visual engineering
LIGHTWARE

Application Notes

Cisco Webex Module for LARA

Table of Contents

Document Information

Document revision: 1.0
Release date: 21-02-2023
Editor: Laszlo Zsedenyi

Contact Us

sales@lightware.com
+36 1 255 3800

support@lightware.com
+36 1 255 3810

Lightware Visual Engineering PLC.
Peterdy 15, Budapest H-1071, Hungary
www.lightware.com

1

Introduction

This application note is created to help installing and setting the Cisco Webex Modul of LARA. The module is for meeting rooms equipped with Lightware Taurus and Cisco Room devices.

1.1. Supported Cisco Devices

The following Cisco devices are supported by this module:

- Cisco Webex Room Kit
- Cisco Webex Room Kit Mini
- Cisco Webex Room Kit Plus
- Cisco Webex Room Kit Pro
- Cisco Webex Codec Plus
- Cisco Webex Codec Pro
- Cisco Webex Desk Pro
- Cisco Webex Room 70 G2
- Cisco Telepresence SX20
- Cisco Telepresence SX80
- Cisco DX70
- Cisco DX80
- Cisco MX700
- Cisco MX800

1.2. The Purpose of This Module

The following main benefits can be achieved by using Taurus/MMX2 devices and LARA with this module:

Bring Your Own Device (BYOD) mode: adding inputs to the Cisco Codec: thus more video sources (e.g. laptops) can be shared.

Camera share option: using the high quality camera and audio system of the Codec for other meeting purposes like a Zoom, Skype, etc. conference for a connected PC/laptop.

BYOD Mode

Cisco Codecs usually contain only one HDMI input. It can be increased with connecting a Taurus/MMX2 device to that input port, thus up to four devices can be connected. Furthermore, certain Taurus models contain USB-C ports, allowing another connection type. When video signal is detected on a video input port of the Taurus device, it will be visible on the UI of the Codec. After that the source can be selected as a BYOD source. Each input can be labelled with a unique name to display in the UI of the Codec.

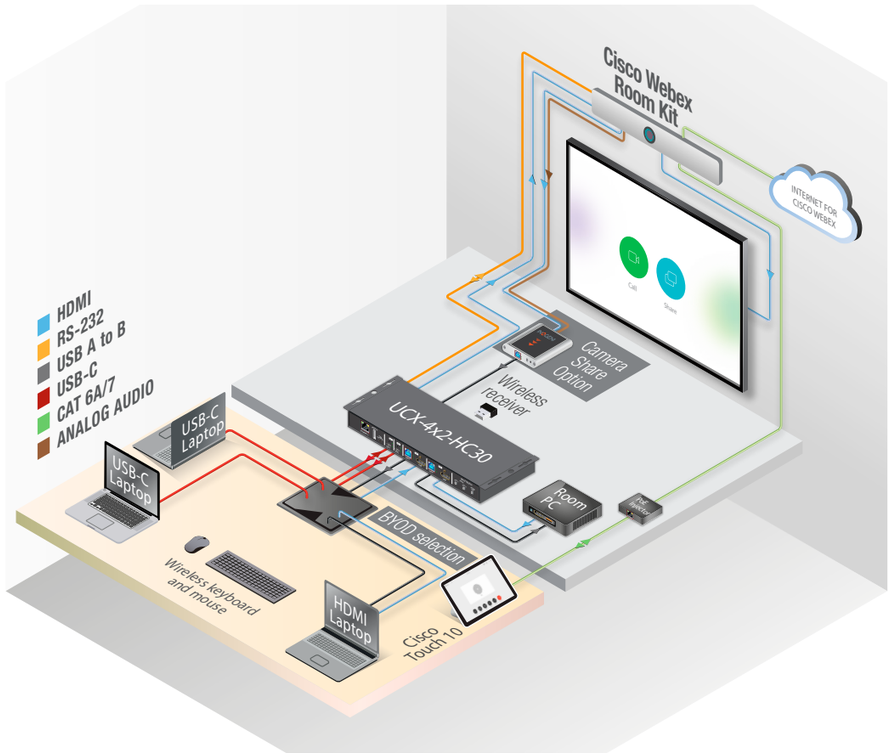
Camera Share Option

It may happen that a video conference is taking place not via the Webex service, but with one of the particpant's laptop. The camera and the audio system of the Codec is much more suitable for this purpose than a laptop, so this feature means the camera and the audio devices can be shared to a PC/laptop connected over **HDMI and USB-B** or only **USB-C**.

2

Controlling Over Serial Connection

This chapter is about the settings when the Taurus and the Codec are connected via Serial port.

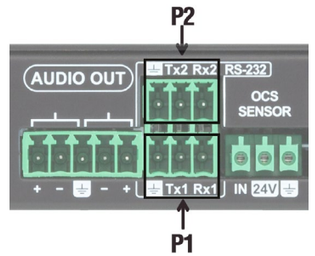


2.1. Preparation for Serial Connection

2.1.1. Checklist for the Taurus/MMX2 Device

Before connecting and configuring the Taurus to a Cisco Codec, the following have to be checked:

- The **serial port settings must match** in the Taurus and in the Codec: **115200 Baud, 8 N, 1** (based on Cisco Codecs).
- Make sure the **autoselect is disabled** on the video output ports as well as on USB ports.
- Check if the **Serial over IP port** is enabled: **8001** for P1, **8002** for P2 (LDC/Settings/Network).
- Set the Video and USB-C ports to **umuted and unlocked** state.
- Pay attention to the **physical serial port**: use the port where the cable is connected to:



Checklist for the Codec

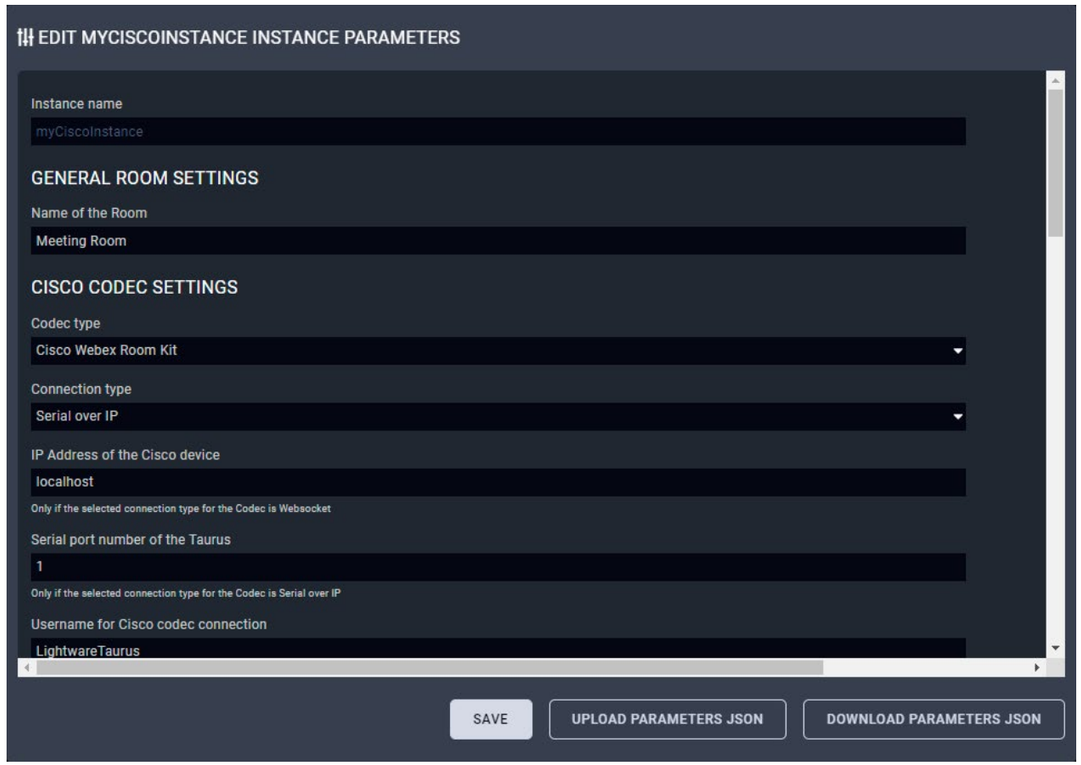
- The **serial port settings must match** in the Taurus and in the Codec.
- Create a **user name** and set a **password** in the Codec. (Note them, these should be entered when configuring the module in LARA.)
- Privileges should be **enabled** for:
  - **RoomControl**,
  - **Integrator**,
  - **Admin**.
- The following option shall be **disabled**:
  - **Require passphrase change on next user sign in.**
- If you install a **USB capture device** for camera share, e.g. Inogeni 4KXUSB3, connect it to the **last HDMI output** of the Codec.

INFO: Certain Cisco codecs do not have separate RS-232 port but the a **dedicated USB port** can be used for this purpose. In that case, connect a **USB-Serial (FTD) cable** between the Taurus and the Codec.

2.2. Instance Parameters

Create an Instance from the module '**ciscowebex**' and set the instance parameters as follows:

ATTENTION! Do not leave the value of the parameter in 'empty' state if it can be selected from a drop-down menu.



Instance Name and Name of the Room

Set them as you wish.

Codec Type

Select the **Cisco model** you install.

Connection Type

Select **Serial over IP**.

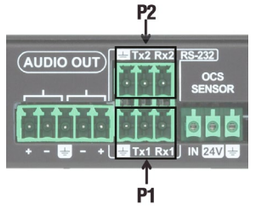
INFO: Ethernet connection is not required between the Taurus and the Codec. These packets are transferred internally, between LARA and the Taurus TCP Serial Gateway.

IP Address of the Cisco Device

Leave it as is: '**localhost**'.

Serial Port Number of the Taurus

Write the index number of the port without letter, e.g. **1** for P1 RS-232 port.



Username for Cisco Codec Connection

As set in the Codec previously.

Password for Cisco Codec Connection

As set in the Codec previously.

Cisco Codec Output Port Connection Settings (#1/#2/#3)

DIFFERENCE: The available port numbers are Codec-dependent.

- If you have a **display device** connected to a certain output, set it to '**Display**'.
- If you connect a **USB capture device** to the last HDMI output for camera share option, set the '**Last HDMI Output as USB Capture**' setting to '**true**'. In this case the Output connection setting on that output does not matter.
- Set '**no connection**' for the output that is not used.

Taurus Settings

The default settings work, no need to change.

Taurus Input Port Settings

Set the labels that will be visible on the Cisco UI (BYOD selection). If you leave a field empty, the input will not be placed to the UI as a source. ASCII characters (space also) are accepted.

ATTENTION! For Cisco-compatibility reasons the HDCP will be disabled on the inputs that are defined in the BYOD selection.

Taurus Output Port Connections

Select '**Cisco Device Input #1**' for **Output#1**. The other output selectors are reserved for future developments.

Enable USB Parallel Switching

If set to 'true', the **USB** crosspoint will **follow the video** crosspoint.

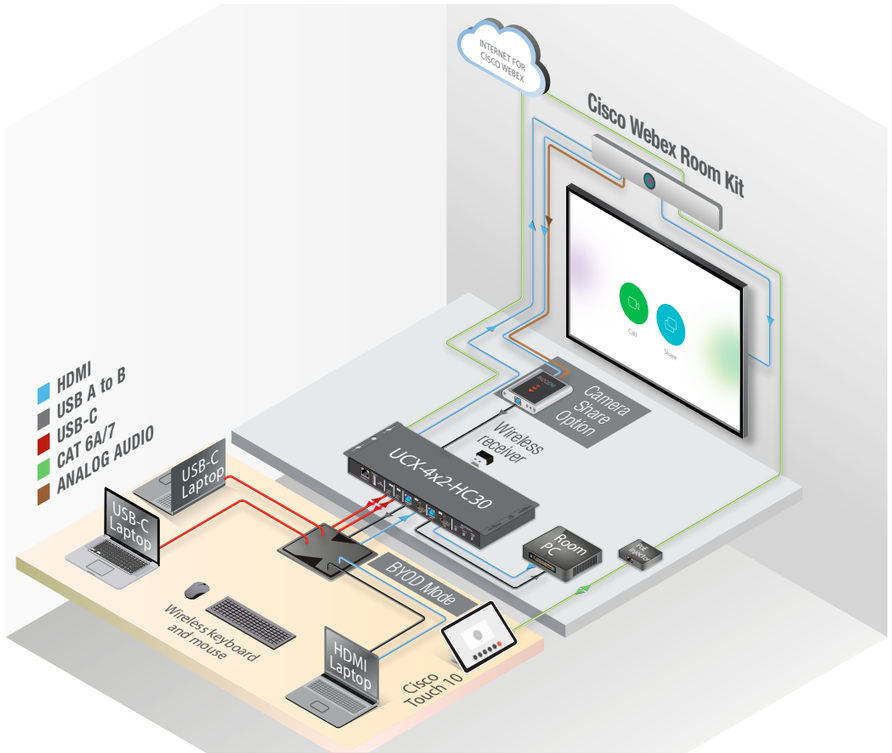
Enable SignalPresent detection on inputs

If set to '**true**', the Taurus device will offer the **BYOD device selection** prompt when signal is present on the HDMI input.

3

Controlling Over Ethernet Connection

This chapter is about the settings when the Taurus and the Codec are connected via Ethernet.



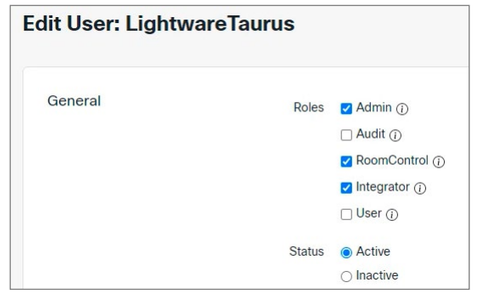
3.1. Preparation for Ethernet Connection

Checklist for the Taurus/MMX2 Device

- Make sure that the Taurus and the Codec can **communicate with each other over Ethernet**.
- Check the **VLAN preset settings** of the Taurus (Control/Ethernet page in LDC): the Codec and the MCU must be in the same VLAN.
- Make sure the **autoselect is disabled** on the video output ports as well as on USB ports.
- Set the Video and USB-C ports to **umuted and unlocked** state.

Checklist for the Codec

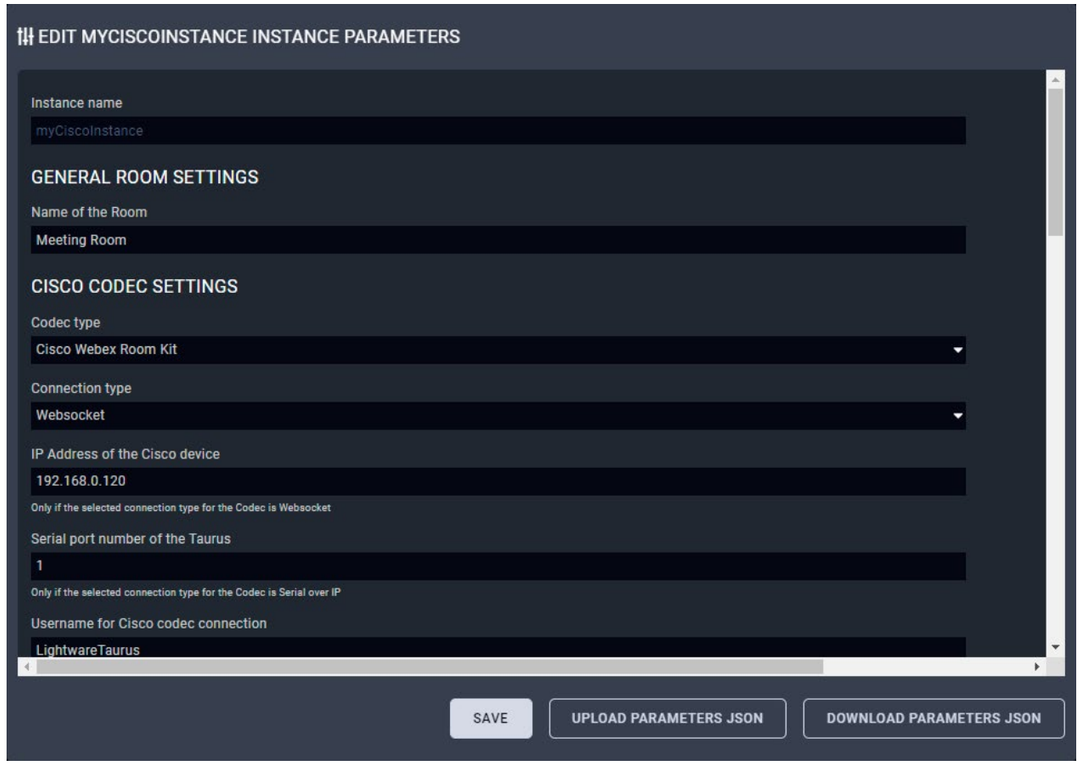
- **Websocket** has to be **enabled** (the integration works with wss (secured websocket) communication). Open the Codec **web interface:**
  - Settings → Configurations → NetworkServices → Websocket → **FollowHTTPService.**
  - Settings → Configurations → NetworkServices → HTTP → Mode → **HTTPS.**
  - **Save** the settings.
- Create a **user name** and set a **password** in the Codec. (Note them, these should be entered when configuring the module in LARA.)
- Privileges should be **enabled** for:
  - **RoomControl**,
  - **Integrator**,
  - **Admin**.
- The following option shall be **disabled**:
  - **Require passphrase change on next user sign in.**
- If you install a **USB capture device** for camera share, e.g. Inogeni 4XKUSB3, connect it to the **last HDMI output** of the Codec.



3.2. Instance Parameters

Create an Instance from the module '**ciscowebex**' and set the instance parameters as follows:

ATTENTION! Do not leave the value of the parameter in 'empty' state if it can be selected from a drop-down menu.



Instance Name and Name of the Room

Set them as you wish.

Codec Type

Select the **Cisco model** you install.

Connection Type

Select **Websocket**.

IP Address of the Cisco Device

Type the IP address of the Codec.

Serial Port Number of the Taurus

N/A

Username for Cisco Codec Connection

As set in the Codec previously.

Password for Cisco Codec Connection

As set in the Codec previously.

Cisco Codec Output Port Connection Settings (#1/#2/#3)

DIFFERENCE: The available port number is Codec-dependent.

- If you have a **display device** connected to a certain output, set it to '**Display**'.
- If you connect a **USB capture device** to the last HDMI output for camera share option, set the '**Last HDMI Output as USB Capture**' setting to '**true**'. In this case the Output connection setting on that output does not matter.
- Set '**no connection**' for the output that is not used.

Taurus Settings

The default settings work, no need to change.

Taurus Input Port Settings

Set the labels that will be visible on the Cisco UI (BYOD selection). If you leave a field empty, that input will not be placed to the UI as a source. ASCII characters (space also) are accepted.

ATTENTION! For Cisco-compatibility reasons the HDCP will be disabled on the inputs that are defined in the BYOD selection.

Taurus Output Port Connections

Select '**Cisco Device Input #1**' for **Output#1**. The other output selectors are reserved for future developments.

Enable USB Parallel Switching

If set to true, the **USB** crosspoint will **follow the video** crosspoint.

Enable SignalPresent detection on inputs

If set to '**true**', the Taurus device will offer the **BYOD device selection** prompt when signal is present on the HDMI input.

4

Appendix

Further notices and Known issues about the module.

4.1. Further Notices

Webex Mode

Webex mode is activated if:

- The Codec is started, or
- All devices are disconnected from the Codec.

INFO: **Half Wake** and **Standby** modes are active in Webex mode, but in BYOD mode these modes are inactive.

After Restart

If the Codec, the UCX/MMX2 or LARA is restarted for some reason, the system must be recover in the same working state as it has been previously.

4.2. Known Issues

'Preset does not exist'

This message may appear in the log window when the Codec is a Cisco Room Kit Mini. This entry does not mean an error.

'Unknown widget: 'byodselector'

This message may appear in the log window when the Codec is a Cisco Room Kit Mini. This entry does not mean an error.

For camera sharing option

Please connect the USB capture device (or the RoomKit Mini USB-C cable) to the Taurus port USB-A #1:

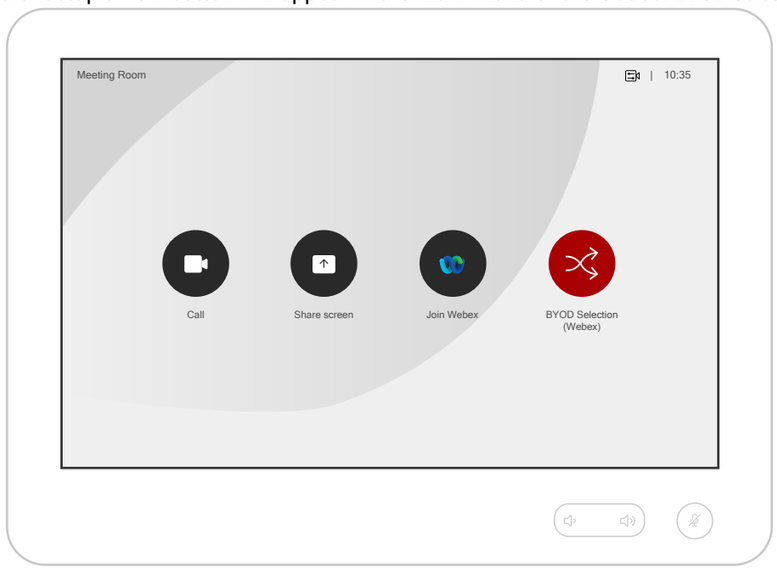
Useless Button

It may happen in case of Room Kit Mini and Room Kit Bar Codecs that the UI contains a button with the following label: 'Call from laptop'. This button has no function in this case.

4.3. Integration with the Cisco Codec

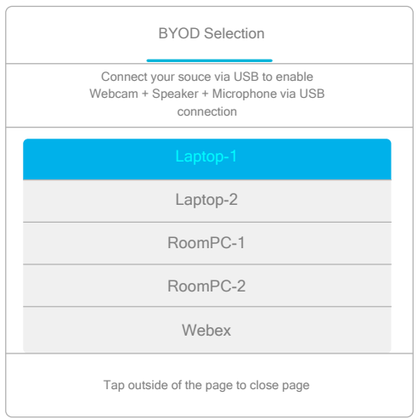
Main Menu

After a successful setup a new button will appear in the Main menu of the Codec: **BYOD Selection**.



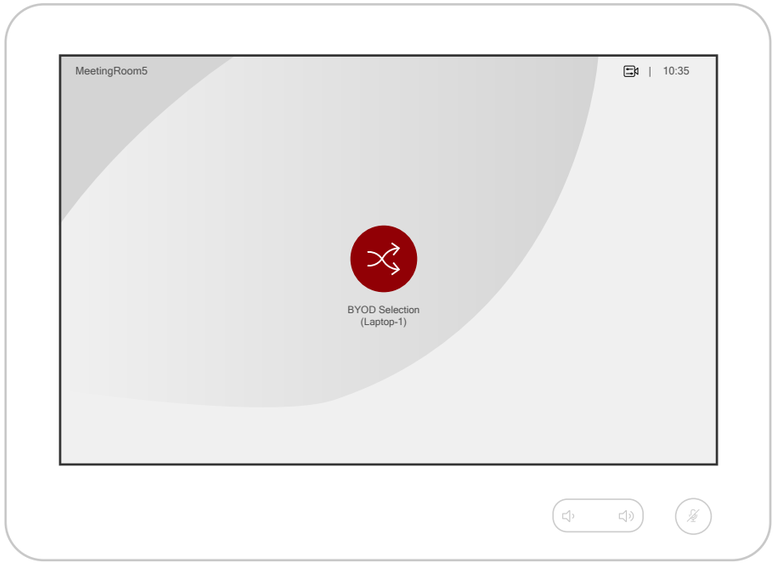
BYOD Selection

After pressing the '**BYOD Selection**' button, a window appears on the UI of the Codec. On the bottom of the screen the defined and available inputs can be seen with the labels set in the instance *.



* If there is no USB layer in the Lightware device, the label below the 'BYOD selection' is: 'Connect your source via HDMI'.

When a source is selected:



- The video signal of the selected source is **displayed on all outputs** of the Codec except the last HDMI output if a USB capture device is installed on that port.
- Not applicable buttons will be **hidden in the main menu**.
- The **USB crosspoint** of the Taurus UCX device **will follow** the video crosspoint state if the 'Enable USB parallel switching' option is 'true'.
- The '**SpeakerTrack**' feature of the camera is turned on – if it is supported.
- The **microphone signal** will be sent via the analog audio output of the Codec to the USB capture device. *
- The '**Do not disturb**' mode of the Codec will be switched on with default timeout (24 h).
- The automatic **standby mode** is deactivated in the Codec.

When selecting '**Webex**' again:

- The video output of the Codec will be the **default UI** content.
- Previously **hidden buttons will appear** again in the menu.
- The '**SpeakerTrack**' feature of the camera will be still on – if it is supported.
- The **analog audio output** of the Codec will be switched off. *
- The '**Do not disturb**' mode of the Codec will be switched off.
- The '**Halfwake**' mode must be activeted in the Codec after 2 minutes idle time.

* Not refers to Cisco Webex Room Kit Mini.

If a new source is connected to the UCX/MMX2 device, the following window appears: