

TEST REPORT CISCO TELEPRESENCE SX10

OVERVIEW



Period

April 2015

SW Version

TC7.3.0

Device class

The Cisco TelePresence SX10 Quick Set is a small full HD capable compact system with integrated camera and microphone. The device is specifically designed for smaller conference rooms and can be fixed with optional equipment on a monitor.

Scope of delivery

The standard equipment of Cisco TelePresence SX10 Quick Set includes the Codec with 5x zoom camera and integrated microphone, remote control as well as a suspension for the wall. In order to fix the compact system on a monitor in a professional manner there is an optional monitor mount (VESA mount). Optionally, the device can also be operated via a TelePresence Touch 10" Panel (1280 x 800).

Protocols and bandwidths

The system is based on the SIP protocol and is able to handle calls up to a bandwidth of 3072 kbps.

INSTALLATION

The Cisco TelePresence SX10 Quick Set can quickly be connected. The ports for network, monitor (via HDMI) and power supply are located at the lower side of the device. Provided that the Power-over-Ethernet (PoE) is available, this means a PoE-Switch or a Midspan-PoE system is available, the power can be supplied via a power supply unit or via a LAN port. During the test the device was supplied with power.

After switching on the device the installation wizard will start automatically in order to integrate the device into the current Cisco UC Architecture Video Conference, TelePresence & Unified Communications. For this purpose it is possible to select the VCS (Video Communications Server) or the CUCM (Cisco Unified Communications Manager) without or with expressway. Only one IP is assigned for the stand-alone mode. Persons that run a SIP Registrar, can register the device there. After few setups on the installation wizard and the menu the device is immediately ready to use.

The data presentation by means of BFCP can be done via the DVI or the VGA port. Optionally, the device offers each a connection for a table microphone and an active loudspeaker.

TEST

Start / Power consumption

After switching on the power the device needs approx. 45 seconds to be ready for operation. Switching from standby mode to operating mode needs 3 seconds. The typical annual power consumption is around 47 kWh.

Operation



The handling is clear and simple and can be implemented easily after a short time also from people without any experience. The remote control is clearly arranged and provides only the buttons that are necessary for the implementation of a video conference. The optionally obtainable TelePresence Touch 10" Panel is a good supplement. As with all other Cisco devices it is given to control and operate the Cisco TelePresence SX10 via a password protected web interface.

Audio and Video

During individual test connections the audio was coded with [AACLD](#), [G.722.1](#) or [G.722](#). With one exception, the audio quality proved to perform successfully and was rated as 'Very Good'. In connection with the Cisco Jabber Video the audio quality was limited in part by audio dropouts.

For the most part of the tested connections the video quality was very good. The video was compressed by using exclusively the video codec [H.264](#). The majority of the connections took place with the maximum possible video format [1080p](#), the other cases took place with [720p](#).

During the test connection with Polycom HDX 8004 certain restrictions were notable. On the Cisco TelePresence SX10 a ghost image was perceptible in the video in both testing directions. (Slightly visible, less bright copy of the video image, shifted towards to the main screen). In one testing direction the VC system Polycom HDX 8004 did not receive any video. As calling device the Cisco TelePresence SX10 could not establish any connections to the Polycom RealPresence Desktop.

Data presentation

TelePresence SX10 Quick Set sends data presentations with BFCP SIP up to the format WXGA (1280x768) with 5 fps.

During the individual test connections the video codec [H.264](#) was used for the transmission of data presentations, with one exception it was transmitted in the format [720p](#) or more. In most cases, the transmitted quality of the slide presentations (static contents) could be rated with 'Very Good'. During the connection with LifeSize Softphone, the data presentation was transmitted via video channel, whereby data intense slides could not be received on the remote station. During the connection with Polycom HDX 8004, when Cisco TelePresence SX10 was calling, the Polycom HDX 8004 could not receive any data presentations. At the same time, the transmission was not possible after starting the data presentation in the video channel of the Polycom HDX 8004.

In most cases of the test connections the transmission of SD videos as well as HD videos were not convincing during practical use. Due to a too low frame rate (between 1-5 fps) the featured videos had the character of a slideshow.

Only as of a frame rate of 7 fps and more the received video can be perceived as such by the viewer.

Camera remote control

During the tests, the camera remote control operated always with corresponding technical prerequisites of the remote station.

Service DFNVideoConference

The collaboration with the DFN-[MCU](#) works without a SIP Registrar. The quality of audio and video was very good. [H.264](#) was utilised as video codec and as resolution were used [720p@30](#) in transmitter direction and [1080p@25](#) in receive direction. [AACLD](#) was utilised as audio codec and upon transmission of data presentations [H.264](#) was used with [720p@5](#).

Encryption

During the connections with DFN-[MCU](#), Cisco EX90, Cisco C40 and Cisco Jabber Video a media encryption was realised with AES-128.

CONCLUSION

The Cisco TelePresence SX10 Quick Set is a small full HD capable compact system designed for smaller conference rooms. Based on the SIP protocol it is intended for the current Cisco UC Architecture. The device is characterised by a simple operating concept and a very high quality regarding audio and video, especially compared to other current devices. With H.323 video conference devices that are older, connection problems may occur. The transmission of static contents in data presentations can be rated as 'Very Good'. The transmission of dynamic contents like SD and HD videos are not convincing because of the too low frame rates. The collaboration with the DFN-MCU works without a SIP registrar.

Documentation

Manufacturer: Cisco

Supported General Standards	SIP, BFCP
Audio Codings	64 kbps MPEG4 AAC - LD, OPUS, G.722 , G.722.1 , G.711 mu , G.711a , G.729ab , G.729
Video Compression	H.263 , H.263+ , H.264
Resolution	Datenpräsentation up to 1080p with 30 fps in video and WXGA mit 5 fps data presentation
Bandwidth	up to 3 Mbps