilience

ClearPath introduces advanced packet loss resilience mechanisms that increase the experienced quality when you use your video system in an error prone environment.

We recommend that you enable ClearPath on your video system.

Go to *Advanced configuration* (menu on screen or web interface) to switch on ClearPath:

• Navigate to Conference 1 > PacketLossResilience > Mode and select On.

Requirement for speaker systems connected to a Cisco TelePresence C Series codec

Cisco has put in a lot of effort to minimize the camera to screen delay on our TelePresence endpoints.

New consumer TVs are usually equipped with "Motion Flow" or similar technology to insert new video frames between standard frames to create smoother images. This processing takes time and to maintain lip synchronization, the TV will delay the audio so that the audio and video arrives at the same time.

The echo canceller in the Cisco endpoints can handle such delay up to 30 ms. Many consumer TVs are not made for real time video communication and may introduce more than 30 ms of delay.

If you use such a TV together with a C Series codec it is recommended that you turn off "Motion Flow", "Natural Motion" or any other video processing that introduces additional delay.

Some consumer TVs also support advanced audio processing like "Virtual Surround" effects and "Dynamic Compression" to improve the TV experience. Such processing will make any acoustic echo canceller malfunction and should hence be switched off.

Some monitors are equipped with a setting called 'Game Mode'. This mode is specifically designed to help reduce the response time and will usually help to reduce the delay.

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Codec C20 – The physical interface

The front panel LEDs

The LED in front of the codec indicates the status of the codec.

- When the LED is off the codec is Off.
- The LED flashes green during the boot up and shut down of the codec.
- The LED pulses green when the infrared (IR) port is activated. This will occur when the remote control is in use.
- The LED is steady green when the codec is On, in Standby mode or in Presentation mode.
- When the LED is red this indicates an Error has occurred.



Codec C20 – The physical interface, continued...

The rear panel

The connectors used in a basic setup are highlighted in **bold**.



Microphone 1-2

Mini-Jack 3.5 mm, 4-pole connector. Connect the microphone to Mic 1, which is the main connector.

Audio input

RCA sockets, mixed to mono. Used when connecting to PC and external playback devices, such as VCR's or DVD players.

Audio output

RCA sockets, mono. Used when connecting to a local loudspeaker system.

Network connector

Ethernet interface, 1 \times 10Mb/100Mb/1Gigabit Ethernet LAN (RJ-45 Jack) interface.

USB

For future use.

Camera Control port

Camera Control (RS-232) port for power and camera control (pan, tilt, zoom) using the VISCA^{m*} protocol. The Pin No. 4 on the Camera Control port provides 12 V DC / 1 A to the main camera.

DVI-I input for PC

DVI-I socket, digital/analog video input for PC presentations.

HDMI input for camera

HDMI socket, digital video input for camera.

HDMI output for the main monitor

HDMI socket, digital video and audio output for the main monitor.

HDMI output for the second monitor

HDMI socket, digital video output for the second monitor.

Power socket

The power socket accepts +12V / 5A (max) from the external adapter.

The external adapter accepts 100/240 V 50/60 Hz and the maximal load is 75 W.

Power switch

The power switch (push button) is located on the rear side.

- · Push the button to boot up the codec.
- Push and hold the button for 1 second to shut down the codec.
- Push and hold the button for 7 seconds to force a shut down of the codec.

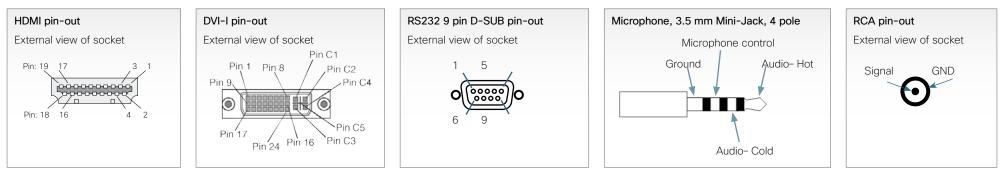
Kensington lock

The Kensington lock may be used to prevent the codec to be moved from its place or to prevent theft.

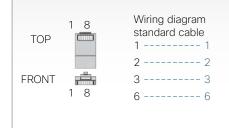
*VISCA™ is a trademark of Sony Corporation

Pin-out schemes

This page gives an overview of the pin-out schemes for C20.



RJ-45 Connector pin-out



RJ11, 8 pins shielded modular jack Pin Signal name 8 +12V (presence 2.8mA current source when connected in daisy chain) GND 7 6 TXD (out) 5 NC (no connect) 4 NC (no connect)

Pin-out–VISCA™ camera control

- 3 RXD (in)

- 2 GND 1 +12V

	HDMI Pin-out					
Pin	Assignment	Pin	Assignment			
1	T.M.D.S. Data 2+	11	T.M.D.S. Clock Shield			
2	T.M.D.S. Data 2 Shield	12	T.M.D.S. Clock-			
3	T.M.D.S. Data 2-	13	CEC			
4	T.M.D.S. Data 1	14	Reserved (N.C. on device)			
5	T.M.D.S. Data 1 Shield	15	SCL			
6	T.M.D.S. Data 1-	16	SDA			
7	T.M.D.S. Data 0	17	DDC/CEC Ground			
8	T.M.D.S. Data 0 Shield	18	+5 V Power (max 50 mA)			
9	T.M.D.S. Data 0-	19	Hot Plug Detect			
10	T.M.D.S. Clock+					

	Pin-out-Camera cable					
Signal name	RJ-45 pin		D-SUB pin			
+12 V DC	1	Twisted pair	4			
GND	2		5			
RX	3	Twisted pair	2			
ТХ	6		3			
NC	4	Twisted pair	1			
NC	5		6			
GND	7	Twisted pair	5			
+12 V DC	8		4			

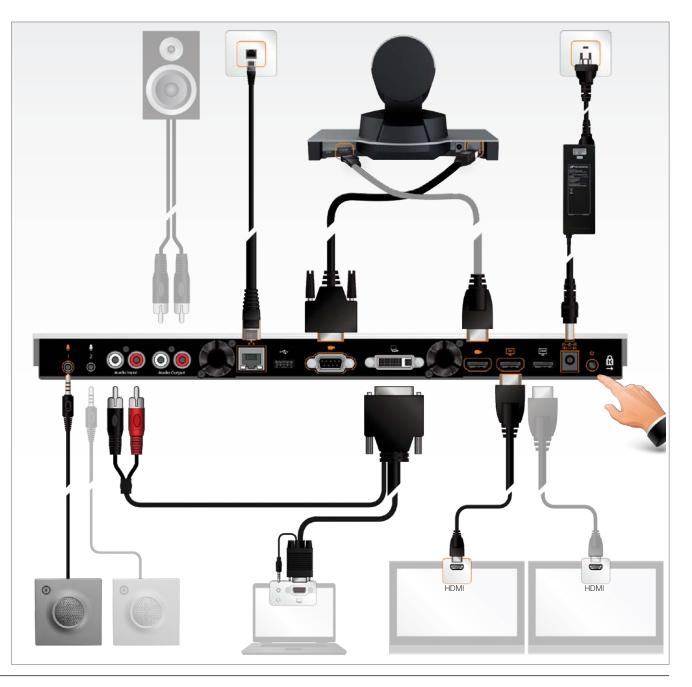
Codec C20 audio connectors							
	Jack Mic input	RCA line input	RCA line output				
Connector pin out	Tip = Hot	Pin = Signal	Pin = Signal				
	Ring 1 = Cold	Shield = GND	Shield = GND				
	Ring 2 = Mic. control						
	Shield = GND						
Signal type	Balanced	Unbalanced	Unbalanced				
Connector (codec)	Mini Jack 3.5 mm	Female RCA/phono	Female RCA/phono				
Input impedance	1.5 kOhm/leg	18k Ohm					
Output impedance			100 Ohm				
Maximum input level	-18.3 dBu +/-2 dB	9.0 dBu +/-2 dB					
Maximum output level			8.2 dBu +/-2 dB				
Phantom power	12V +/-1V						
Phantom power resistor pin "tip"	1.7 kOhm						
Phantom power resistor pin "ring 1"	1.7 kOhm						
Frequency response	20Hz-20kHz +/-1dB	20Hz-20kHz +/-1dB	20Hz-20kHz +/-1dB				
Signal to Noise Ratio	-85 dB	-95 dB	-95 dB				

Quick Set C20 – Cable configuration

The illustration shows you the basic setup when connecting the monitor, PC, **PrecisionHD 1080p 4X camera**, microphone, loudspeakers (if applicable), LAN and line voltage to the Codec C20.

NOTE: The early shipments of the Quick Set C20 came with an interim version of the PrecisionHD 1080p 4X camera (the PrecisionHD 1080p **4X*** camera). For cable configurations of the interim PrecisionHD 1080p **4X*** camera, see next page.

CAUTION: In order to be able to use the system for video calls, all orange colored sockets must be connected.

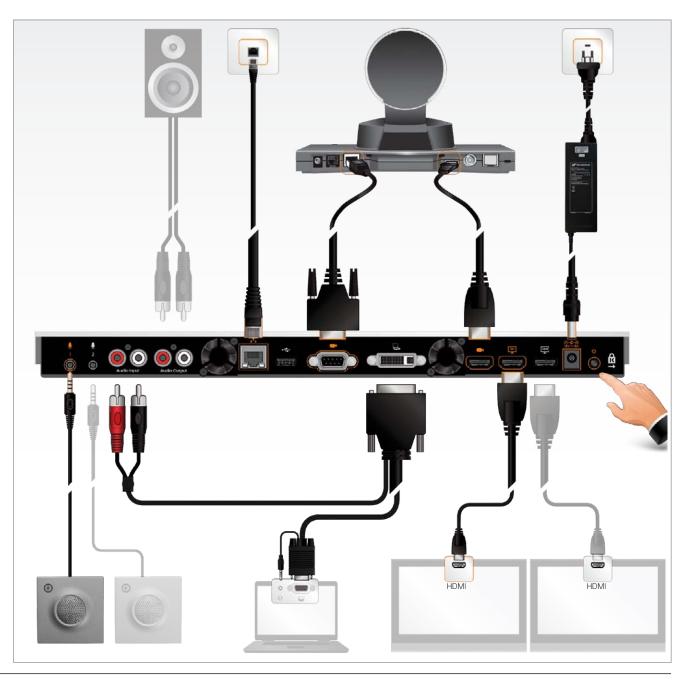


The codec must be switched off and disconnected from the line voltage whenever connecting or disconnecting other equipment.

Quick Set C20 Plus – Cable configuration

The illustration shows you the basic setup when connecting the monitor, PC, **PrecisionHD 1080p 12X camera**, microphone, loudspeakers (if applicable), LAN and line voltage to the Codec C20.

CAUTION: In order to be able to use the system for video calls, all orange colored sockets must be connected.



The codec must be switched off and disconnected from the line voltage whenever connecting or disconnecting other equipment.

DNAM for Profile 42"

The DNAM – Digital Natural Audio Module – is built on two specially designed and separate modules, the amplifier and the loudspeaker cabinet.

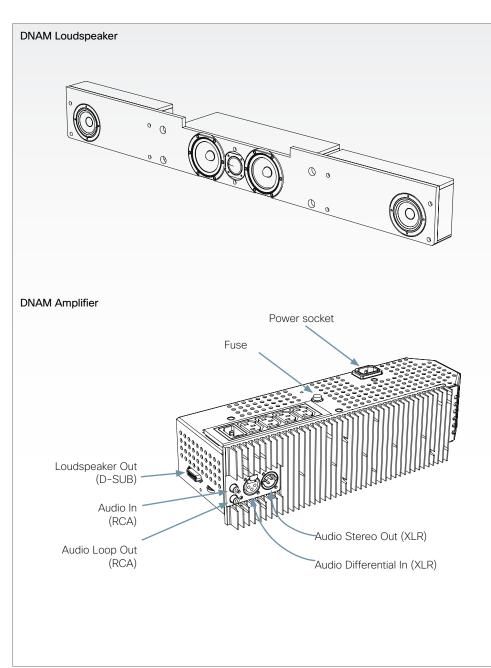
The DNAM Loudspeaker

- 3-way Center Loudspeaker system
- Frequency range 50 Hz 20 kHz
- 2 × 100 mm low- and midrange loudspeaker 8 Ohms nominal, excellent quality (SEAS Prestige series)
- 1 × 25 mm dome tweeter, 6 Ohms nominal, excellent quality
- Active crossover filtered audio signals received from DNAM amplifier
- Long time max power 70 Watt on all loudspeakers
- Enclosed MDF loudspeaker cabinet

Integrated Left / Right Stereo Loudspeaker

Stereo Loudspeaker System, each side has:

- 1 × 90 mm fullrange loudspeaker, 8 Ohms nominal, excellent quality
- Frequency range 70 Hz 20 kHz
- Enclosed MDF Loudspeaker cabinet



The DNAM Amplifier

- 3 × 50 W continuous average Center Output Power (load specified by DNAM Center Loudspeakers)
- 2 × 50 W continuous average Stereo Output Power (load specified by DNAM Stereo Loudspeakers)
- Full dynamic range for audio (20 Hz-20 kHz).
- Digital Signal Processing and Filtering on all channels for best audio detail clarity
- Digital Crossover Filtering on center channels
- In/out:

Audio In - SPDIF (stereo) or Analog (mono), using the same connector

Audio Loop Out - line out directly from the input, always analog even with SPDIF in

Audio Differential In - female XLR pinout: 1 - GND, 2 - Signal (+), 3 - Signal (-)

Audio Stereo Out - male XLR, common GND configuration

Loudspeaker Out - female D-SUB 15p

• Fuse 2A 250V Slow, 5 × 20 mm, Littelfuse type 215002. Push and twist counterclockwise to release

Technical specifications

Quick Set C20/C20 Plus

SET DELIVERED COMPLETE WITH:

Codec C20, PrecisionHD 1080p 4x or 12x camera, Table Mic 20 microphone, remote control, cables and power supply

BANDWIDTH H.323/SIP up to 6 Mbps point-to-point

FIREWALL TRAVERSAL

Cisco TelePresence Expressway technology H.460.18, H.460.19 firewall traversal

VIDEO STANDARDS

H.261, H.263, H.263+, H.264

VIDEO FEATURES

Native 16:9 widescreen Advanced screen layouts Intelligent video management Local auto layout

VIDEO INPUTS (2 INPUTS)

One HDMI input; supported formats:

1920 × 1080@60 fps (1080p60) 1920 × 1080@50 fps (1080p50) 1920 × 1080@30 fps Hz (1080p30) 1920 × 1080@25 fps (1080p25) 1280 × 720@60 fps (720p60) 1280 × 720@50 fps (720p50) 640 × 480@60 fps (480p60) 800 × 600@60 fps (SVGA) 1024 × 768@60, 70, 75, 85 fps (XGA) 1280 × 1024@60, 75 fps (SXGA)

One DVI-I input; supported formats: Analog (VGA):

1920 × 1080@60 Hz (1080p60) 1280 × 720@60 Hz (720p60) 1600 × 1200@60 Hz (UXGA) 1280 × 1024@60, 75 Hz (SXGA) 1280 × 960@60 Hz 1024 × 768@60, 70, 75, 85 Hz (XGA) 1920 × 1200@50 Hz (WUXGA) 1680 × 1050@60 Hz (WSXGA+) 1440 × 900@60 Hz (WXGA+) 1280 × 800@60 Hz (WXGA) 1280 × 768@60 Hz (WXGA) Digital (DVI-D): Same as HDMI, ref. above.

Extended Display Identification Data (EDID)

VIDEO OUTPUTS (2 OUTPUTS)

Two HDMI output; supported formats: 1920 × 1080@60 fps (1080p60) 1280 × 720@60 fps (720p60) 1366 × 768@60 fps (WXGA) 1280 × 768@60 fps (WXGA) 1280 × 1024@60 fps (SXGA) 1024 × 768@60 fps (XGA) 800 × 600@60 fps (SVGA) 640 × 480@60 fps (VGA)

VESA Monitor Power Management Extended Display Identification Data (EDID)

LIVE VIDEO RESOLUTIONS (ENCODE/DECODE)

176 × 144@30, 60 fps (QCIF) 352 × 288@30, 60 fps (CIF) 512 × 288@30, 60 fps (w288p) 576 × 448@30, 60 fps (w448p) 768 × 448@30, 60 fps (w448p) 704 × 576@30, 60 fps (w576p) 640 × 480@30, 60 fps (w576p) 640 × 480@30, 60 fps (VGA) 800 × 600@30, 60 fps (SVGA) 1024 × 768@30 fps (XGA) 1280 × 768@30 fps (WXGA) 1280 × 720@30 fps (720p30) 1280 × 720@60 fps (720p60)* 1920 × 1080@30 fps (1080p30)*

720p30 from 768 kbps 720p60 from 1152 kbps* 1080p30 from 1472 kbps*

AUDIO STANDARDS

G.711, G.722, G.722.1, 64 kbps MPEG4 AAC-LD

AUDIO FEATURES

CD-quality 20 kHz mono One acoustic echo canceller Automatic Gain Control (AGC) Automatic noise reduction Active lip synchronization

AUDIO INPUTS (4 INPUTS)

Two microphones, 4 pin MiniJack Two RCA/Phono (mixed to mono)

AUDIO OUTPUTS (3 OUTPUTS)

Two RCA/Phono (dual mono) One HDMI (digital main audio)

DUAL STREAM

H.239 (H.323) dual stream BFCP (SIP) dual stream Support resolutions up to WXGA (1280 × 768) When dual stream is activated the main video stream maximum is 720p at 30fps

MULTIPOINT SUPPORT

Cisco TelePresence Multiway support (requires Cisco TelePresence Video Communication Server [Cisco VCS] and Cisco TelePresence MCU) Ability to natively ioin multipoint conferences hosted on

Ability to natively join multipoint conferences hosted on Cisco Telepresence Multipoint Switch (CTMS)

PROTOCOLS

H.323 SIP

EMBEDDED ENCRYPTION

H.323/SIP point-to-point Standards-based: H.235v3 and AES Automatic key generation and exchange Supported in dual stream

IP NETWORK FEATURES

DNS lookup for service configuration Differentiated Services (OoS) IP adaptive bandwidth management (including flow control) Auto gatekeeper discovery Dynamic playout and lip-sync buffering H.245 DTMF tones in H.323 Date and time support via NTP Packet loss based downspeeding URI dialing TCP/IP DHCP 802.1x Network authentication 802.10 Virtual LAN 802.1p QoS and class of service ClearPath

IPV6 NETWORK SUPPORT

Single call stack support for both H323 and SIP Dual-stack IPv4 and IPv6 for DHCP, SSH, HTTP, HTTPS, DNS, DiffServ Support for both static and autoconfiguration (stateless address autoconfiguration)

CISCO UNIFIED COMMUNICATIONS MANAGER

(requires Cisco UCM version 8.6 or later) Native registration with Cisco Unified Communications Manager Basic Cisco Unified Communications Manager provisioning Firmware upgrade from Cisco Unified Communications Manager Cisco Discovery Protocol and DHCP option 150 support Basic telephony features such as hold, resume, transfer, and corporate directory lookup

SECURITY FEATURES

Management through HTTPS and SSH IP administration password Menu administration password Disable IP services Network settings protection

NETWORK INTERFACES

One LAN/Ethernet (RJ-45) 10/100/1000 Mbit

OTHER INTERFACES USB device for future usage

Quick Set C20/C20 Plus, continued...

PRECISIONHD 1080P 12X CAMERA

1/3" CMOS
12 × zoom
+15°/-25° tilt, +/- 90° pan
43.5° vertical field of view
72° horizontal field of view
Focus distance 0.3 m-infinity
1920 × 1080 pixels progressive @ 60fps
Other formats supported (configurable through dipswitch):
1920 × 1080@60 Hz (HDMI only)

1920 × 1080@60 Hz (HDMI 0hly) 1920 × 1080@50 Hz (HDMI only) 1920 × 1080@30 Hz 1920 × 1080@25 Hz 1280 × 720@60 Hz 1280 × 720@50 Hz 1280 × 720@30 Hz 1280 × 720@25 Hz Automatic or manual focus/brightness/whitebalance

Far-end camera control Dual HDMI and HD-SDI output Upside-down mounting with automatic flipping of picture

PRECISIONHD 1080P 4X CAMERA

1/3" CMOS 4 × zoom +15° /-25° tilt, +/- 90° pan 43.5° vertical field of view 72° horizontal field of view Focus distance 0.3m-infinity 1920 × 1080 pixels progressive @ 30fps / 1280 × 720 pixels progressive @ 60fps Automatic or manual focus/brightness/whitebalance Far-end camera control

Upside-down mounting with manual flipping of picture Note: The early shipments of the Quick Set C20 came with an interim version of the PrecisionHD 1080p 4x camera SYSTEM MANAGEMENT

Support for the Cisco TelePresence Management Suite (Cisco TMS) Total management through embedded SNMP, Telnet, SSH, XML, SOAP Remote software upload through web server, SCP, HTTP, HTTPS Remote control and on-screen menu system

DIRECTORY SERVICES

Support for local directories (My Contacts) Corporate directory Unlimited entries using server directory supporting LDAP and H.350 (requires Cisco TMS) Unlimited number for corporate directory (through Cisco TMS) Received calls with date and time Placed calls with date and time Missed calls with date and time

POWER

Auto-sensing power supply 100-120/200-240 VAC, 60/50 Hz 75 W max for codec and main camera

OPERATING TEMPERATURE AND HUMIDITY

0° C to 35° C (32° F to 95° F) ambient temperature 10% to 90% relative humidity (RH)

STORAGE AND TRANSPORT TEMPERATURE

 -20° C to 60° C (-4° F to 140° F) at RH 10–90% (non-condensing)

DIMENSIONS

Codec C20: Length: 13.8in. / 35.0cm Height: 1.2in. / 3.0cm Depth: 5in. / 12.7cm Weight: 4lbs / 1.8kg

* Requires option

APPROVALS

EU/EEC

Directive 2006/95/EC (Low Voltage Directive) - Standard EN 60950-1

- Directive 2004/108/EC (EMC Directive)
- Standard EN 55022, Class B
- Standard EN 55024
- Standard EN 61000-3-2/-3-3

USA

Approved according to UL 60950-1 Complies with FCC15B Class A Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense

Canada

Approved according to CAN/CSA-C22.2 No. 60950-1 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.

MTBF PRODUCT RELIABILITY/MTBF

The predicted reliability is expressed in the expected random Mean Time Between Failures (MTBF) for the electronic components based on the Power On Hours: Power On Hours (POH) > 69 000 hours Useful Life Cycle > 6 years

ISO 9001 certificate is available upon request

All specifications are subject to change without notice, system specifics may vary.

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Profile 42" using C20

UNIT DELIVERED COMPLETE WITH:

Full HD LCD display, Codec C20, Touch 8" user interface device, remote control, PrecisionHD camera (1080p), Table Mic 20 microphone and choice of installation configuration: floor stand, wheel base or wall mount on pedestal.

MONITOR Full HD LCD, 16:9, 1080x1920 resolution

BASE Floor standing footplate Wheel base Wall mount on pedestal

BANDWIDTH The same as QuickSet C20/C20 Plus

FIREWALL TRAVERSAL The same as QuickSet C20/C20 Plus

VIDEO STANDARDS The same as QuickSet C20/C20 Plus

VIDEO FEATURES The same as QuickSet C20/C20 Plus

VIDEO INPUTS (2 INPUTS) The same as QuickSet C20/C20 Plus

VIDEO OUTPUTS (2 OUTPUTS) The same as QuickSet C20/C20 Plus

LIVE VIDEO RESOLUTIONS (ENCODE/DECODE) The same as QuickSet C20/C20 Plus

AUDIO STANDARDS The same as QuickSet C20/C20 Plus

AUDIO FEATURES The same as QuickSet C20/C20 Plus AUDIO INPUTS (4 INPUTS) The same as QuickSet C20/C20 Plus

AUDIO OUTPUTS (3 OUTPUTS) The same as QuickSet C20/C20 Plus

DUAL STREAM The same as QuickSet C20/C20 Plus

MULTIPOINT SUPPORT The same as QuickSet C20/C20 Plus

PROTOCOLS The same as QuickSet C20/C20 Plus

EMBEDDED ENCRYPTION The same as QuickSet C20/C20 Plus

IP NETWORK FEATURES The same as QuickSet C20/C20 Plus

IPV6 NETWORK SUPPORT The same as QuickSet C20/C20 Plus

CISCO UNIFIED COMMUNICATIONS MANAGER The same as Codec QuickSet C20/C20 Plus

SECURITY FEATURES The same as QuickSet C20/C20 Plus

NETWORK INTERFACES The same as QuickSet C20/C20 Plus

OTHER INTERFACES The same as QuickSet C20/C20 Plus

PRECISIONHD 1080P 12x CAMERA The same as QuickSet C20/C20 Plus

SYSTEM MANAGEMENT The same as QuickSet C20/C20 Plus, as well as Cisco TelePresence Touch 8" user interface device

DIRECTORY SERVICES The same as QuickSet C20/C20 Plus

POWER

Auto-sensing power supply 100-120/200-240 VAC, 60/50 Hz, 6A max 75 W max for codec and main camera Maximum power rating (complete system) 265 W

OPERATING TEMPERATURE AND HUMIDITY

0° C to 35° C (32° F to 95° F) ambient temperature 10% to 90% relative humidity (RH)

STORAGE AND TRANSPORT TEMPERATURE

-20° C to 60° C (-4° F to 140° F) at RH 10-90% (non-condensing)

DIMENSIONS

Height: 63.78 in. / 162 cm Width: 38.58 in. / 98 cm Depth: 6.7 in. / 17 cm Weight: 202.8 lbs / 92 kg

APPROVALS

EU/EEC

Directive 2006/95/EC (Low Voltage Directive) -Standard EN 60950-1, 2ed Directive 2004/108/EC (EMC Directive) -Standard EN 55022, Class A

- Standard EN 55024

- Standard EN 61000-3-2/-3-3

Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

USA

Approved according to UL 60950-1 Complies with FCC15B Class A

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canada

Approved according to CAN/CSA C22.2 No. 60950-1 This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

MTBF PRODUCT RELIABILITY/MTBF

The predicted reliability is expressed in the expected random Mean Time Between Failures (MTBF) for the electronic components based on the Power On Hours: Power On Hours (POH) > 69 000 hours Useful Life Cycle > 6 years

ISO 9001 certificate is available upon request

All specifications are subject to change without notice, system specifics may vary.

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User documentation on the Cisco web site

User documentation for Cisco TelePresence products can be found on \rightarrow http://www.cisco.com/go/telepresence/docs.

Depending on which product you have got, select the following in the right pane:

MX Series:

TelePresence Endpoints - Multipurpose > Cisco TelePresence MX Series

Profile Series:

TelePresence Endpoints - Multipurpose > Cisco TelePresence System Profile Series

EX Series:

TelePresence Endpoints - Personal > TelePresence Desktop

> Cisco TelePresence System EX Series

Codec C Series:

TelePresence Solutions Platform

> TelePresence Integrator Products

> Cisco TelePresence System Integrator C Series

Quick Set C20:

TelePresence Solutions Platform

> TelePresence Quick Set

> Cisco TelePresence Quick Set Series

Document categories

For each product you will find the documents under the following categories:

User guides:

Maintain and Operate | End-User Guides

Quick reference guides:

Maintain and Operate | End-User Guides

Installation guides:

Install and Upgrade | Install and Upgrade Guides

Getting started guide:

Install and Upgrade | Install and Upgrade Guides

Administrator guides:

Maintain and Operate | Maintain and Operate Guides

API reference guides:

Reference Guides / Command references

Physical interface guides:

Maintain and Operate | End-User Guides

Regulatory compliance and safety information:

Install and Upgrade | Install and Upgrade Guides

TC software release notes:

Release and General Information | Release Notes

TC software licensing information:

Release and General Information | Licensing Information

Video conferencing room guidelines:

Design | Design Guides

NOTE: All products do not have all types of user documentation.

Cisco contacts

On our web site you will find an overview of the worldwide Cisco contacts.

Go to: > http://www.cisco.com/web/siteassets/contacts

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