SCOPIA Elite 5000 Series MCU

User Guide

Version 7.7

User Guide for SCOPIA Elite 5000 Series MCU Version 7.7, September 2011

http://www.radvision.com

1 Table of Contents

1

Overview of the SCOPIA Elite MCU

The SCOPIA Elite MCU enables multimedia, multiparty collaboration in applications such as group conferencing, distance learning, training and video telephony. The MCU supports multimedia, multiparty communications in the board room, at the desktop, in the home, or on the road over wireless.

Main Features of the SCOPIA Elite MCU

The SCOPIA Elite MCU is a hardware unit which houses videoconferences from multiple endpoints, both H.323 and SIP. It includes many powerful features including:

- Video processing

  Video and audio processing is carried out per user rather than per conference. Each user connects using unique, optimized audio and video settings to enjoy the best audio and video quality supported by their endpoint and network, without affecting the other participants in a conference.

- Seamless interoperability

  The MCU is built on the solid foundation of RADVISION's H.323 and SIP software, ensuring full compliance and unmatched interoperability with IP, ISDN, and 3G networks.

  The MCU unites H.323, SCCP and SIP devices in the same conference session.

  When used with the series of SCOPIA Gateways, the MCU also enables ISDN, V.35, and 3G handsets to participate in the same conference session. See Figure 1-1 on page 2.

Figure 1-1 Various devices are used in the same conference
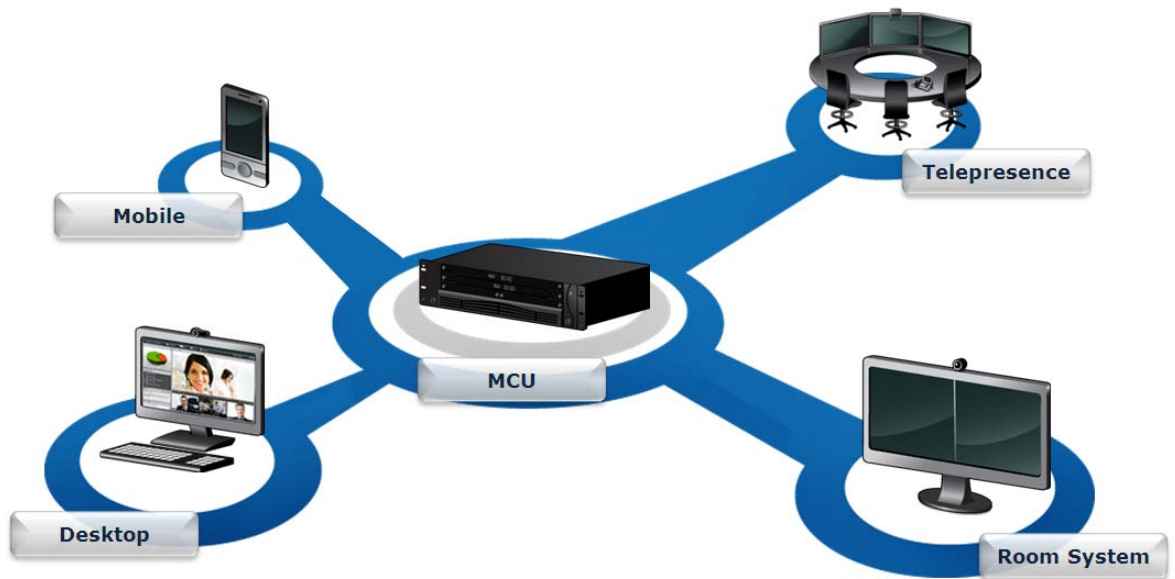
- Seamless interoperability with leading telepresence systems

  The MCU can easily connect to telepresence systems and combine them with regular videoconferencing systems, even within the same call. The MCU is compatible with telepresence systems from Cisco, Tandberg, Polycom, and LifeSize/Logitech. Enhanced video layouts were specifically designed for telepresence systems.

Note: Cisco telepresence systems can participate in conferences, but only as regular endpoints. Full telepresence functionality is not supported for Cisco telepresence systems.

- SIP and H.323-based content sharing

  The MCU supports sharing presentations and other content via SIP (using the BFCP standard) and H.323 (using the H.239 standard).

  A user can connect to a meeting from a SIP or H.323 endpoint to share content such as presentations, spreadsheets, documents, and movies.

- Video quality

  The MCU delivers high quality video and audio processing, using latest industry standards and upgradeable DSP chip software. This state-of-the-art video quality is supported by:

  - H.264 SVC error resiliency

    The MCU supports SVC error resiliency for unmanaged networks using Temporal Scalability and Forward Error Correction (FEC).

    The FEC component improves video quality and reduces the number of video freezes in packet loss conditions.

  - Error concealment mechanism: Maintains video quality when 3rd party endpoints are connected to the MCU over lossy networks.

  - High definition and standard definition participants in the same conference.

- A choice of 24 video layouts
- H.263 and H.264 in the same conference
- Resolutions from QCIF to 1080p in the same conference
- Framerate of up to 60 fps for 720p resolution and 30 fps for other resolutions
- Up to 12Mbps on each stream without affecting capacity
- MCU's bandwidth estimation package improves call quality over Internet connections. The available bandwidth is estimated at the beginning of each call and adjusts accordingly during the call.

- Security and privacy

  The MCU features administrator and operator password protection for accessing the MCU web interface. It also features optional PIN protection for joining a conference and web access, and additional PIN protection for conference Moderator Control.

  To achieve secure communication with endpoints, the MCU uses H.235-based encryption for H.323 endpoints and SRTP and TLS encryption for SIP endpoints.

  The SCOPIA Elite MCU is certified by the Joint Interoperability Test Command (JITC).

- Intuitive web-based management and control

  Both the MCU system and actual conference sessions are managed, configured, and dynamically modified through an intuitive, web-based interface that offers easy, high-level conference control and administrative flexibility for an enhanced user experience.

- Unlimited number of conferences

  The number of supported conferences depends on the number of ports provided by your license. The SCOPIA Elite MCU supports a dynamic port capacity that enables extra calls to be connected even after maximum call capacity is reached. By downspeeding existing 1080p calls to 720p, the MCU can accept additional calls within a single meeting.

  Participants defined as VIP users in SCOPIA iVIEW Management Suite will not have their resolution downspeeded.

- In-meeting indicators

  A range of messages and icons are displayed on the endpoint monitor during conferences when certain events occur. For example, conference participants are notified when a participant joins or leaves a conference, an audio-only participant speaks, or a participant's personal video layout changes.

- Personal layouts per participant

  You can choose from 24 video layouts for each conference participant. You can view up to 28 participants on your screen.

- Single LAN connection

  Only a single Ethernet connection is required for the entire MCU chassis. The connection is via the upper blade. The upper Media Blade manages the platform, including call signaling and processing, application interface, network management, and audio and video processing.

- Snapshot files for Customer Support

  One-click creation of a file of bundled logs and configuration files which you can send to Customer Support for debugging.

- In-conference control

  During a conference, participants can use their endpoint remote control or keypad to perform actions such as mute, volume control, changing video layouts and inviting participants. These options are presented in the in-meeting menu displayed on top of the video layout.

- Optional no self see

  The no self-see (NSS) option is enabled by default, but can be disabled with an advanced command. This feature enables more effective use of the video screen.

- Interactive Voice Response (IVR) messages

  The MCU includes pre-recorded greetings to conference participants and announcements as each new participant joins the conference. You can record messages to provide custom greetings and announcements.

Note: If your MCU deployment includes iVIEW Management Suite, use the IVR from your iVIEW Management Suite.

- Video switching

  The MCU supports the switching of HD resolutions 720p and 1080p at the capacity of up to 120 calls, depending on the video resolution and call bitrate. Video switching is available for H.264 and H.261 video codecs.

  When using switched video, all endpoints in the conference must support the same resolution. If a network experiences high packet loss, switched video might not be displayed properly for all endpoints in the conference.

- Dual NIC support

  The MCU enhances security within the enterprise by routing media and management traffic to two different subnets. For more information, see the Configuring a Dual NIC MCU section in the *Installation Guide of SCOPIA Elite MCU*.

- Recording via moderator menu

  Moderators can record meetings using the MCU moderator menu.

Note: This feature is only relevant if your SCOPIA Desktop deployment includes the recording option.

2

Starting or Joining a Conference from an Endpoint

You can start or join a conference either by using an auto attendant number or by dialing directly into the SCOPIA Elite MCU. The auto attendant number is a prefix defined by your video network administrator. You can use the auto attendant number for both H.323 and SIP endpoints.

Starting or Joining a Conference Using an Auto Attendant Number

You can start or join a conference using an auto attendant number with both H.323 and SIP endpoints.

You can start or join a conference using an auto attendant number with both H.323, SIP or SCCP endpoints.

Procedure

Step 1 Contact an administrator and verify the auto attendant number. By default, the auto attendant number is set to 1800.

Step 2 From the endpoint, dial the auto attendant number, then perform one of these actions:

- Select 0 to create a new meeting.

Figure 2-1 MCU Menu

-or-
- Select a meeting to join from the list of existing meetings.

Starting or Joining a Conference with H.323 Endpoints by Dialing Directly into the MCU

Perform this procedure to start or join an ad hoc conference with H.323 endpoints.

Procedure

Step 1 Contact an administrator and verify the meeting ID number.

The meeting ID number is composed of a service prefix number and a unique number (or numbers) identifying the meeting.

For example, the meeting ID number of 711234 consists of these elements:

- 71 is the service prefix.
- 1234 is the unique meeting number.

Step 2 Dial in to the meeting using the meeting ID number.

As soon as the MCU accepts the call, you are either connected to the existing meeting.

-or-
If the meeting does not exist, the MCU creates a new meeting with this meeting identifier.

Starting or Joining a Conference with SIP Endpoints by Dialing Directly into the MCU

Perform this procedure to create or join ad hoc conferences with SIP endpoints.

Procedure

Step 1   Verify the meeting ID number.

The meeting ID number is composed of a service prefix number and a unique number (or numbers) identifying the meeting.

For example, the meeting ID number of 711234 consists of these elements:

- 71 is the service prefix.
- 1234 is the unique meeting number.

Step 2   Verify the MCU domain name.

Step 3   Dial in to the meeting using the meeting ID number and the MCU domain name in this format:

<meeting ID number> @ <mcu.domain.com>

-or-

<meeting ID number> @ <mcu.IP address>

As soon as the MCU accepts the call, you are either connected to the existing meeting.

-or-
If the meeting does not exist, the MCU creates a new meeting with this meeting identifier.

3 Moderating Conferences

You can control MCU meetings using Dual Tone Multi-Frequency (DTMF) signals from your endpoint remote control or key pad. You may need to enable touch tone mode for DTMF entry on some endpoint remote controls.

Figure 3-1 Moderator Menu
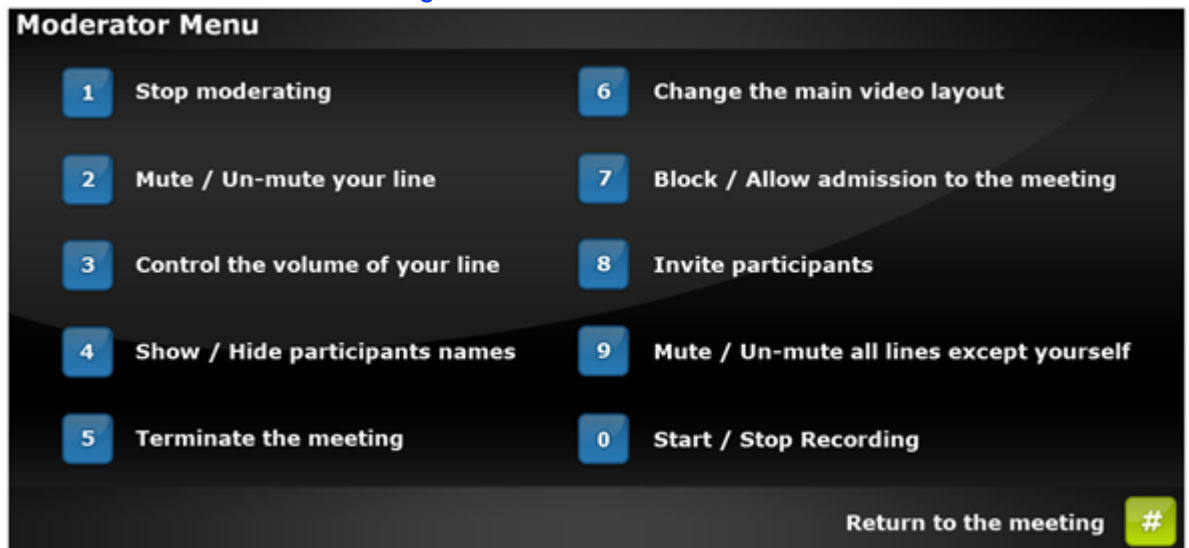
Table 3-1 DTMF Controls

During a meeting press * followed by:	Functionality
*	Listen to available options and display video menu
1	Become Moderator/stop moderating
2	Mute/unmute your line
3	Control your volume
4	Show/hide participant names (Moderator only)
5	Terminate the meeting (Moderator only)

During a meeting press * followed by:	Functionality
6	Change the main video layout for the meeting (Moderator only)
7	Block/allow admission to meeting (Moderator only)
8	Invite a new participant (Moderator only)
9	Mute/unmute all participants besides yourself (Moderator only)
0	Start/stop recording the meeting (Moderator only) This option only appears if your SCOPIA Desktop deployment includes the recording feature.
#	Return to the meeting

4 Controlling Personal Video Layouts with DTMF

Procedure

Step 1 Press **0** on your endpoint remote control to activate the personal video layout mechanism.

Step 2 Continue to press **0** to rotate through these personal video layout options:

- Default Meeting Layout
- Enlarged Main View
- Same Sized View
- Full screen
- Fixed 2 Participants
- Fixed 4 Participants
- Fixed 6 Participants
- Fixed 9 Participants

Step 3 Select the option that you require.

Step 4 (Optional) Press # to automatically adjust the size of the video display to better fit your endpoint screen.

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About RADVISION

RADVISION (NASDAQ: RVSN) is the industry's leading provider of market-proven products and technologies for unified visual communications over IP, 3G and IMS networks. With its complete set of standards-based video communications solutions and developer toolkits for voice, video, data and wireless communications, RADVISION is driving the unified communications evolution by combining the power of video, voice, data and wireless – for high definition video conferencing systems, innovative converged mobile services, and highly scalable video-enabled desktop platforms on IP, 3G and emerging next generation IMS networks. To gain additional insights into our products, technology and opinions, visit blog.radvision.com. For more information about RADVISION, visit www.radvision.com

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