TrueConf

TrueConf Group

User Guide

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Overview

TrueConf Group is a Full HD video conferencing endpoint designed for small and medium-sized meeting rooms. Used both as an endpoint and an independent MCU, this ergonomic modular system suits any workspace.

With TrueConf Group architecture, communication quality is always stable even on slow channels. Advanced video stream settings, adaptation to changing radio communication channels, such as LTE and WiFi, automatic selection of the most suitable audio and video codecs enable the device to optimally fit into existing infrastructure and leased communication channels. High-quality sound and perfect video are guaranteed. A Full HD PTZ camera and an excellent speakerphone come as a standard. You no longer need to adjust audio on your computer every time before you call anyone.

The device is powered by software of Integrit LLC which was acquired by TrueConf in March 2019.

Supply Package

TrueConf Group package includes:

- PTZ camera, e.g. CleverMic 1011U-20 (20x, HDMI, LAN)

- Phoenix Audio Duet PCS Speakerphone (MT202-PCS)
- Remote control
- Codec
- Ethernet patch cable
- HDMI TV cable
- Power cable

TrueConf Group Key Features

TrueConf Group video endpoints combine ease of use with advanced functionality. Up-to-date concepts of user interaction help you spend much less time on adapting to the device.

Key Features:

- Call third-party server users
- Take calls from third-party server users
- Run video conferences with up to 8 users
- Manage video layouts
- Control local camera
- Control far-end cameras
- Record conferences
- Receive and transmit content as a second video stream (H.239, BFCP)
- Address book
- Call log
- Highlight active speakers
- Choose audio and video codecs manually
- Control channel strips manually
- Streaming (RTMP/SAP/Multicast/HLS)
- Sleep mode
- Play slide decks from USB drives
- Connect up to 6 additional input streams

- Dual-screen configurations
- Intelligent noise cancellation

Protocols

- H.323, H.221, H.225, H.231, H.239, H.241, H.242, H.243, H.245, H.281, H.283, H.350, H.460
- SIP, ICE, TURN, BFCP, RFC
- RTSP

Video Codecs

- H.261
- H.263, H.263+/++
- H.264 Baseline Profile
- H.264 High Profile
- H.264 SVC
- H.265 Main profile

Audio Codecs

- G.711,
- G.719 (Siren22)
- G.722
- G.722.1 (Siren7)
- G.722.1 Annex C (Siren14)
- G.723.1
- G.726
- G.728
- G.729
- AAC-LD (MPEG4 64 kbps)

Resolutions

- CIF@30
- w408p@30
- 480p@30
- 720p@30
- 720p@60
- 1080p@30
- 1080p@60
- 2160p@30

Network Features

- ITU-T: H.323 v4.2, Annex Q (FECC), Far-End Camera Control
- DNS
- Quality of Service (QoS)
- Differentiated Services (QoS).
- IP adaptive bandwidth management (including flow control)
- Dynamic playout buffering
- H.245 DTMF tones in H.323
- Intelligent speed reduction in case of packet loss
- Supported protocols: TCP/IP, Static IP, DHCP, IPv4, IPv6, SNMP
- Resizable MTU
- Date and time support via NTP
- URL/IP dialing
- Access to LDAP network directory
- NAT traversal (ICE, TURN, H.460.18, H.460.19).

Network Interfaces

- LAN/Ethernet (RJ-45) 10/100/1000 Mbit (1Gbit)
- Second network interface:
    - NIC Teaming
    - Simultaneous connection to two different networks

Security

- SRTP/TLS support
- Passwords for various sections and interfaces
- List of IP addresses allowed for remote access
- Management through Telnet, SSH, WEB (HTTP, HTTPS)
- Disabling IP services
- Network settings protection

Compatibility

Video endpoints and video phones supporting H.323/SIP protocols; SIP/H.323 softphones.

Endpoint Control

TrueConf Group can be controlled in several ways.

Remote Control

TrueConf Group comes with a remote control.

Key assignment:

No.	Key	Description	Functions
1	**Off**	Disable a video conferencing codec	Press this button to call a menu window confirming endpoint shutdown, shutdown cancellation or reboot
2	**Mic**	Mute/unmute a microphone	Mute/unmute a microphone. Dial pad
3	**Alphanumeric keypad**	Keypad is used to enter IP addresses when you make a call and personalize the system	Digits 0–9 and letters A–Z – a set of letters and digits. Characters are typed using a search method by successively pressing the button on the remote control, or, depending on the current menu, only digits or only letters are typed
4	**.**	“.” – period	Set of characters: “@”, “.”, “-“, “*”
5	**Backspace**	Move a cursor one character to the left, deleting that character	Delete a character to the left of a cursor. Camera control is performed with buttons within a curly bracket “**CAMERA**”
6	**Position**	Used to control a camera	Select a saved (set) camera position. To use a saved position, press “Position” and then a digit with a position number from 1 to 9, while a camera switches to a preset position. Position number 0 cannot be programmed by a user and is used to set a camera to a default position (zero position)

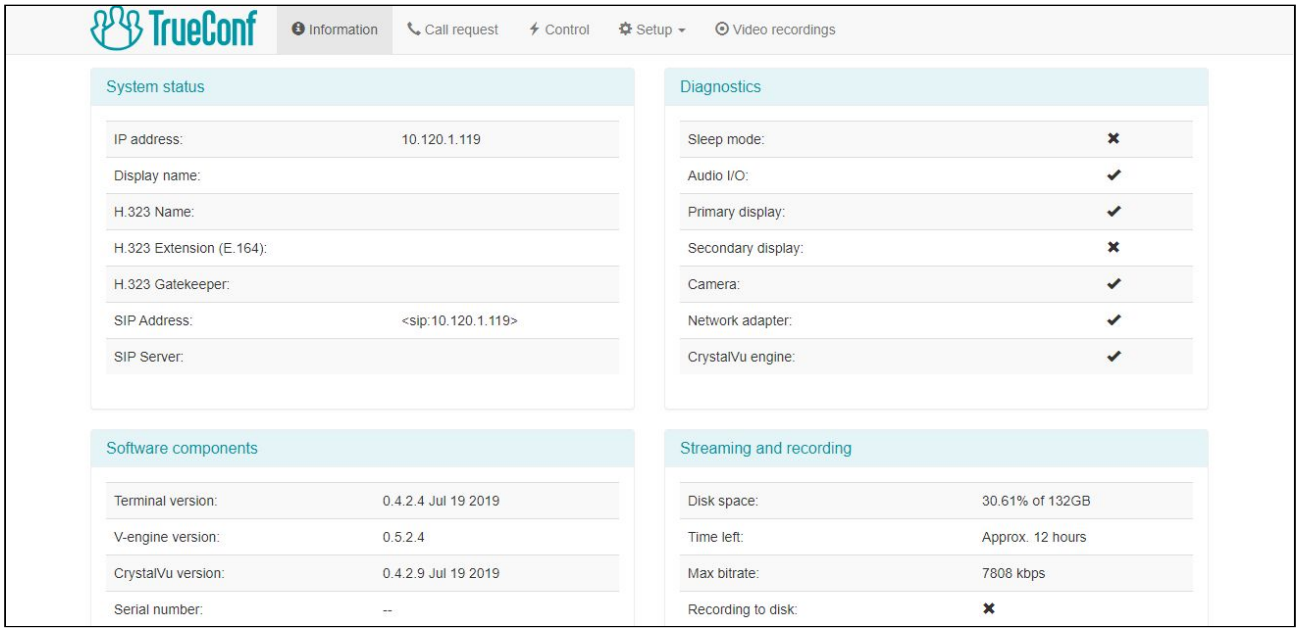
7	**Assign**	Used to control a camera	Save the current (set) camera position to video endpoint memory under the selected number. Tilt angle, pan angle and zoom position are also saved. To save the current camera position (tilt/pan/zoom), press “Assign” and then a digit from 1 to 9. After that, you can switch a camera to saved positions by using “**Position**”
8	**Menu**	Used to control a camera	Input source selection
9	**Far-end/Local**	Switch control between local and far-end cameras	Switch control from a local camera to a far-end camera and vice versa. Capture is performed with buttons within a curly bracket “Capture”
10	**Data**	Call Data menu	Start/stop
11	**Menu**	Call Data Capture menu	Open the source selection menu with a presentation to be played (laptop, USB device, internal recording device). The endpoint supports any USB devices (USB, USB-HDD, USB-CD) with up to 2Tb. Supported formats: PDF
12	**Position/Menu/ OK**	Camera pan, selection and navigation through menu items	Pan and tilt a camera/call the menu/save settings/navigate through menu items
13	**Call**	User call	Open the new call menu
14	**Address book**	Address Book form	Open the address book
15	**Drop**	Return to the main screen	Active call termination (disconnection)
16	**Back/Stop**	Return to the previous menu	Return to the previous menu item, exit Endpoint Optional Features menu

		item and exit	
17	**Video**	Enable/disable your camera video	Enable/disable local camera video transmitted to a remote user
18	**PIP**	Switch position and disable local video	Move a window with a local camera image to the four screen corners and switch on dual-screen simulation mode in one screen (two virtual screens). This button is active only during a call to a remote user
19	**Screens**	Choose on-screen image	Choose on-screen image
20	**Speaker**	Enable/disable far side audio	Enable/disable audio coming from a far side (mute audio device). In passive mode, mute any system sounds going to speakers (audio device).
21	**Notebook**	Open Notebook menu	Reserved key
22	**Calls**	Open Call History window	Open incoming/outgoing/missed call window
23	**Directory**	Open Network Directory menu	Open the network directory menu. The menu is active only if the endpoint is registered with network directory services of a particular organization.
24	**Info**	Connection information	Settings, Calls, Audio, Video, Network, Address Book, System, System Status, Device
25	**Stream/Stop**	Allow/disallow target broadcasting	Reserved key
26	**Broadcast/Stop**	Enable/disable multicast streaming	Reserved key

27	**Selector**	Reserved button	Reserved key
28	**Record/Stop**	Start/stop recording	Reserved key

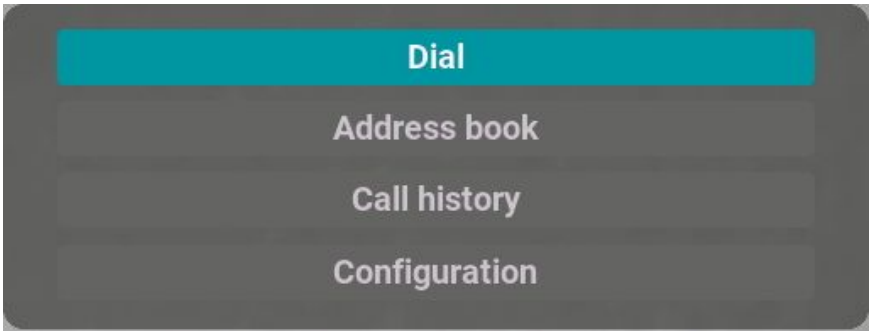
Web-Based Management

TrueConf Group can be managed via the web interface (control panel) in your browser.



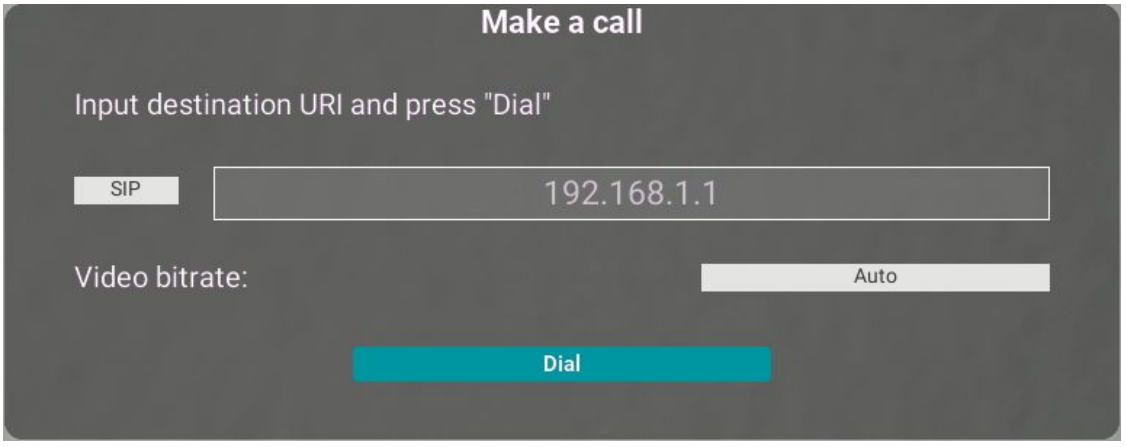
Program Start

When the endpoint is powered on, TrueConf Group starts automatically with the main menu appeared on the screen.



Making a Call

1. Choose **Dial** in the main menu.
2. Enter the number or network address of a called user in the field.
3. Choose **Auto/H.323/SIP** to specify call protocol.
4. Choose **Call** on the remote control.



Technical Information about the Call

For call technical information, press **Info** on the remote control. Technical information includes the following data about incoming and outgoing data streams:

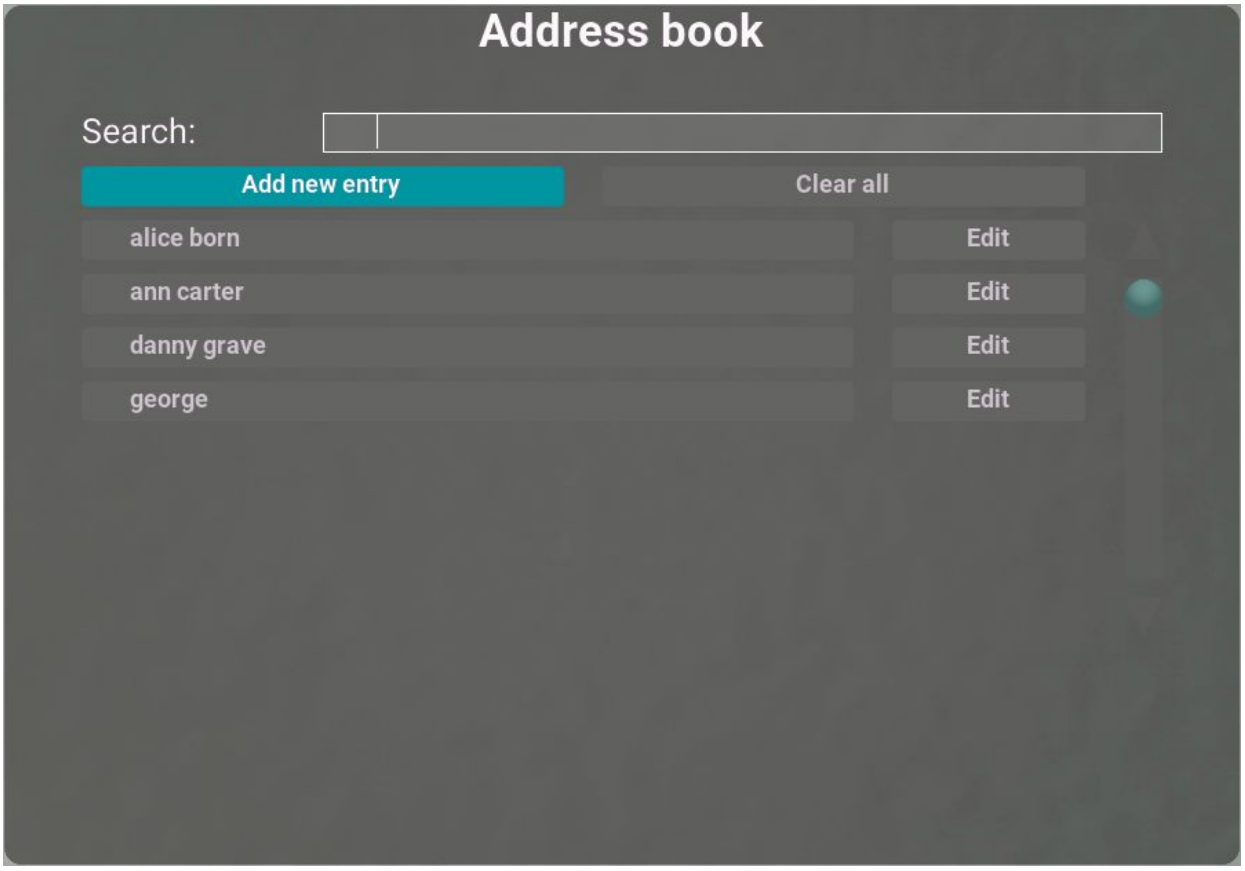
1. Audio codec name.

2. Audio bitrate (kbps).
3. Video codec name and flow type (primary – main video stream or secondary – presentation stream).
4. Video bitrate (kbps).
5. Video resolution (encrypted frame width and height, not to be confused with camera resolution, see video settings below).
6. Video frame rate.

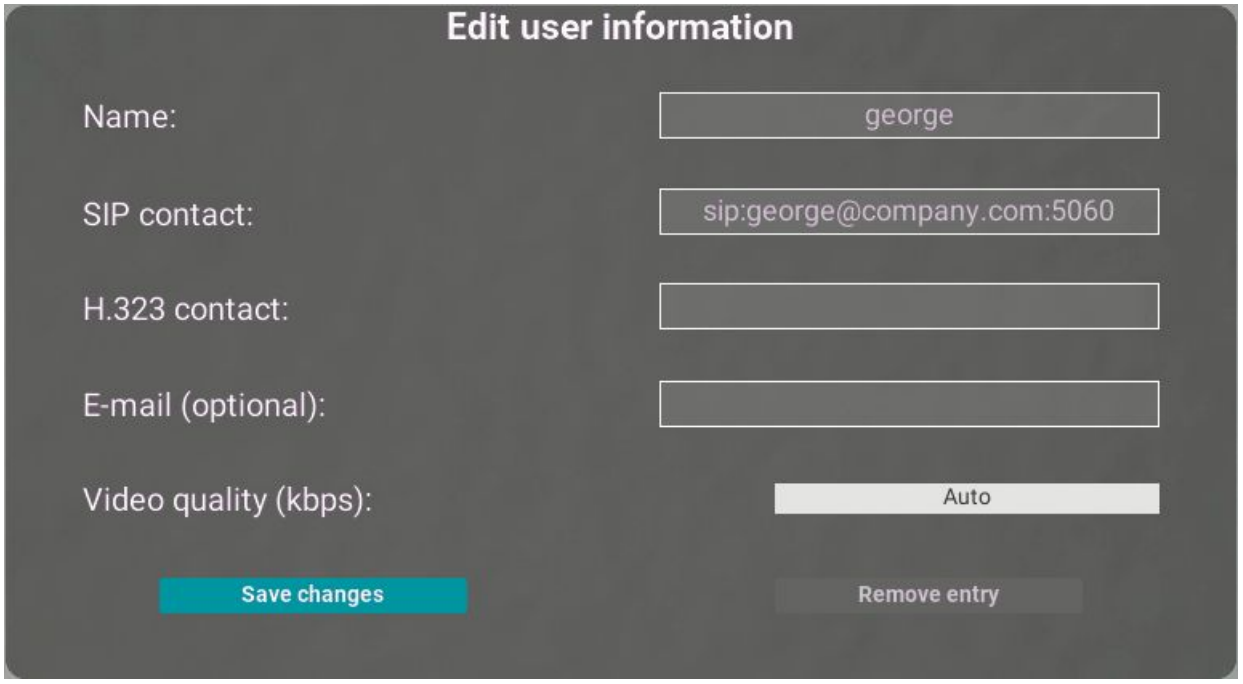
Address Book

Adding a User

1. Go to **Address Book** in the main menu.
2. Choose **Add New Entry**.

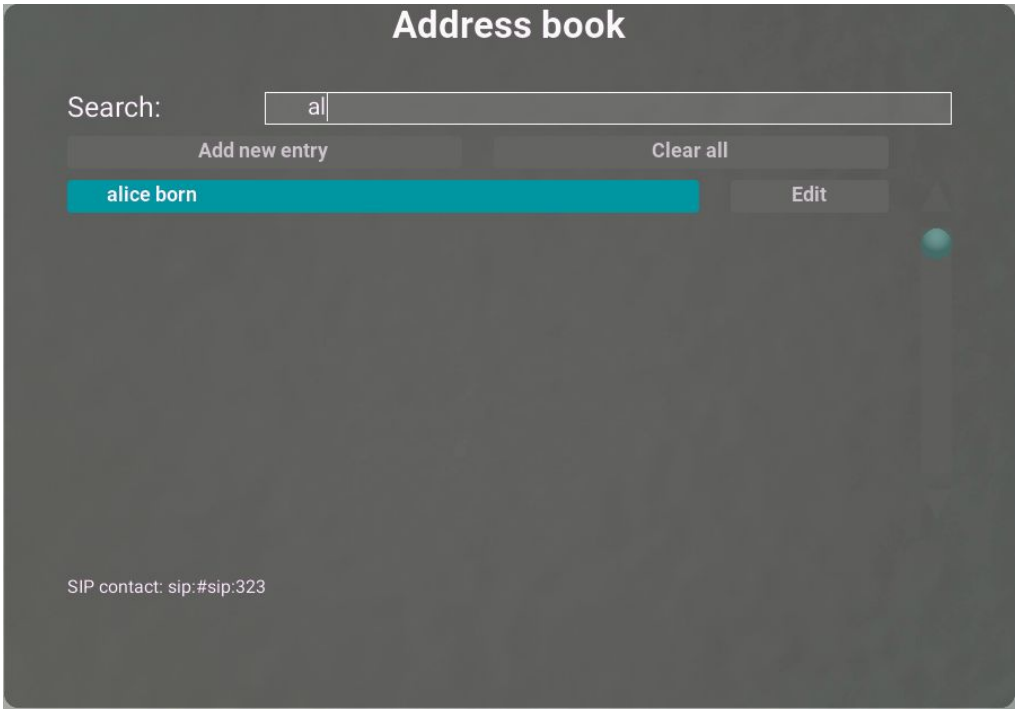


3. Complete your personal profile using the remote control.
4. Choose **Save Changes** and press **OK** on the remote control.



Searching or Choosing a User

Enter a user name in the search field. The program then filters the list according to the query you have entered, making it easier for you to find the user.

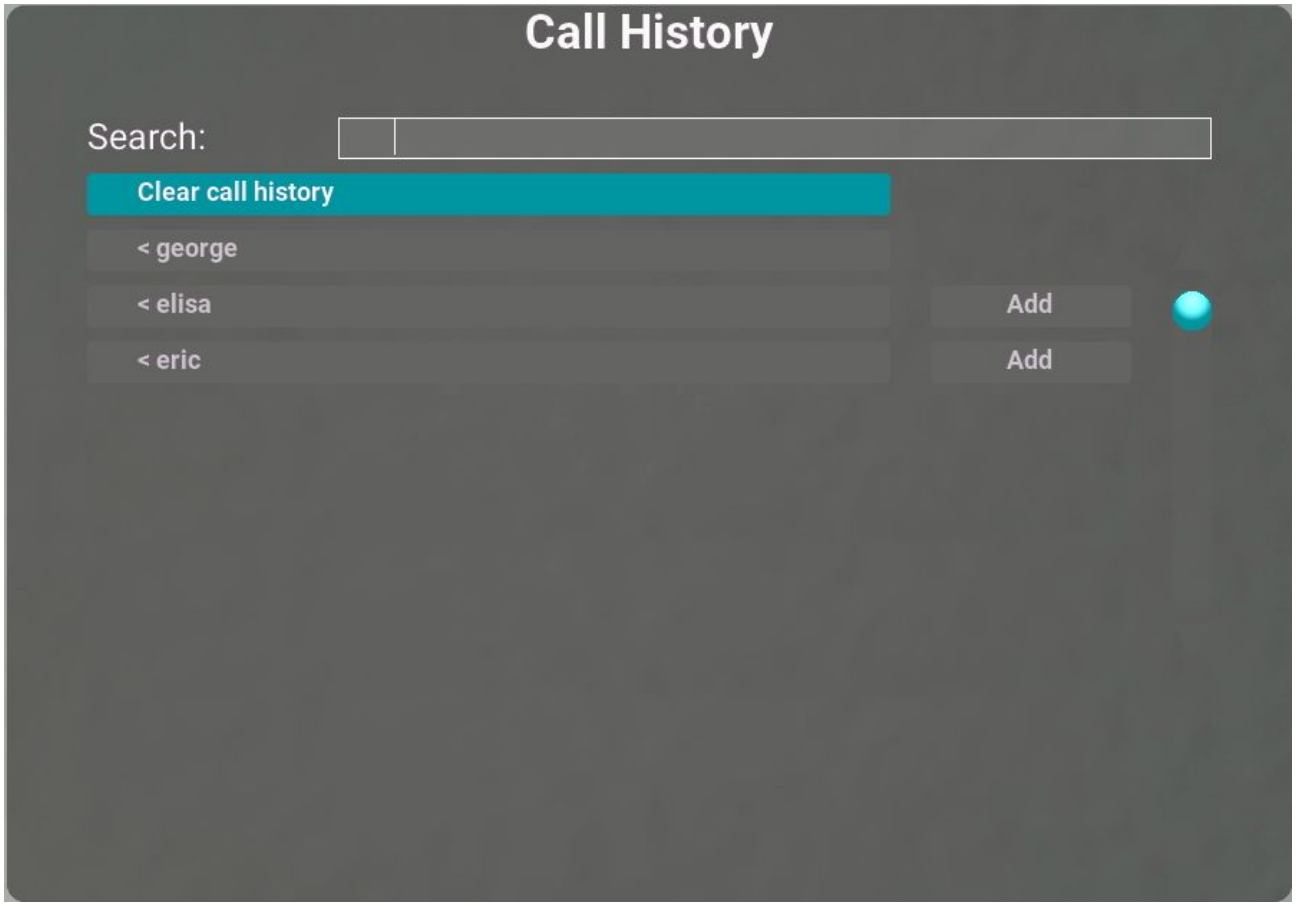


To call a user, just press **OK** on the remote control.

Call History

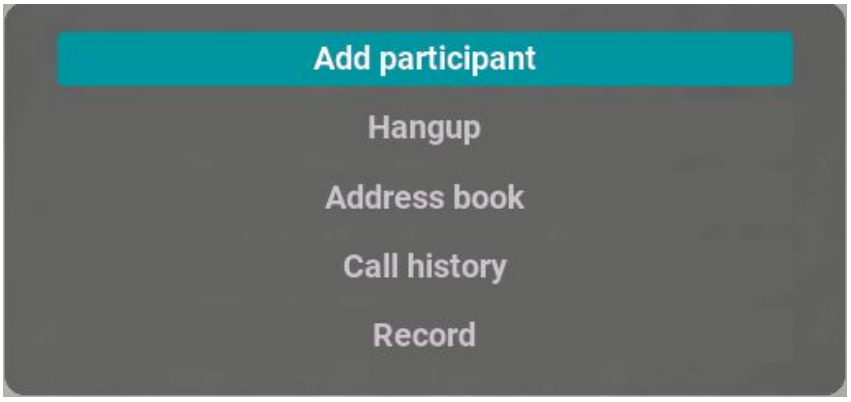
TrueConf Group saves the recent call history which can be used to quickly call or add users to an active conference.

To that end, choose **Call History** in the main menu.

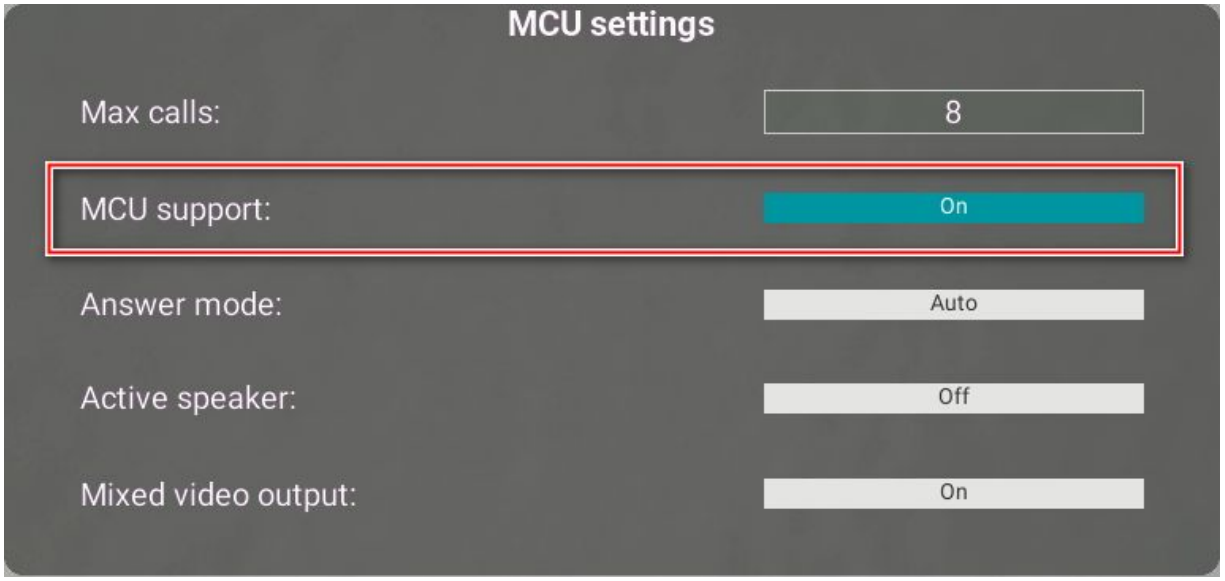


Creating a Conference

1. Call the first conference participant (see section above).
2. Click **Back**.
3. In the appearing menu, choose **Add Participant / Address Book** to add the following participants.



! These menu items are not active by default during a call. To activate them, choose **Configuration → Calls → MCU Settings** and enable multipoint connections in the menu.



Your conference is then displayed on the endpoint screen.

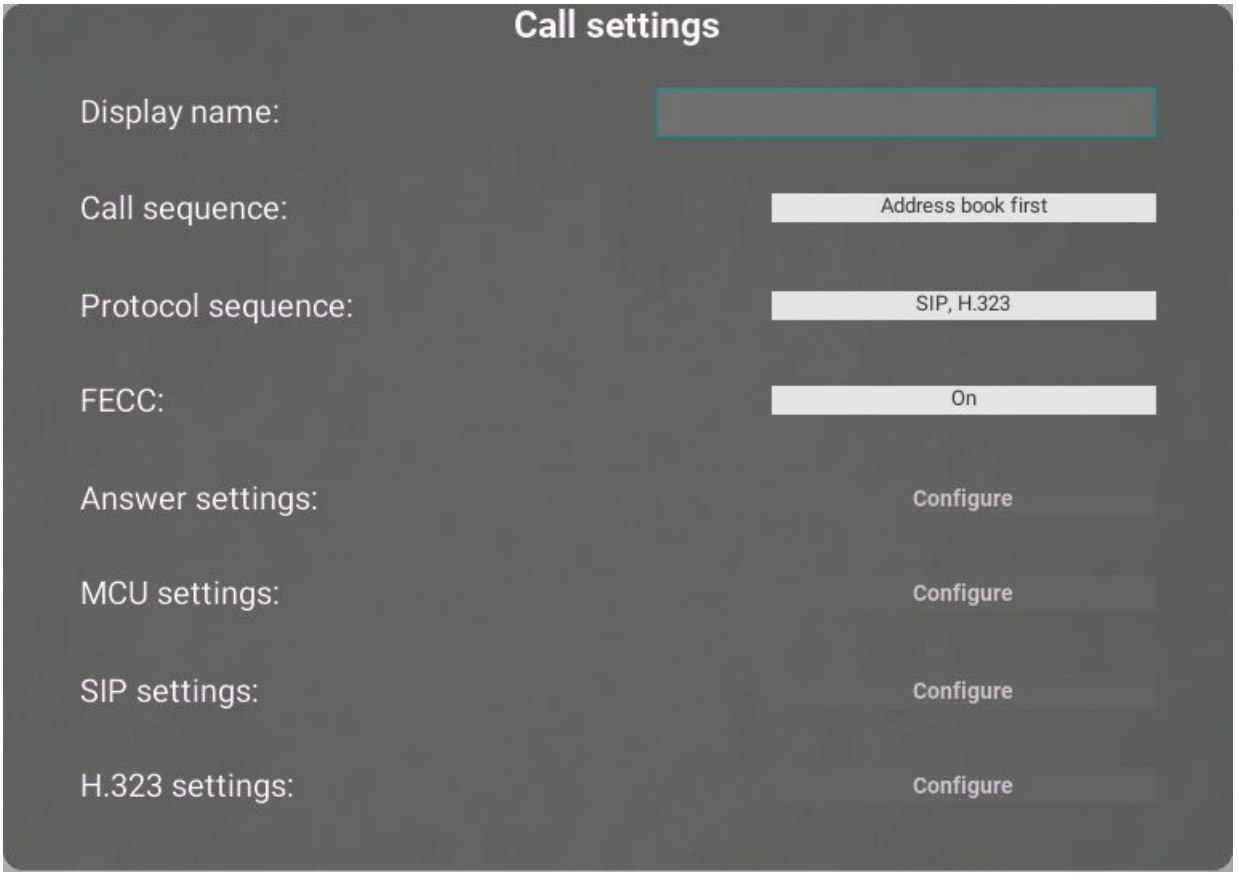
If you want to change the video layout (video windows order), use **PiP** on the remote control. To change video streams in layout windows, use **Screens.**

Endpoint Settings

Call Settings

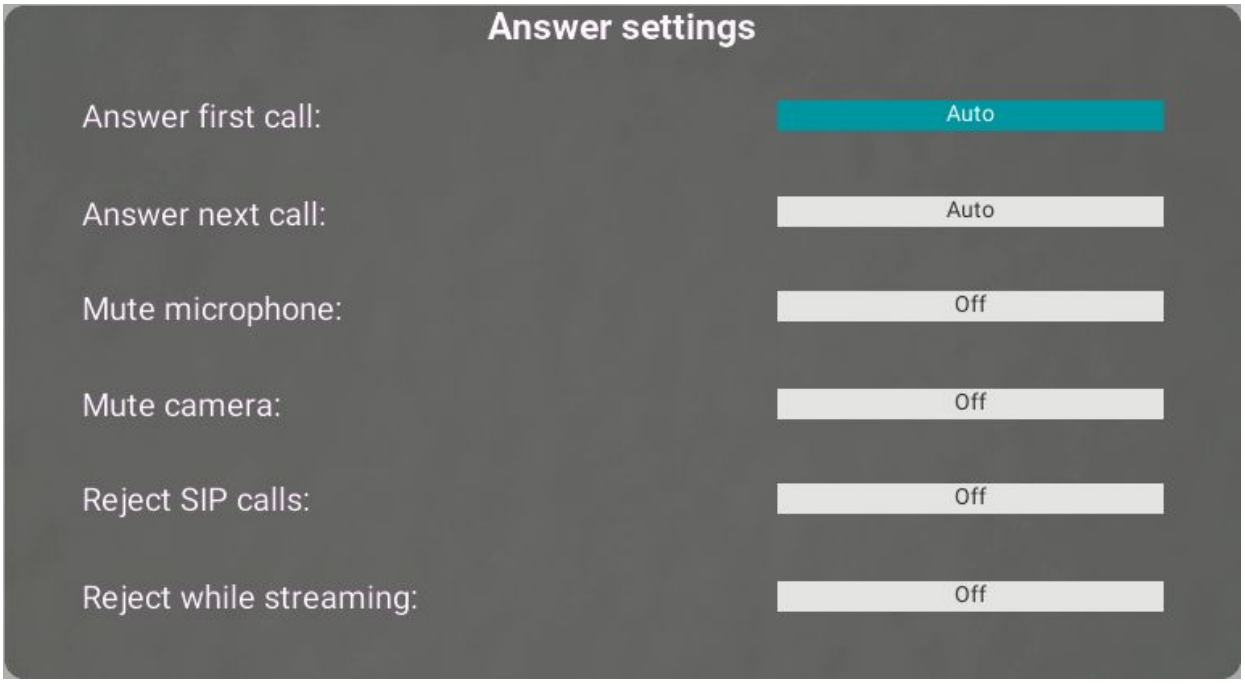
To configure protocols which will be used for making video calls and running conferences:

1. Choose **Configuration** → **Call** in the menu.

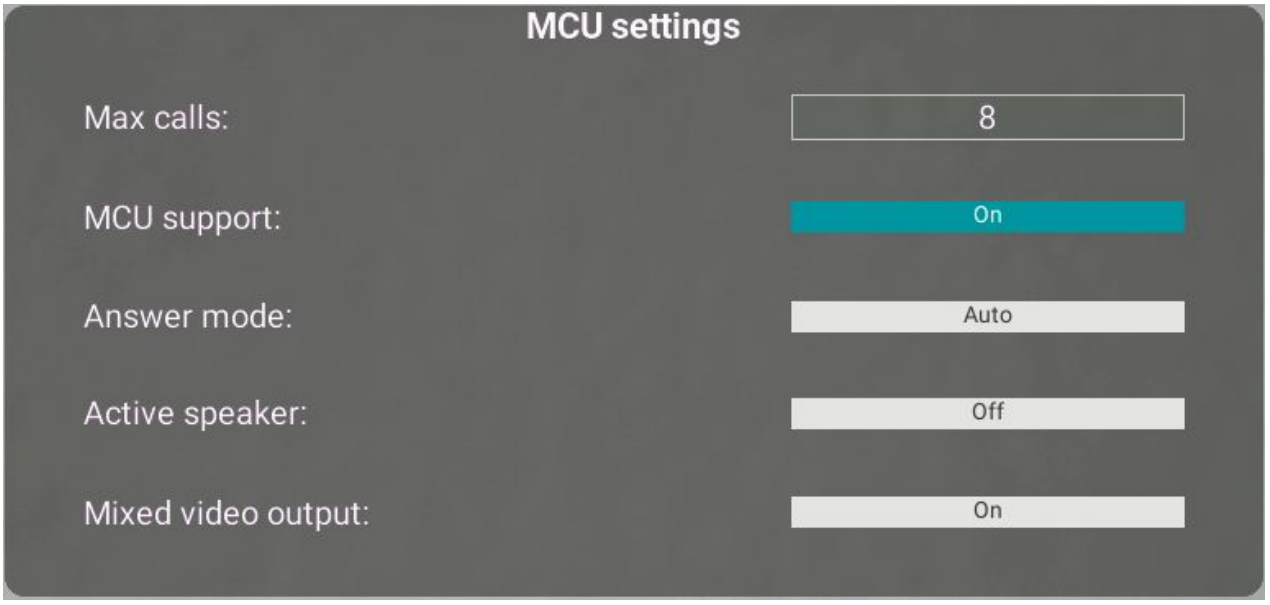


2. Configure the following settings:

- **Answer Settings** which are used to set auto-reception and call blocking, as well as enable/disable devices connected to the endpoint:



- **MCU Settings** which are used to enable multipoint connections for running conferences on the integrated server (MCU):

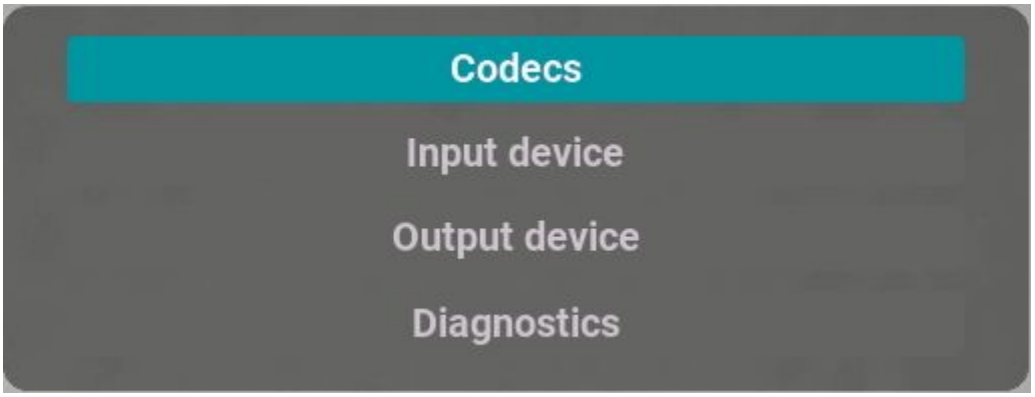


- **SIP** settings and **H.323** settings (see **Network** settings in the manual)

Audio Settings

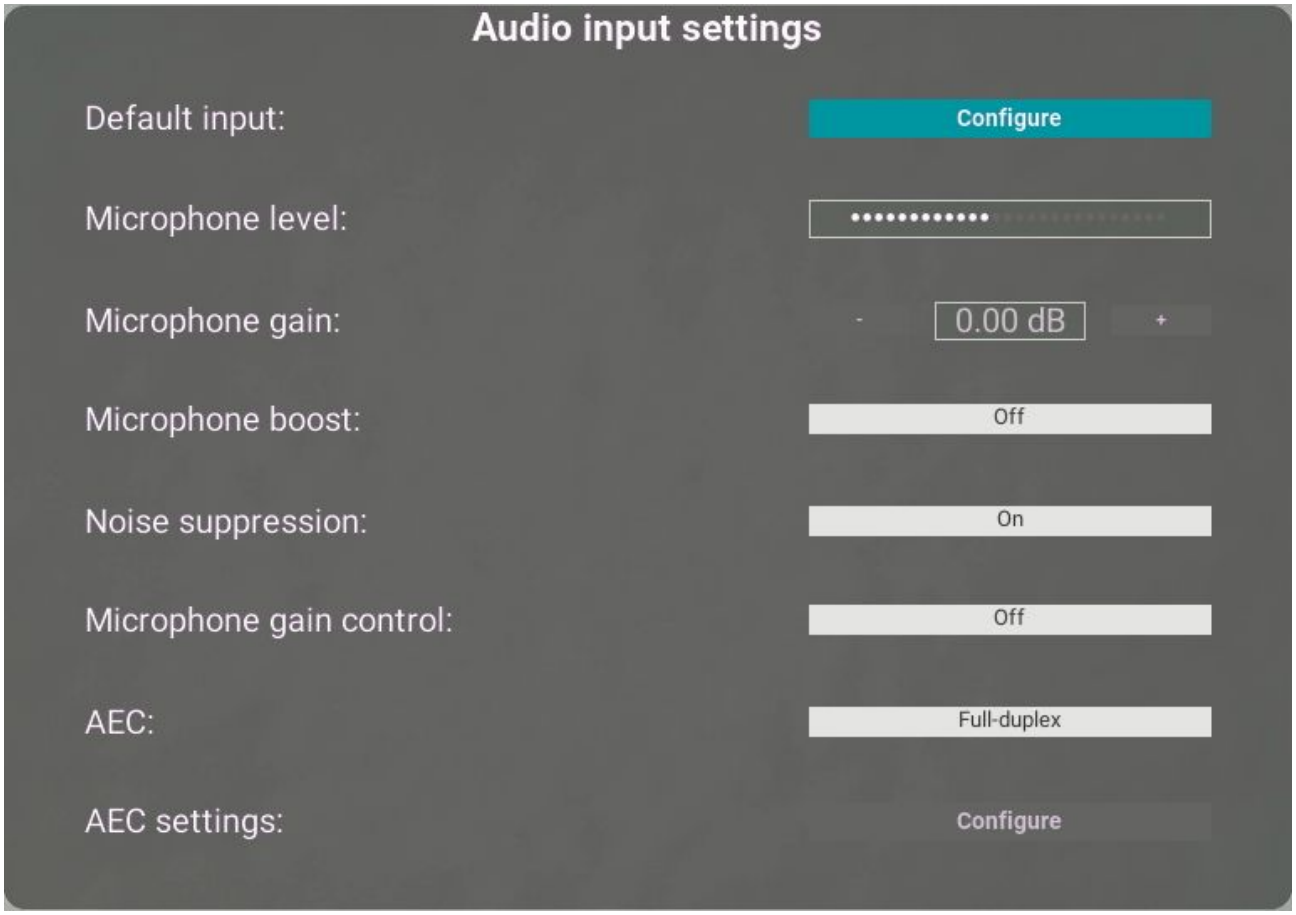
1. Choose **Configuration** → **Audio** in the menu.

2. Choose one of the following menu items to configure:



- Audio codecs used by the endpoint — **Codecs:**

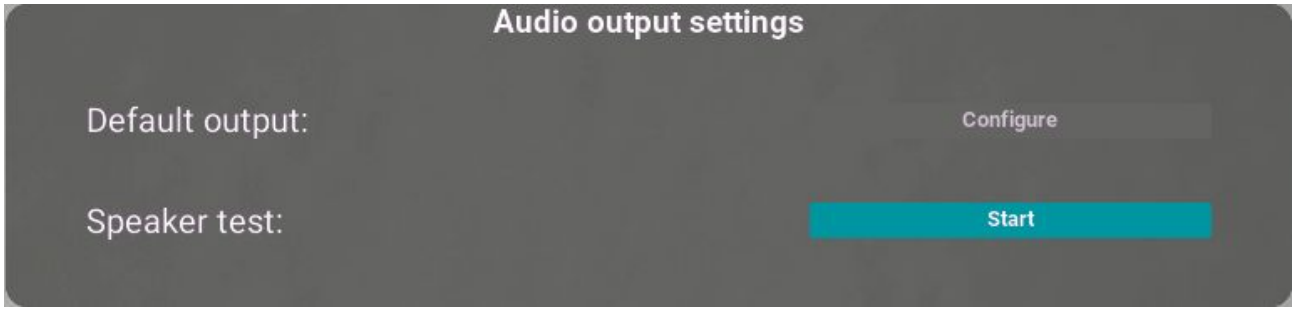
- Built-in and connected microphones — **Input Device:**



Microphone Level does not control the volume heard by a remote user. It is used to avoid non-linear distortions arising from microphone signal overamplification. The audio volume level is adjusted by a user on the endpoint which will play audio.

AEC allows you to suppress acoustic connection between the speaker and microphone of this endpoint and eliminate echo on the side of a remote user.

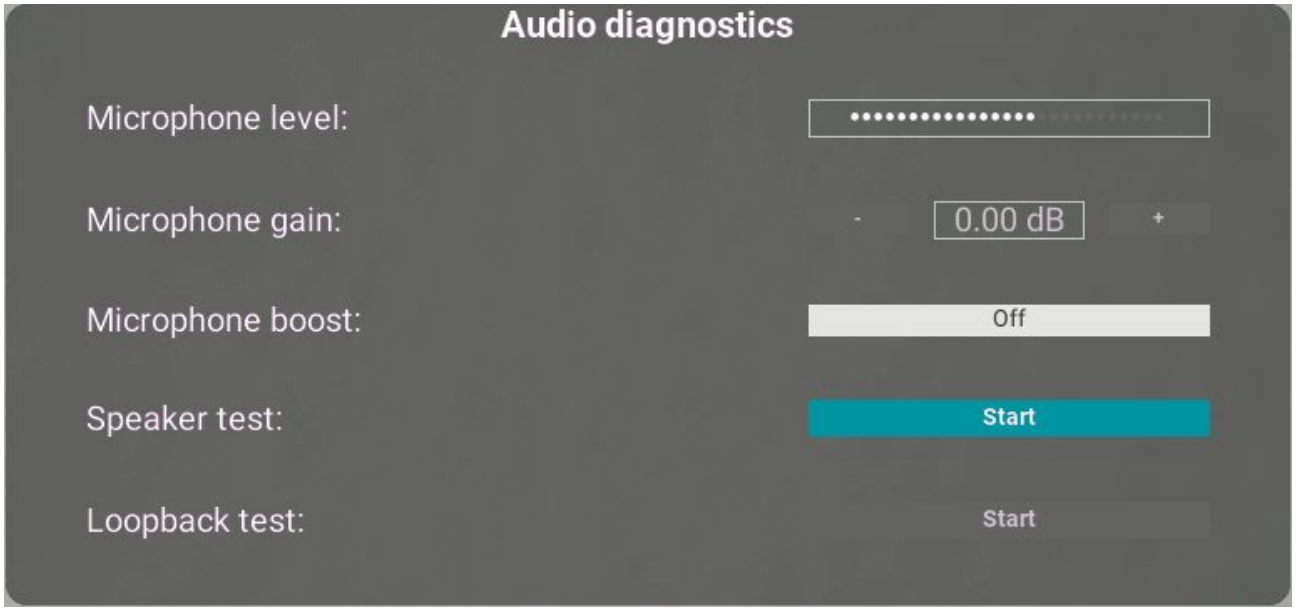
- Built-in or connected speakers — **Output Device:**



By setting **Default Input** and **Default Output,** you can choose audio devices which will be used as the microphone and speaker, respectively. If several audio devices (e.g.

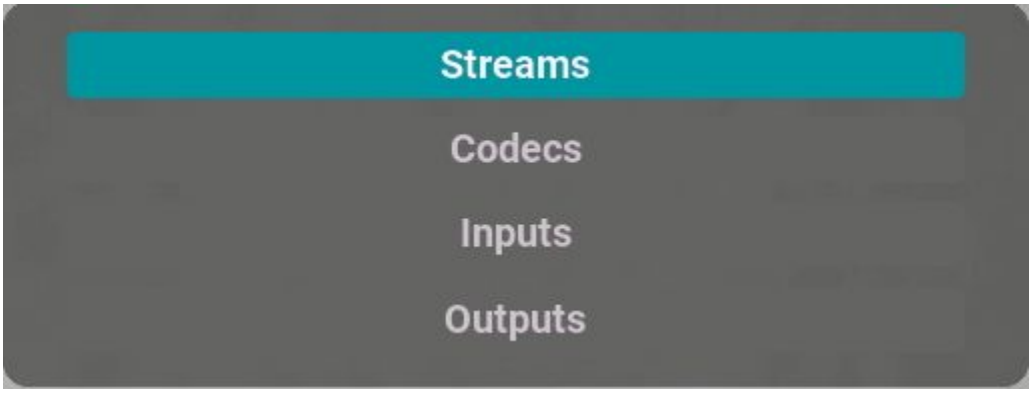
microphones) are connected to the endpoint, the preferred one will be used.

To check audio devices connected to the endpoint, choose **Diagnostics** in the menu.

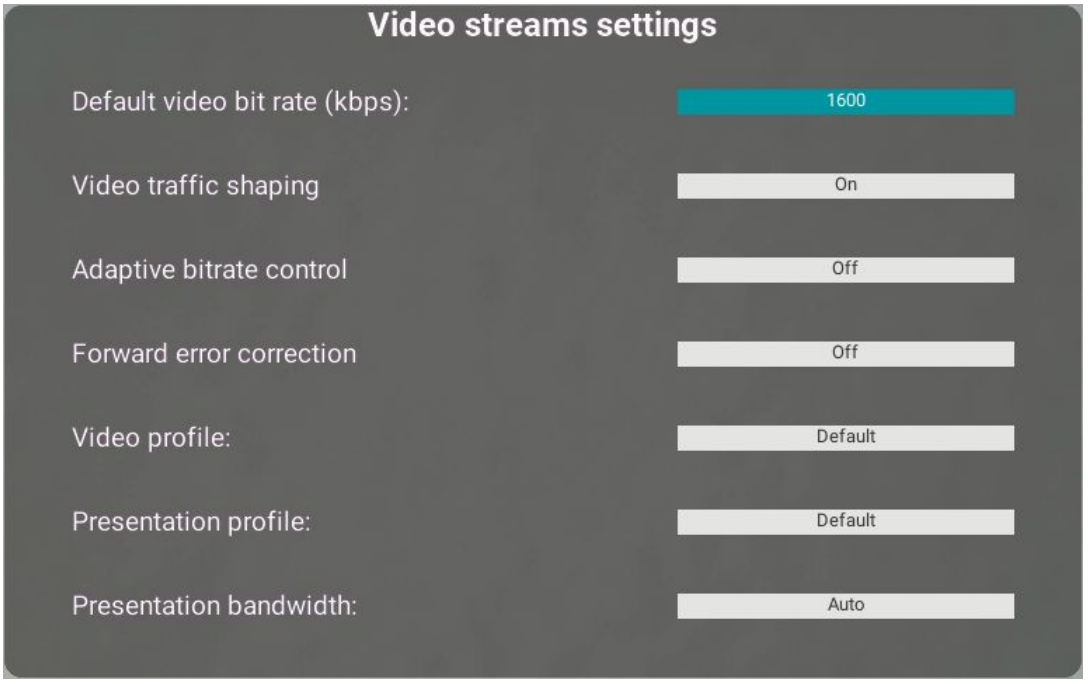


Video Settings

1. Choose **Configuration → Video.**
2. Choose one of the following menu items to configure:



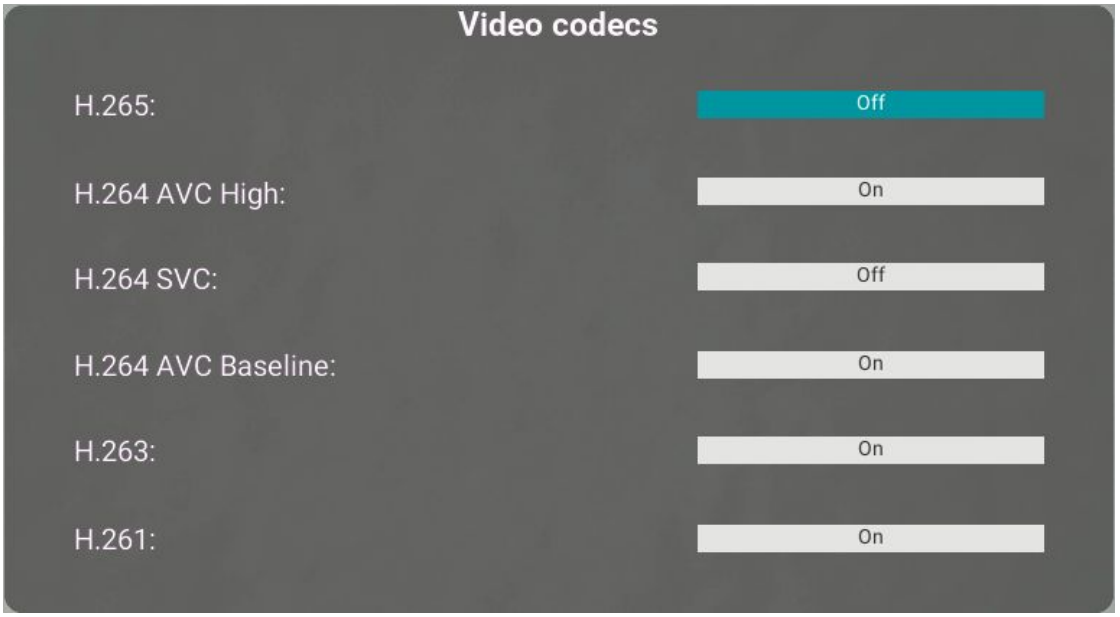
- Video stream features — **Streams.**



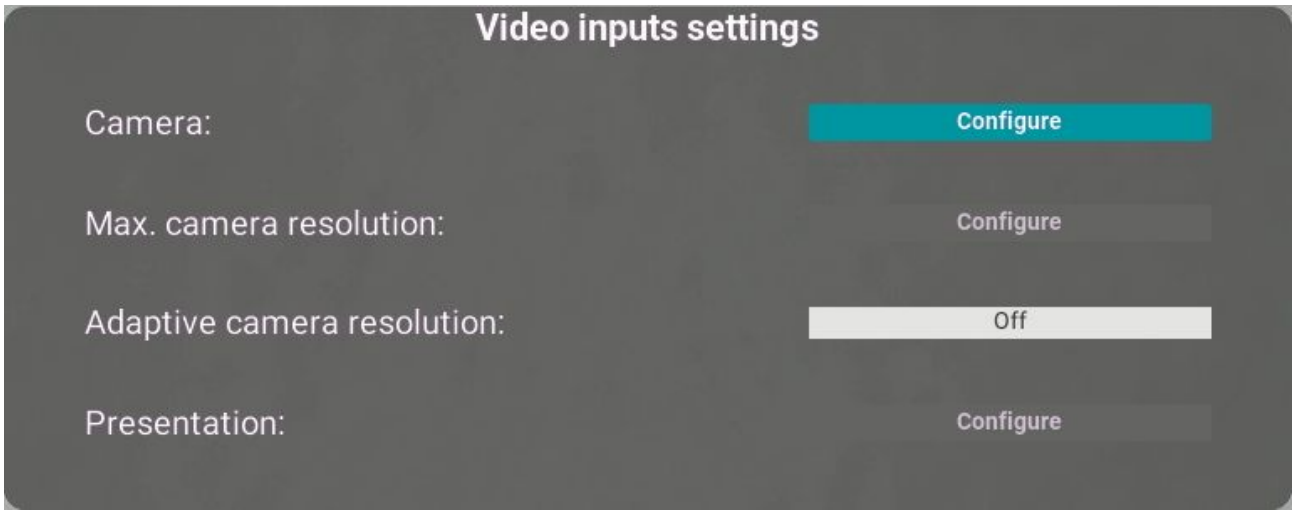
Default Video Bit Rate (kbps) is critical to most video settings. Video stream quality, sharing presentations, etc. depend on it. Typically, video speed is determined by channel bandwidth.

Adaptive Bitrate Control allows you to automatically reduce video stream speed if a large number of data packets are lost when transmitted over the network due to decreased channel bandwidth.

- Used video codecs — **Codecs.**



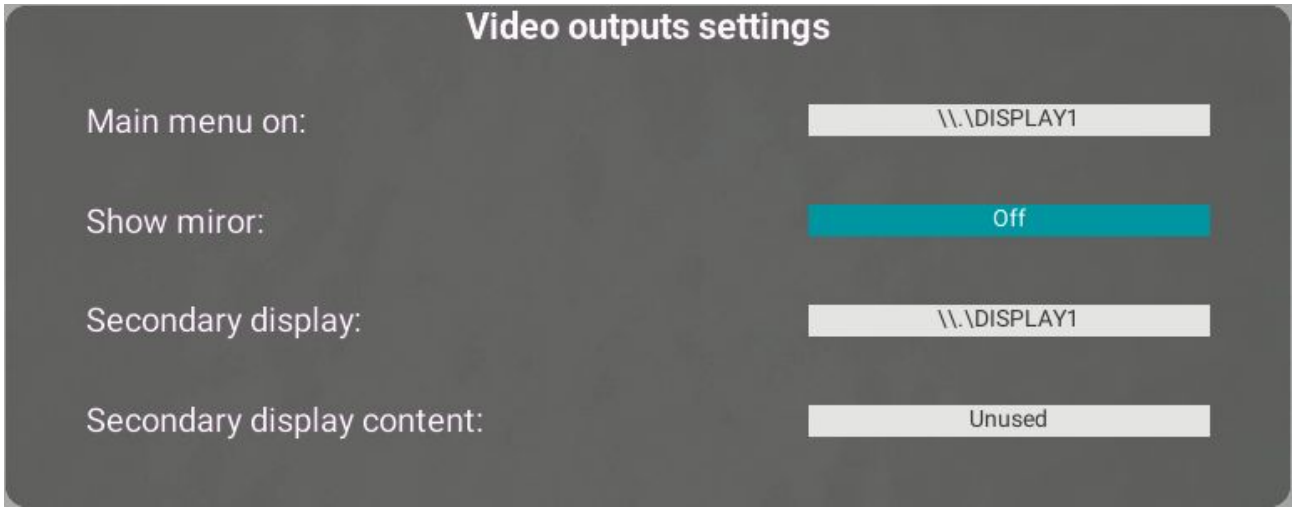
- Used video inputs — **Inputs.**



Configure **Adaptive Camera Resolution** to automatically send low resolution video if a remote user does not request more.

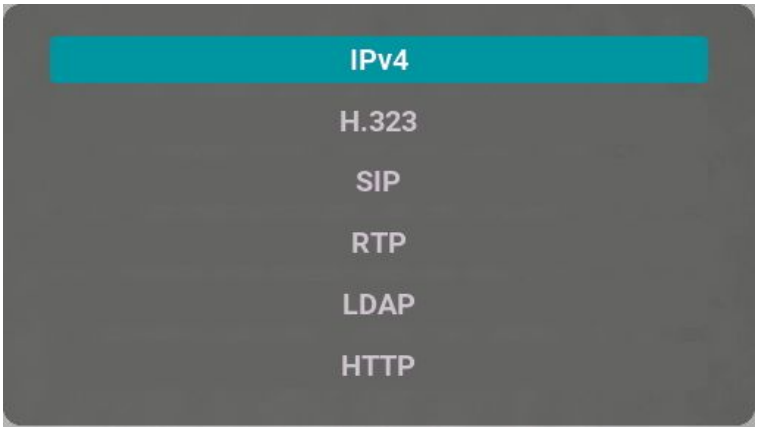
Configure **Presentation** to specify the video capture device which will be used to play presentations from. When you start playing a presentation during a call, this video will be sent to remote users in a second stream (in addition to the main video connection).

- Used video outputs (when connecting a second monitor) — **Outputs.**



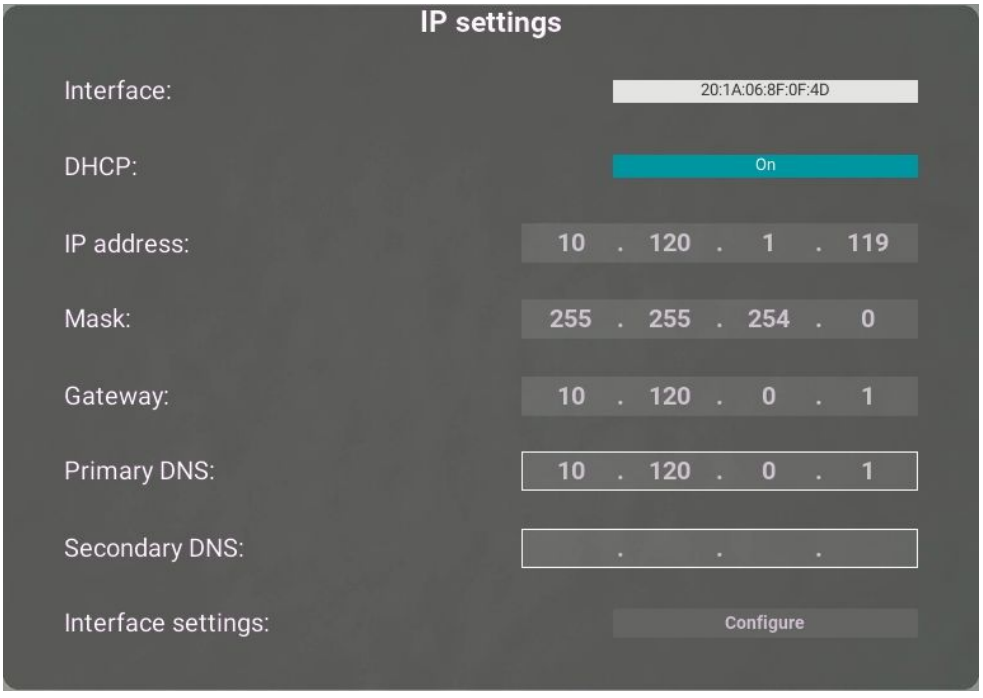
Network Settings

To change network settings used by TrueConf Group, choose **Configuration** → **Network** in the main menu.



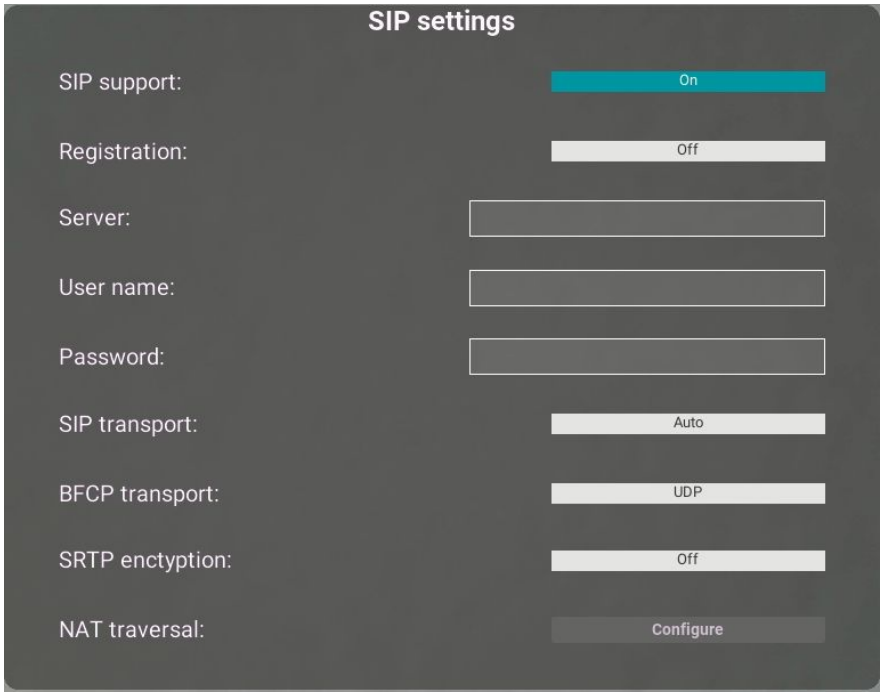
IP Settings

To assign an IP address, gateway and subnet mask to the endpoint, choose **IPv4** in the menu.

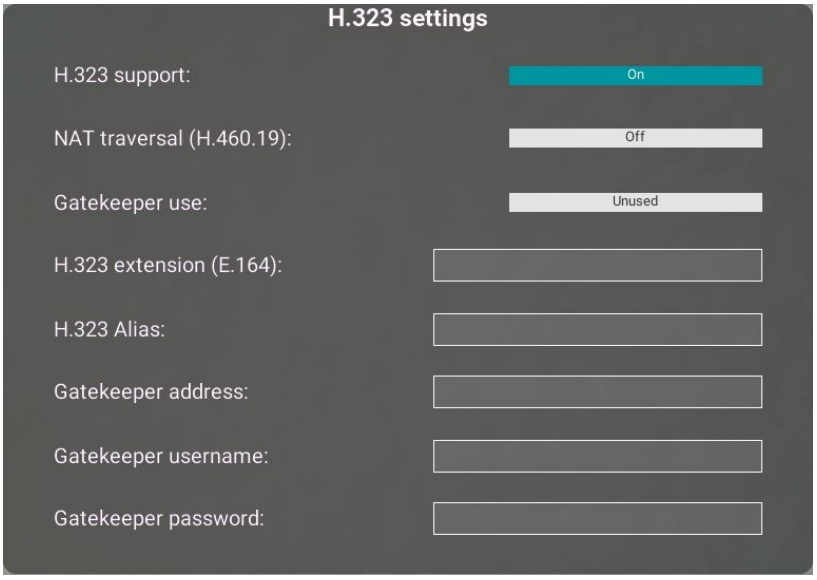


SIP and H.323 Settings

If the network supports SIP, you can use it in your video communication sessions with TrueConf Group and integrate with hardware and software exchanges. To configure integration, choose **SIP** in the menu.

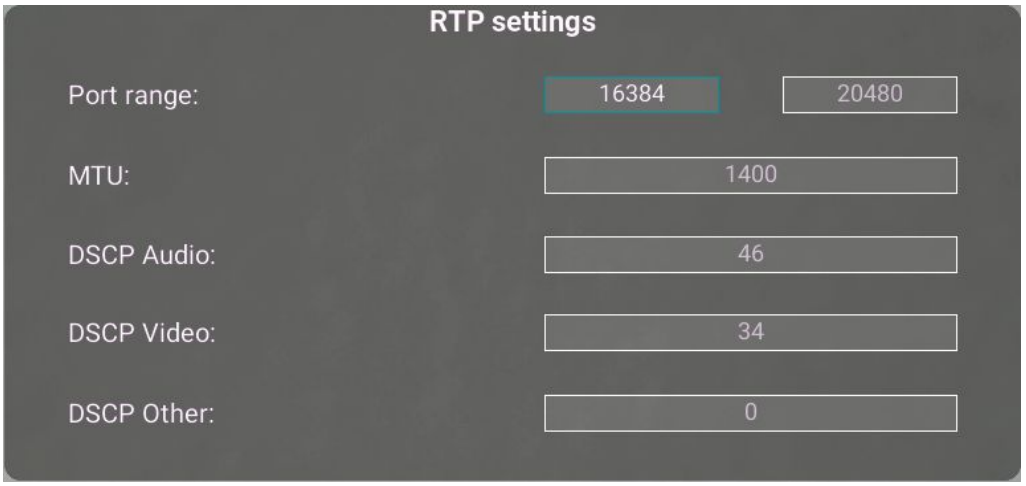


If the network uses Gatekeeper, the endpoint can automatically register its name and H.323 extension with it. This enables you to call the endpoint by entering the name or extension number in E.164 format instead of the IP address. To register the endpoint, choose **H.323** in the menu.



RTP Settings

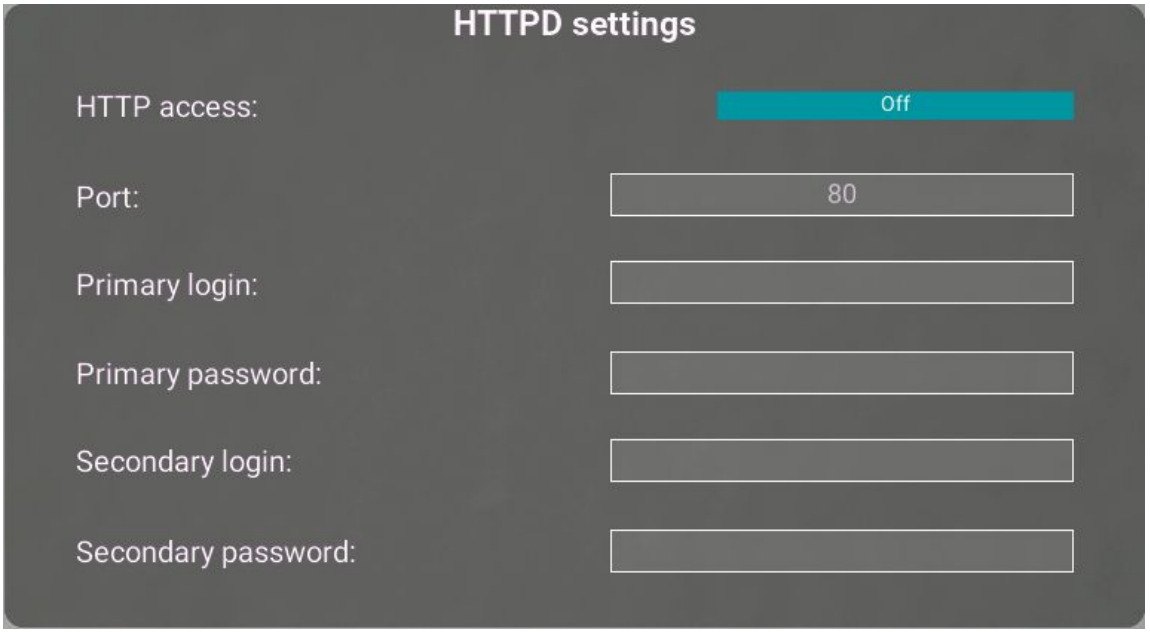
Choose **RTP** to set RTP ports for video sessions using the endpoint



Control Panel Web Access

Choose **HTTP** to enable access to the TrueConf Group control panel from your browser.

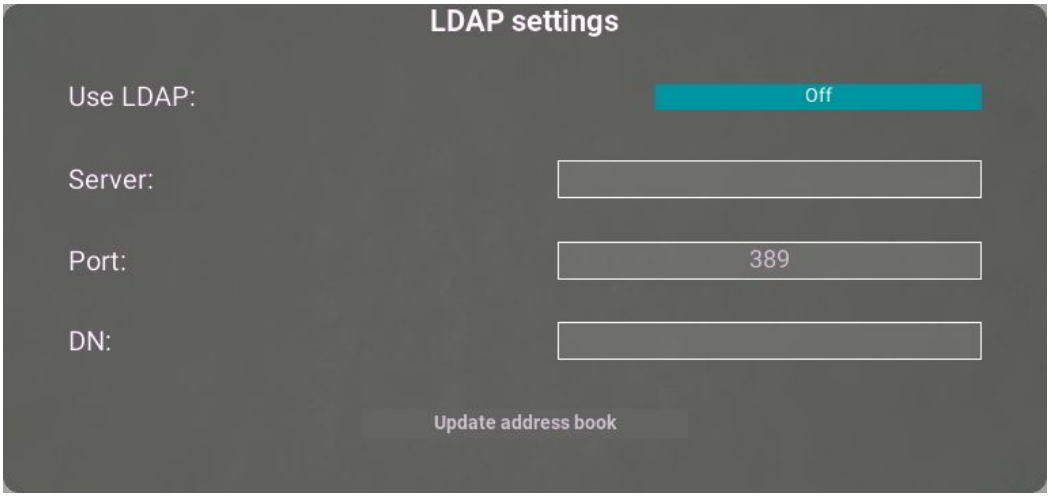
Using the control panel, you can administer calls and conferences, view conference participants, control cameras and audio/video streams, etc.



LDAP Directory Service

TrueConf Group supports LDAP H.350 directory service which is compatible with Polycom. Anonymous access to LDAP server is available.

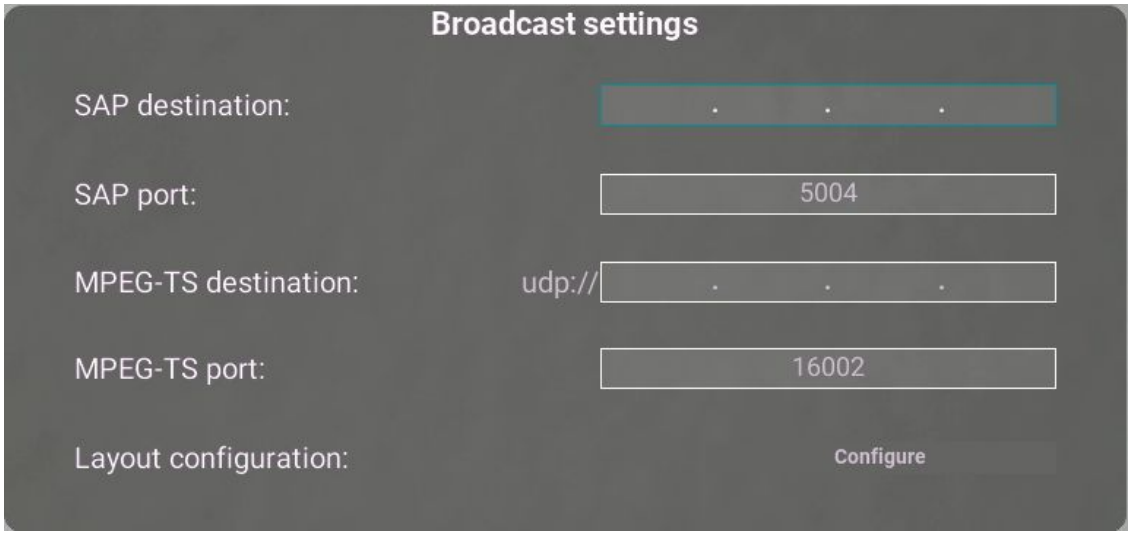
Choose **LDAP** to connect LDAP directory service



If everything is configured correctly, the endpoint synchronizes contacts in the address book with the LDAP server.

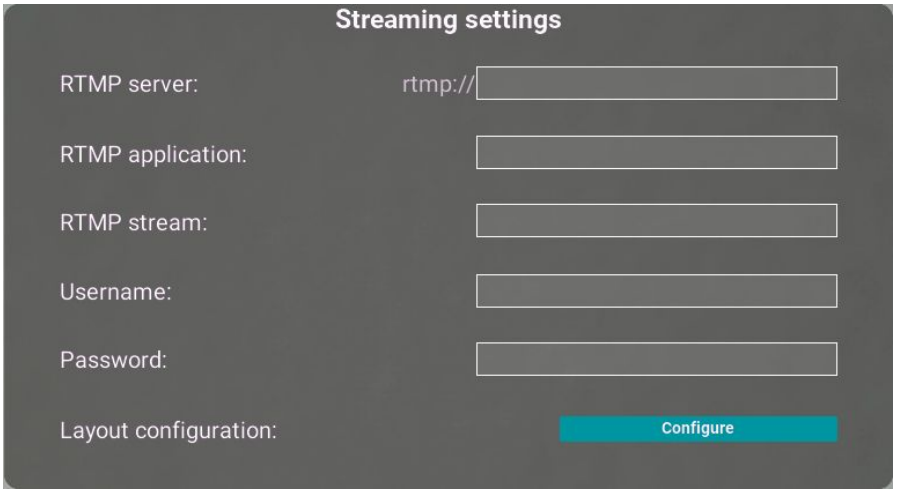
Multicast Settings

To configure multicast communication sessions, choose **Configuration** → **Broadcast** in the menu.



Streaming Settings

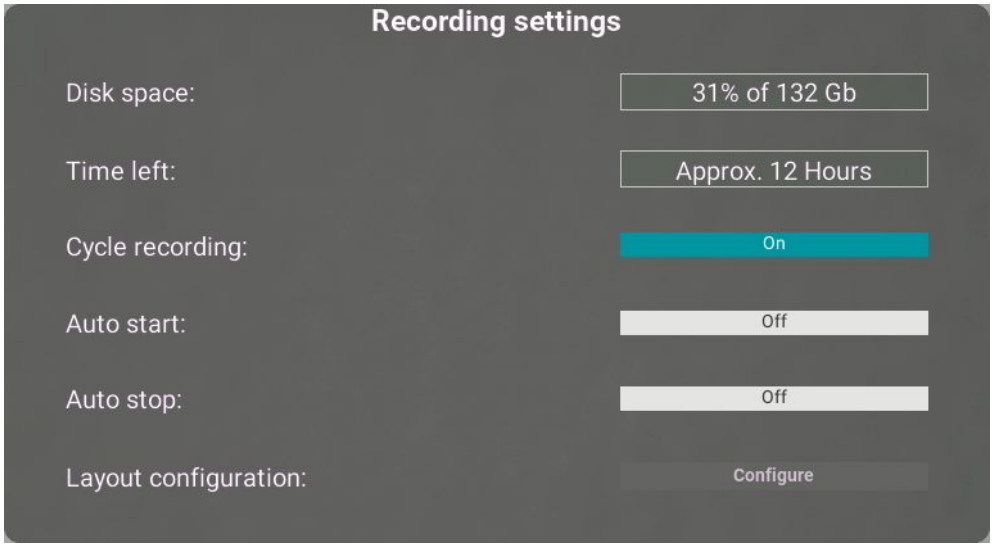
To configure RTMP conference streaming and connect RTSP cameras, choose **Configuration** → **Streaming** in the menu.



Conference Recording Settings

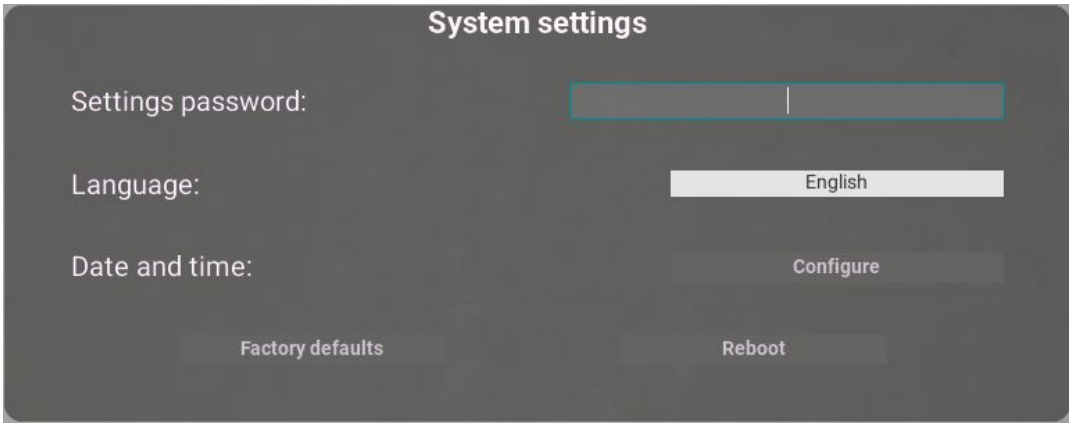
During a conference, press **Back** on the remote control and choose **Record** in the menu. Pressing the button again will stop recording. You can resume recording, and new data will be added to the end of the file.

To proceed to conference recording settings, choose **Configuration** → **Recording** in the main menu.



System Settings

To set the system date and time, interface language and password to access the TrueConf Group settings, choose **Settings** → **System** in the menu.



Once you have entered the password, the main menu will be displayed without **Configuration**. You can go to this menu item after entering the password. The password is entered “blindly” in the main menu; the entered characters are not displayed on the screen.

Sleep Mode Settings

To set the waiting time for the camera and monitors connected to TrueConf Group before turning it off and transiting to the sleep mode, choose **Configuration** → **Powersave**.