TEST REPORT RADVISION SCOPIA XT 1009

[PDF version](#) (optimised for print)

GENERAL

PERIOD

August/September 2011

SW-VERSION

The test was performed with software version 02.05.0031.

DEVICE CLASS

The system RADVISION XT 1009 is a set-top system. It is equal to the system RADVISION XT 1000 with the addition of an integrated MCU, which facilitates conferences with up to eight other (external) participants. As a result it is possible to hold continuous presence meetings with up to nine different locations. Due to the fact that both devices seem to be constructed absolutely identically, this difference becomes apparent only after turning on the device.

SCOPE OF DELIVERY

The scope of delivery consists of the system, a camera, 2 table microphones, all required cables and a remote control.

BANDWIDTHS

The system facilitates calls according to H.323 and SIP with bandwidths up to 6120 kbps. 12 Mbps, which are given by the manufacturer, refer to the overall bandwidth of a connection (sending and receiving).

If the integrated MCU is used, 12 Mbps bandwidth are available for all remote locations together, whereas one remote location is not provided with more than 2 Mbps.

INSTALLATION

The installation proceeds smoothly. After few adjustments, the device is operative. The menu items' default values were chosen reasonably while still offering a wide range of possibilities for individual adaptations.

In order to separate private and public networks, two different ports are available (called LAN and GLAN). However, if there is a gatekeeper, its rules will always apply to both networks. This may require network adjustments.

TEST

OPERATION

Optically, the remote control is divided into five blocks. The most important buttons, which are used very often, are arranged in the middle of the remote control. The demarcations should protect from erroneous improper operation. The remote control's four coloured buttons are assigned differently, depending on context. They grant access to essential functions of every page. In combination

TECHNISCHE UNIVERSITÄT DRESDEN

ZIH
Zentrum für Informationsdienste
und Hochleistungsrechnen

Kompetenzzentrum für
Videokonferenzdienste

with the well structured software interface, this guarantees that you can work

fast and smoothly with the system.

AUDIO/VIDEO

All the audio connections were established with AAC-LD or G.722.1C. During most of the tests with modern devices, the quality was very good. However, the quality of connections to Polycom PVX and Sony PCS G70 could only be rated good in both directions. When connected to Mirial Softphone, the incoming quality on the part of Scopia was only good, regardless of the version of Mirial Softphone (Windows or OS X - Apple). The remote system received very good audio nevertheless.

The video connections were invariably implemented using the H.264 codec. The system Scopia XT1009 sent with a 1080p or 720p resolution. In connections with the TANDBERG MXP-generation w448p (768 x 448) were sent. The following anomaly occurs during connections to PVX (Windows 7): even though Scopia sends at w448p, the remote side only receives QCIF - an image format that is deemed unacceptable by now.

The incoming image of the Scopia has a resolution of 1080p, 720p or w448p, depending on the opposite side's capabilities.

During connections to Sony PCS G70, only the image format CIF has been negotiated in both directions. This does not conform to the current technical possibilities.

H.239

Sending:
In the area of presentations according to H.239, in connections to modern HD-capable systems all the technical possibilities are made use of. In connections to CISCO EX 90, CISCO C40, LifeSize Room and Mirial Softphone (Windows and OS X), static as well as dynamic content is transmitted at 30 fps at 1280x1024 pixels.

However, the resolution in the first channel is reduced when transmitting to Mirial Softphone according to H.239. Here, the limits of a desktop software used on a PC or Apple are very obvious. All in all the the ability to work is not affected though.

When connected to older systems, H.239 is usually established at 7 fps and with a bandwidth that is equivalent to the remote system's capabilities. The older the opposite side the smaller the used bandwidth and, as a consequence, the quality of the transmission. Slide shows are always applicable, it varies regarding moving images. Therefore, before initiating the first connection, tests should be performed with the remote system .

Receiving:

The reception of H.239 by Scopia was only unconditionally possible with CISCO C40 and SONY PCS XG 80. Devices of the second-last generation facilitated the transmission of static content and SD-videos. Devices that were even older only had good presentation reception.

It was not possible to receive anything according to H.239 via Mirial Softphone under OS X. This channel could not be established.

REMOTE CONTROL

As long as the technical requirements were met, the remote control for the camera always worked in both directions .

MCU

The cooperation with Codian's MCU within the DFNVideoConference service worked smoothly up to the respective maximal bandwidth and in very good quality.

GATEKEEPERS

The cooperation with the gatekeepers GNU-GK 2.0.7 and CISCO MCM was faultless and stable. It was always possible to register with the devices.

MISCELLANEOUS

SIP-calls to the DFN-MCU work just fine.

If a registration at a gatekeeper was not carried out, URI-dialing is possible with the syntax gatekeeper_IP##alias or alias@gatekeeper_IP. If the device is registered with a gatekeeper, the latter will perform the URI dialling.

Calls of a device from LifeSize to Scopia XT 1009 should be executed with a fixed bandwidth (e.g. 6000 kbps) because auto negotiation does not connect with an optimal bandwidth.

The integrated MCU is convenient for multipoint connections. It adjusts the necessary power via the resolution that participants receive. Beginning with more than 4 participants, the resolution is adapted (i.e. reduced) with every additional remote system. Scopia's capacity for work is not decreased by this process but other systems receive an incoming image of diminished quality. Unfortunately, when a remote system leaves the conference, no post adjustment is carried out.

CONCLUSION

The system RADVISION Scopia XT 1009 is a high performance set-top system, which offers an excellent price-performance ratio. The design of the device contrasts strongly with other manufacturers'. Especially with the design of the camera, new grounds were broken.

The user has many sensible settings at their disposal, which are easily accessible due to the well structured menu.

During connections to modern devices the system shows its rich capacities, but it is also still possible to work sensibly in connections to older systems.

DOCUMENTATION

We would like to thank the companies RADVISION and Klengel Consult Dresden for providing the devices.

Manufacturer: RADVISION
Distributor: Klengel Consult GmbH - Dresden

Supported General Standards	H.320, H.323, SIP, H.239
Audio Codings	G.711, G.719, G.722, G.722.1, G.722.1C, G.728, G.729A, AAC-LD
Video Compression	H.261, H.263, H.263+, H.263++, H.264, H264 SVC
Bandwidth	IP, SIP with 6 Mbps; Total Bandwidth MCU: 12 Mbps