This document provides additional assistance with wiring your Extron IP Link® Pro Series enabled product to your device. Different components may require a different wiring scheme than those listed below.

For complete operating instructions, refer to the user's manual for the specific Extron IP Link® Pro Series enabled product or the controlled device manufacturer supplied documentation.

Device Specifications

Device Type: Video Conference
Manufacturer: Cisco
Firmware Version: N/A
Model(s): Webex Room Navigator

Tested on the Following Software and Firmware Versions

GC (Plus, Pro) Version	3.21.0.25
IP Link Pro Control Processor Firmware	3.17.0000-b002
IP Link Pro Control Processor xi Firmware	1.06.0000-b005
IP Link Pro Control Processor Q xi Firmware	1.06.0001-b001
MediaLink Plus Controller Firmware	3.04.0000-b001
HC 400 Series Firmware	2.11.0000-b015
TLP Pro x25 and TLC Pro x26 Series Firmware	3.09.0000-b002
TLP Pro 300M Firmware	1.04.0000-b003

Version History

Driver Version	Date	Notes
1_2_0	9/8/2023	Updated communication sheet notes on how the driver communicates with the device.
1_0_2	10/20/2022	Fixed Firmware Version status.
1_0_1	2/22/2021	Added support for IPCP Pro Q xi and xi controllers and ability to clear string for Text command.
1_0_0	12/15/2020	Initial version.

Driver Notes

- User Defined command takes a string parameter and sends the string out of the port.
- Driver supports device firmware CE9.14.X or newer.
- This driver does not communicate directly with the Cisco Webex Room Navigator panel, but rather the Cisco codec the panel is connected to. Therefore, all serial and/or Ethernet communication settings in GCP must match those of the codec rather than the panel.

Driver Timings

- Recommended repeat rate for this driver is .1 seconds.

Room Navigator Commands:

- It is required that the control system initializes all used widgets on the Cisco Webex Room Navigator panel in the following situations:
  - When the video conference system restarts.
  - When the Extron Control System restarts.
- For details on how to initialize widgets, refer to the “How to initialize the Extron Cisco Webex Room Navigator driver” section below or the GCP template file on the Extron website.

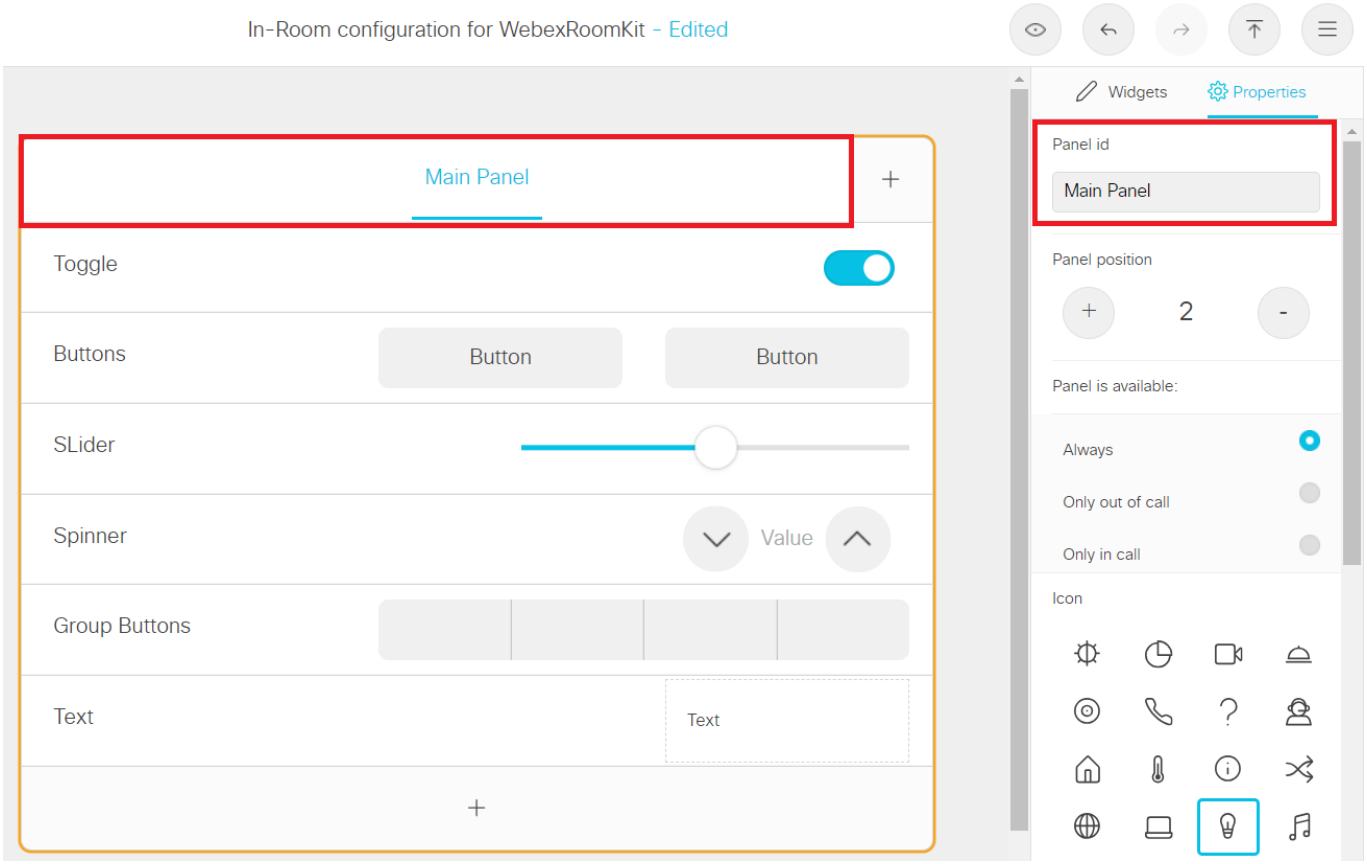
Cisco Widget Object	Extron Driver Command	Function	Control Direction
Button	Button	Allows you to set button state on Cisco Webex Room Navigator. Active = Button On Inactive = Button Off	To Cisco Codec
Button	Button Event	Allows you to monitor the activity of a button event on the Cisco Webex Room Navigator. Pressed Released	To Extron Control System
Group Button	Group Button	Allows you to set mutually exclusive button states on the Cisco Webex Room Navigator. Do not modify Button ID from range 1 – 255 for module to work properly. i.g. 1 = Group 1 Selected 2 = Group 2 Selected 3 = Group 3 Selected 4 = Group 4 Selected	To Cisco Codec
Group Button	Group Button Event	Allows you to monitor the activity of a group button event on the Cisco Webex Room Navigator. Pressed Released	To Extron Control System
Slider	Slider	Allows you to set a range value on Cisco Webex Room Navigator. Allows you to monitor the current value of the Cisco Webex Room Navigator. 0 = minimum 255 = maximum	To Cisco Codec & Extron Control System
Spinner	Spinner	Allows you to set custom text to a label.	To Cisco Codec
Spinner	Spinner Event	Allows you to monitor the activity of increment and decrement button events on the Cisco Webex Room Navigator. Pressed Released	To Extron Control System
Text	Text	Allows you to set custom text to a label.	To Cisco Codec

Toggle	Toggle	Allows you to toggle button state on Cisco Webex Room Navigator. Allows you to monitor the current state of the Cisco Webex Room Navigator. On/Off = Button On/Off	To Cisco Codec & Extron Control System

Cisco Layout Object	Extron Driver Command	Function	Control Direction
Page	Page Event	Allows you to monitor the activity of a Page event on the Cisco Webex Room Navigator. Opened Closed	To Extron Control System
Panel	Panel Event	Allows you to monitor the activity of a Panel event on the Cisco Webex Room Navigator. Clicked Released	To Extron Control System

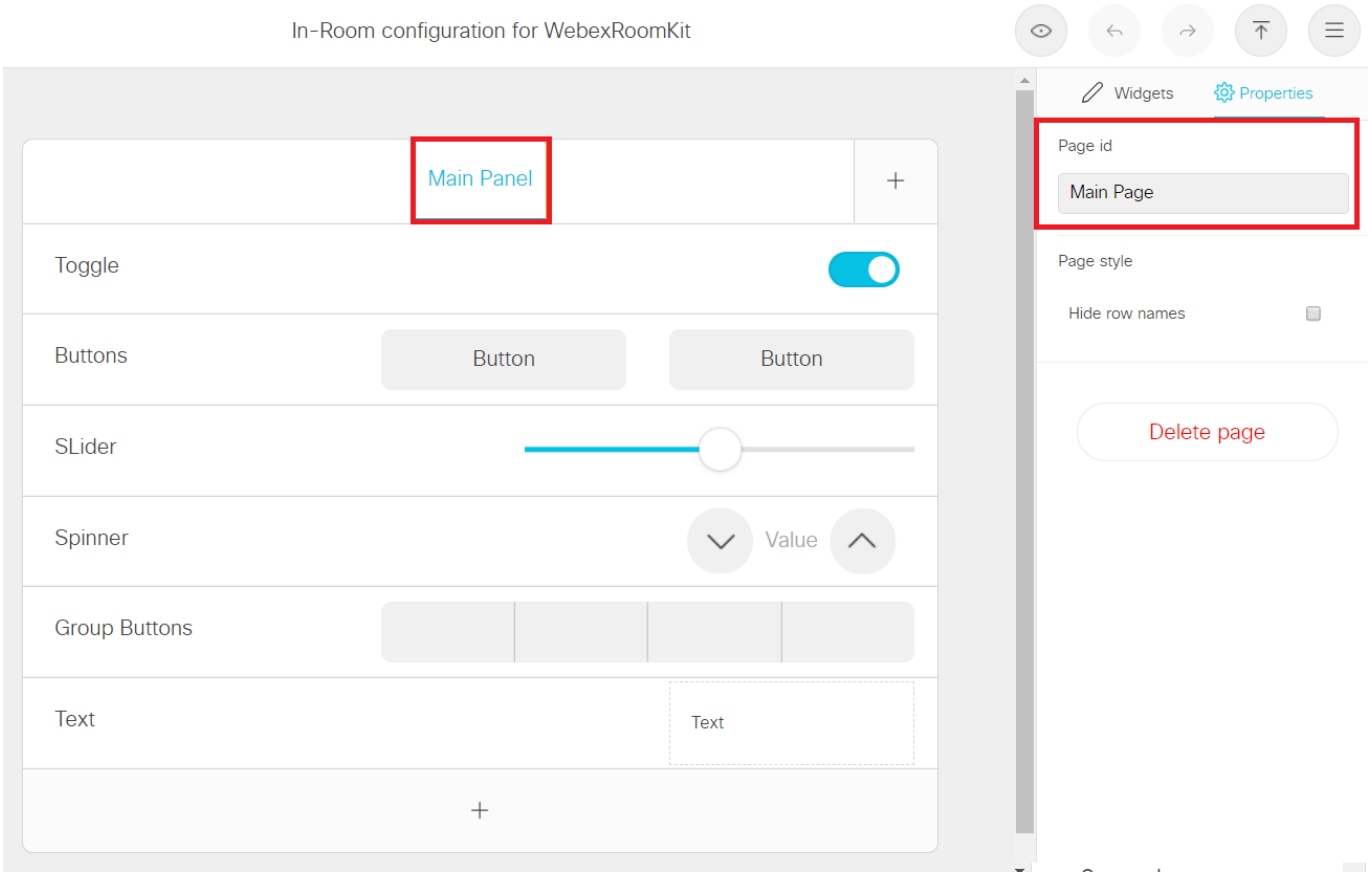
Panel ID:

Panel id can be found by selecting the area around the Title object to bring up the Panel id properties. Configure the Panel id to match the driver configuration for Clicked and Released event status.



Page Event:

Page id can be found by selecting the Title object to bring up the Page id properties. Configure the Page id to match the driver configuration for Opened and Closed event status.

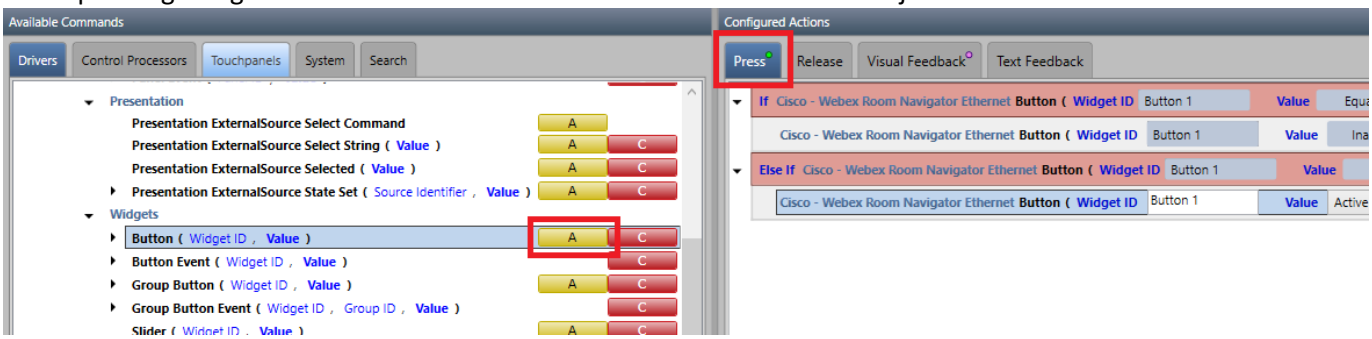


Control Configuration Example:

This configuration example will send a command to the Cisco Webex Room Navigator and update the button state Active or Inactive.

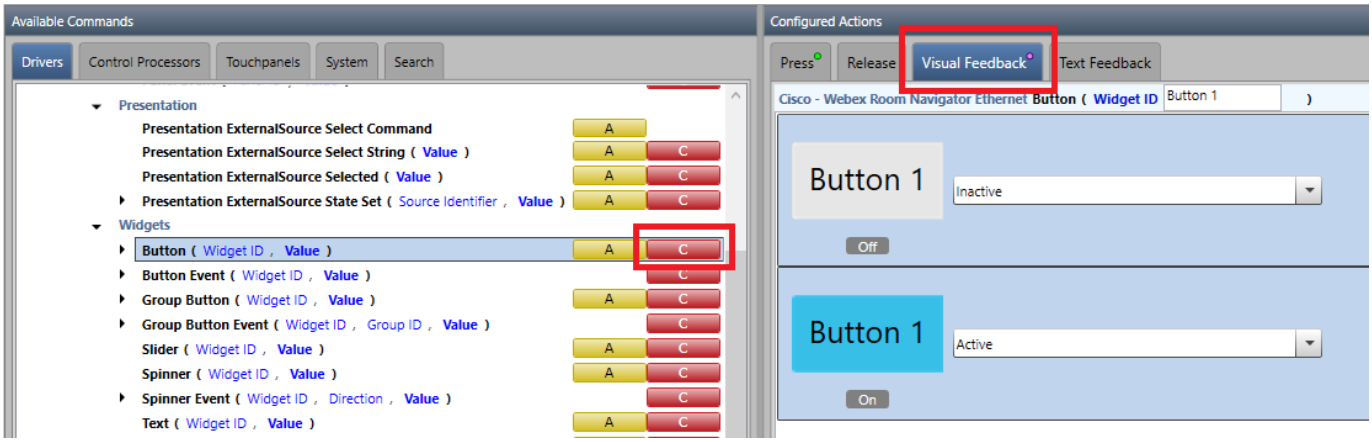
Step 1:

Click on the Button command and select the Press tab. Generate an auto toggle Button and fill in the corresponding Widget ID to match the Cisco UI Extensions Editor button object.



Step 2:

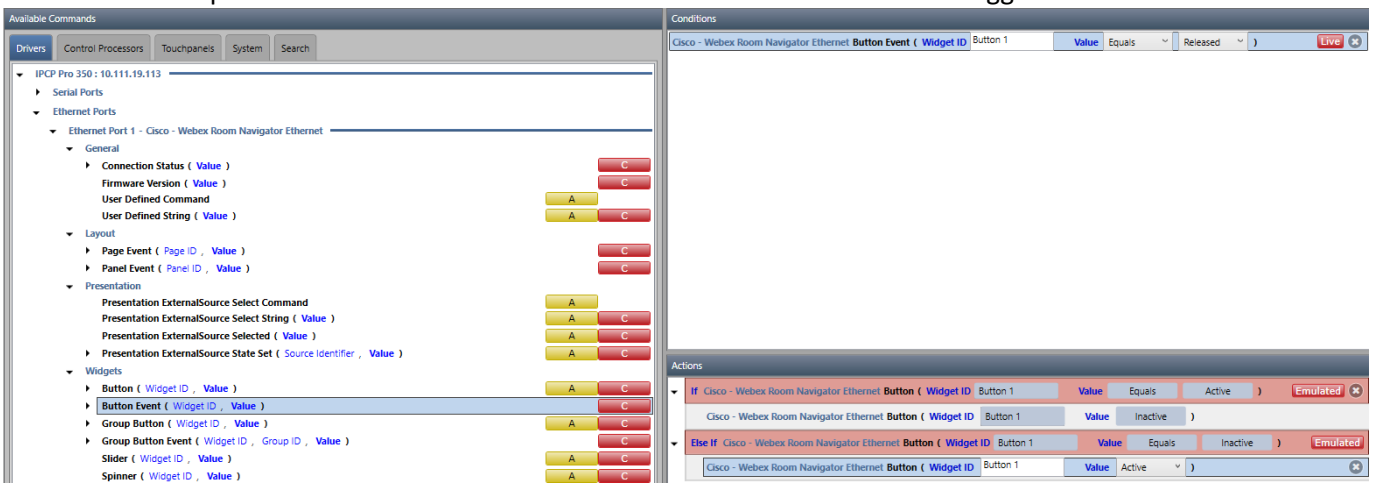
Click on Visual Feedback tab and configure the Button status of the Cisco Webex Room Navigator driver. Fill in the corresponding Widget ID to match the Cisco UI Extensions Editor button object.



Status Configuration Example:

The following example will demonstrate how to configure a monitor to update the status of a button on the Extron Control System when an event is triggered on the Cisco Webex Room Navigator. In practice you would configure the Actions window with the control system command that you want to trigger when the Cisco Webex Room Navigator panel button is pressed.

Below is an example on how to create a monitor based on the Released state to trigger an action event.



Step 1:

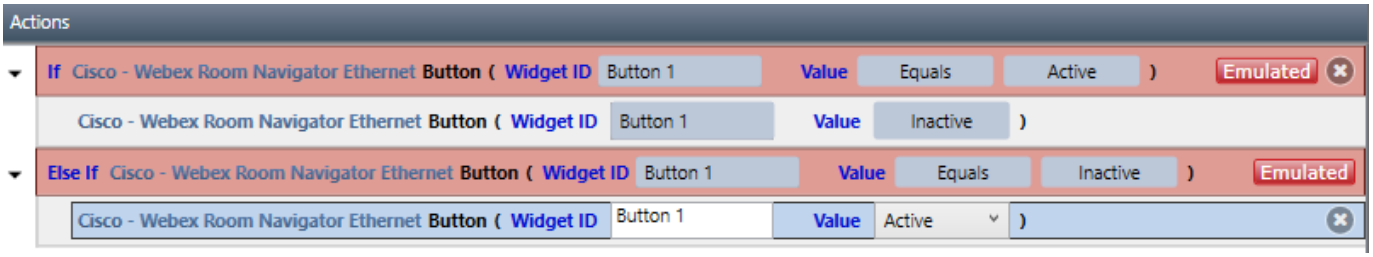
Create a monitor in GCP and add Button Event as the condition and select equals to Released.

This monitor will trigger only when a button is Released.

Step 2:

Add an if/else statement to the Actions window with the same auto toggle conditions as shown below.

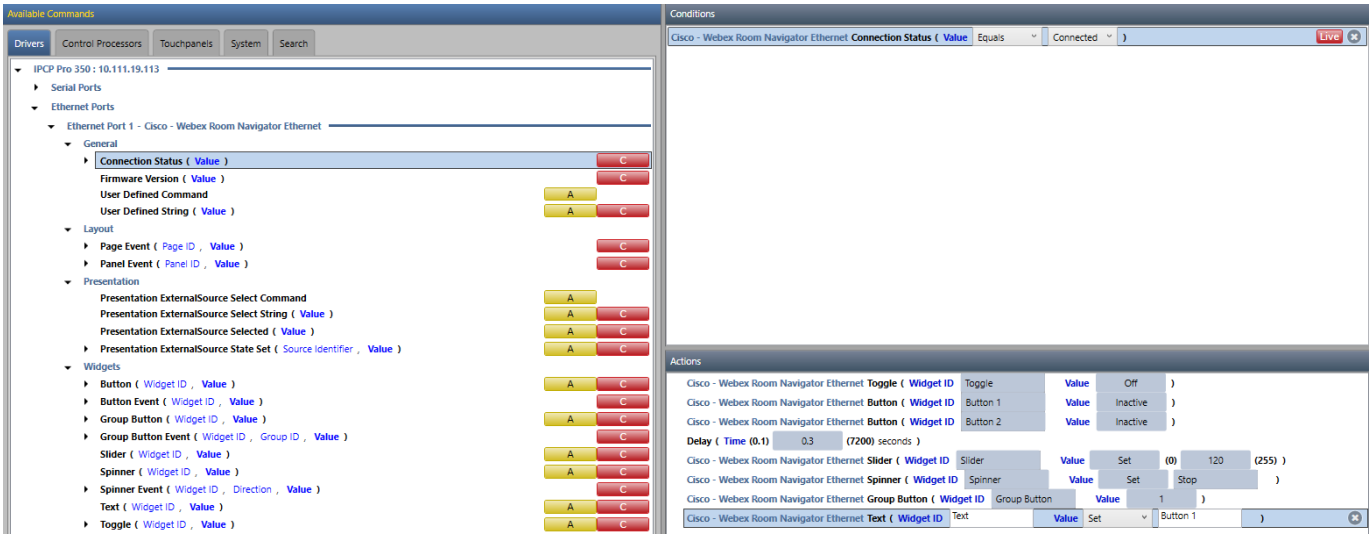
The action of this event will trigger a button press based on its current status.



How to initialize the Extron Cisco Webex Room Navigator driver:

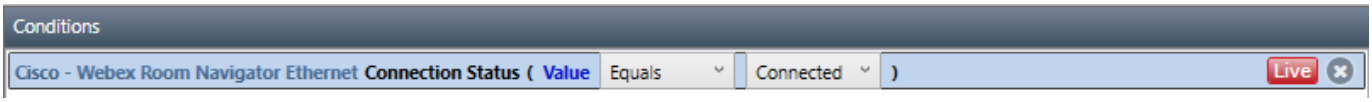
It is required to always initialize all commands to match the status of the Cisco Webex Room Navigator panel. If this is not done the Extron Control System and the Cisco Webex Room Navigator panel will be out of sync.

Below is an example on how to initialize the Extron Cisco Webex Room Navigator driver with a monitor.



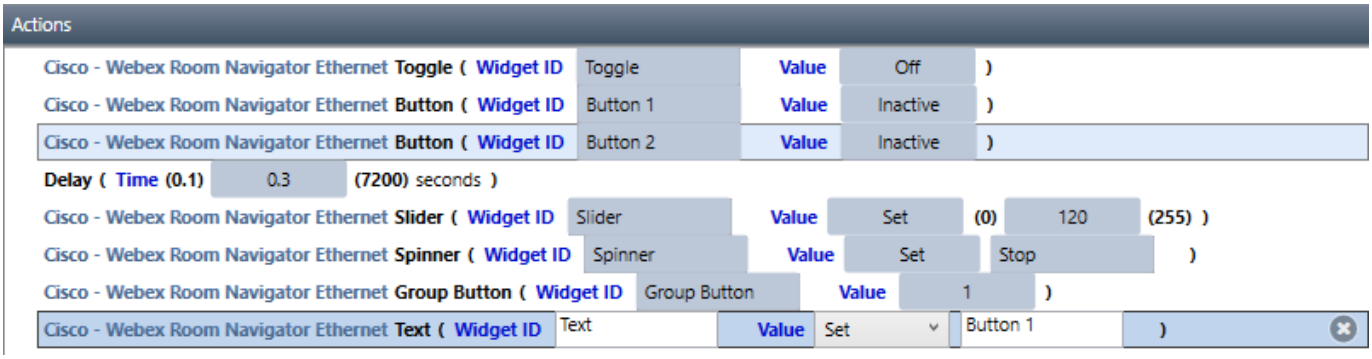
Step 1:

Create a monitor in GCP and add Firmware Version or Connection Status into the Conditions window.



Step 2:

All configured commands are set to a default value once the monitor event triggers



How to configure External Sources:

The external source(s) must be configured manually via control terminal software, such as Extron DataViewer software, before the driver is initialized. To do so, the "UserInterface Presentation ExternalSource Add" command will be used to establish and define an external source. Use the following command syntax and parameters to build the external source.

xCommand UserInterface Presentation ExternalSource Add ConnectorId: ***ConnectorId*** Name: "***Name***" SourceIdentifier: ***SourceIdentifier*** Type: ***Type***\r

ConnectorId: The ID of the codec connector to which the external switch is connected

Name: Name displayed on Webex Room Navigator

SourceIdentifier: A unique string ID used to identify this source when selecting or setting state

Type: Decides what icon is displayed on the Webex Room Navigator, choose between: pc, camera, desktop, document_camera, mediaplayer, other and whiteboard.

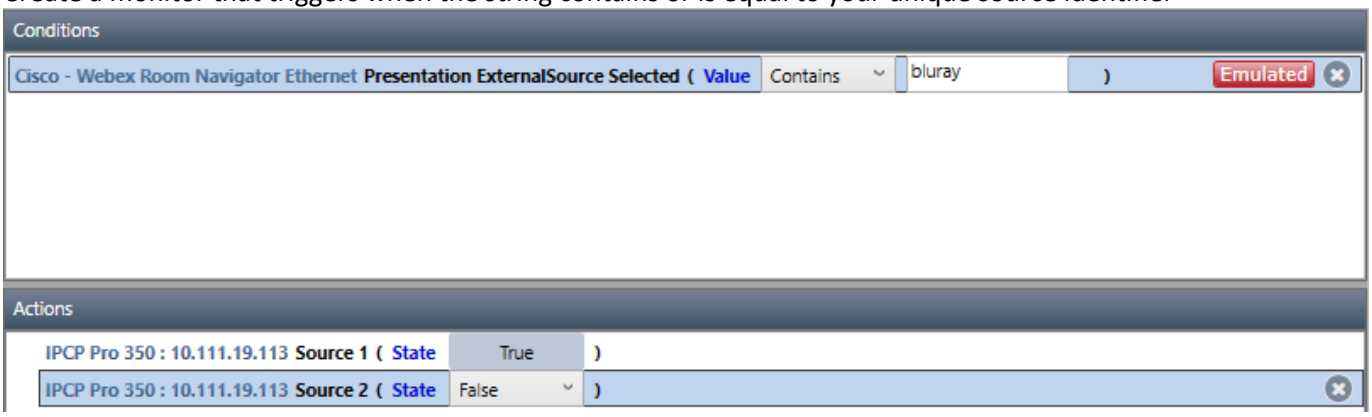
Example:
xCommand UserInterface Presentation ExternalSource Add ConnectorId: 3 Name: "Blu-ray" SourceIdentifier: bluray Type: mediaplayer\r

Extron Driver Command	States	Notes
Presentation ExternalSource Select String	String	Builds the ConnectorId for Presentation ExternalSource Select Command
Presentation ExternalSource Select Command	None	Starts to present the selected source if it is in **ready** state and has a valid ConnectorId
Presentation ExternalSource State Set	Error Hidden Not Ready Ready	Ready is the only presentable state, hidden exists in the list but does not show in the sharetray.
Presentation ExternalSource Selected	String	Displays latest SourceIdentifier selected

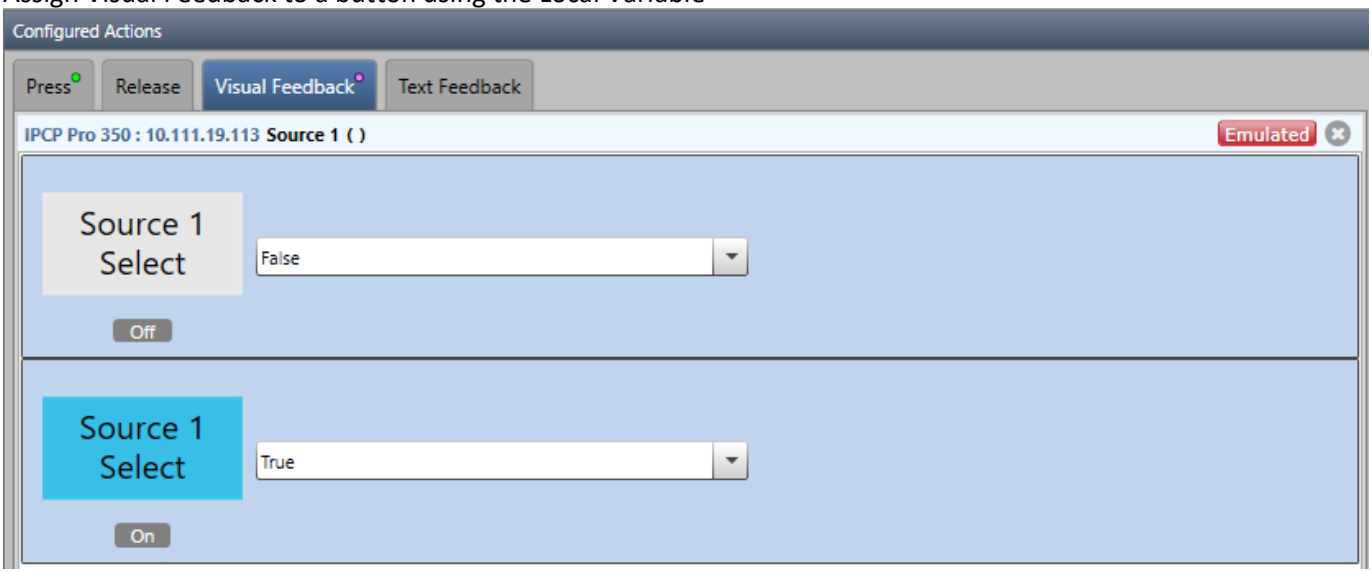
Track status of a Presentation External Source Selected using monitors along with local variables i.e.

Step 1:
Create local variables with True and False states

Step 2:
Create a monitor that triggers when the string contains or is equal to your unique source identifier



Step 3:
Assign Visual Feedback to a button using the Local Variable



Control Commands & States

Button			
Widget ID	String		
Value	Active	Inactive	
Group Button			
Widget ID	String		
Value	1 – 255		
Presentation ExternalSource Select Command			
Value	None		
Presentation ExternalSource Select String			
Value	String		
Presentation ExternalSource Selected			
Value	String		
Presentation ExternalSource State Set			
Source Identifier	String		
Value	Hidden	Ready	Not Ready
	Error		
Slider			
Widget ID	String		
Value	0 to 255 in steps of 1		
Spinner			
Widget ID	String		
Value	String		
Text			
Widget ID	String		
Value	String		
Toggle			
Widget ID	String		
Value	On	Off	
User Defined Command			
Value	None		

User Defined String	
Value	String

Status Available

Button			
Widget ID	String		
Value	Active	Inactive	
Button Event			
Widget ID	String		
Value	Pressed	Released	
Connection Status [RP]			
Value	Connected	Disconnected	
Firmware Version			
Value	String		
Group Button			
Widget ID	String		
Value	1 – 255		
Group Button Event			
Widget ID	String		
Group ID	1 – 255		
Value	Pressed	Released	
Page Event			
Page ID	String		
Value	Opened	Closed	
Panel Event			
Panel ID	String		
Value	Clicked	Released	
Presentation ExternalSource Select String			
Value	String		
Presentation ExternalSource Selected			
Value	String		
Presentation ExternalSource State Set			
Source Identifier	String		
Value	Hidden	Ready	Not Ready
	Error	Source Identifier does not exist	

Slider [1]		
Widget ID	String	
Value	0 to 255 in steps of 1	
Spinner		
Widget ID	String	
Value	String	
Spinner Event		
Widget ID	String	
Direction	Increment	Decrement
Value	Pressed	Released
Text		
Widget ID	String	
Value	String	
Toggle [1]		
Widget ID	String	
Value	On	Off
User Defined String		
Value	String	

[1] For these commands to work properly, use Emulated status, not Live.

[RP] Connection Status is based off of the following string: xgetxml /status/standby\r

Cable and Adapter Requirements

SX10: Please contact manufacturer.
SX20: Captive Screw to USB Type-A RS-232 Serial Cable Adapter
SX80: Captive Screw to Male DB9 RS-232 Serial Cable
Webex Room & Webex Board Series: Captive Screw to USB Type-A RS-232 Serial Cable Adapter

Notes for the Device

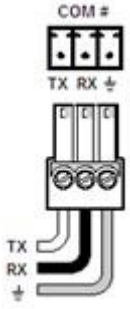
- Use the highest baud rate for the most optimal performance.
- For the driver to work, the "Require passphrase change on next user sign in" checkbox under Users → <USERNAME> must be unchecked within the devices embedded webpage.

Serial communication

Port Type:	RS-232	**Parity:**	None
Baud Rate:	115200, 38400 (SX20)	**Stop Bits:**	One
Data Bits:	8	**Flow Control:**	None

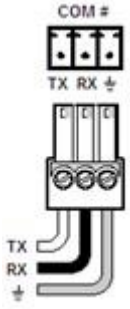
Pin Assignments Diagram

SX10, SX20, Webex Room & Webex Board Series:



Please contact manufacturer for pin assignments diagram and connector type.

SX80:



Signal	Main Cable	Pin	Signal
TxD		2	TxD
RxD		3	RxD
GND		5	GND

Network communication

When configuring the Ethernet driver, be sure device settings match that of the GCP configuration.

Port Type:	Ethernet (SSH)
Default Port:	22
Logon Credentials Supported:	Yes
Default Username:	admin
Multi-Connection Capabilities:	Yes
Port Changeability:	No

Ethernet Driver Configuration Description

Please refer to user manual for settings and changes to the network communication parameters such as: Username and Password.

Notes for the Device

- Password is required for SSH communication to work. “SSH Mode” must be set to “On” by an admin to have open communication with the driver.
- For the driver to work, the “Require passphrase change on next user sign in” checkbox under Users → <USERNAME> must be unchecked within the devices embedded webpage.