

User Manual

COD401B

**4K 6 Multi-format Extender Switch
with USB Extension for Softcodec**



All Rights Reserved

Version: COD401B_2018V1.0.0

Important Safety Instructions



1. Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.



6. Clean this apparatus only with dry cloth.



2. Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.



7. Unplug this apparatus during lightning storms or when unused for long periods of time.



3. To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.



8. Protect the power cord from being walked on or pinched particularly at plugs.



4. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



9. Only use attachments / accessories specified by the manufacturer.



5. Do not place sources of naked flames, such as lighted candles, on the unit.



10. Refer all servicing to qualified service personnel.

Warnings of FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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Introduction

Overview

Altium 4K 6 Multi-format Inputs Extender Switch with USB Extension for Softcodec which provides AV switching, USB, HDMI, DP, VGA and USB-C extension , plus system control for meeting spaces using PC-based conferencing codecs such as Microsoft Skype, Cisco WebEx and Citrix GoTo Meeting. The Transmitter and receiver kit offers six video inputs shared between both devices for HDMI, Display Port, VGA plus analog audio in and USB-C video signals. To simplify conference room device management, the kit provides four USB type B connectors for host computers. Six built-in USB hubs, three on the transmitter and three on the receiver, allow for numerous Human Interface Devices (HID) as well as USB cameras and microphones.

The kit is compatible with Ultra High Definition source up to 4K/UHD@60 Hz with 4:2:0 color subsampling. All audio, video, data, control, USB, and Ethernet transmission between the two devices is carried over a single, Ethernet-enabled HDBaseT link up to 328 feet (100 meters).

It simplifies classroom and small office system integration, for installation beneath conference tables and in lecterns, to provide localized presentation switching support.

Features

- HDMI 2.0 with 4k@60Hz (Chroma sub-sampling 4:2:0 8-bit only) and HDCP 2.2 compliance, VGA input up to 1920x1200@60Hz.
- Provides a variety of interfaces including USB-C to simplify meeting room devices management.
- Supports USB hosts like Desktop and Laptop, USB devices like keyboard/MIC/Speaker/Camera/Whiteboard for conference system.
- Automatically detect active inputs when sources are connected or there is a change in source power status.
- Source with USB-B Auto switching according to video detection technology.
- Ethernet can be imported from either receiver or transmitter, providing LAN accessibility for users.
- Allows connected displays to be controlled via CEC commands or front panel buttons.
- Relay commands can be triggered to control relay devices such as the rising and falling of the project screen.
- RS232 pass through; IR pass through from TX to RX.
- API Control through LAN interface and RS232-C.
- De-embedded Audio out in Receiver.

Package Contents

TX :

- 1 x TX
- 2 x Phoenix Male Connector (3.5 mm, 3 pins)
- 1 x DC 12V Power Adapter
- 1 x IR Receiver Cable
- 2 x Mounting Brackets

RX :

- 1 x RX
- 5 x Phoenix Male Connector (3.5 mm, 3 pins)
- 1 x DC 12V Power Adapter
- 1 x IR Emitter Cable
- 2 x Mounting Brackets

Specifications

TX

| Technical | |
|--------------------|--|
| Input | 1 x HDMI IN 1 x DisplayPort IN 1 x USB-C IN 1 x VGA IN 1 x Audio IN (followed with VGA IN) |
| Input Signal Type | HDMI 2.0 with 4k@60Hz (Chroma sub-sampling 4:2:0 8-bit only) DP/USB-C: DP 1.2 |
| Resolution Support | HDMI: 800x600@60Hz, 1024x768@60Hz 1280x768@60Hz, 1280x800@60Hz 1280x960@60Hz, 1280x1024@60Hz 1360x768@60Hz, 1366x768@60Hz 1440x900@60Hz, 1400 x 1050@60Hz 1600x900@60Hz, 1600x1200@60Hz 1680x1050@60Hz, 1920x1200@60Hz 480p@60Hz, 576p@50Hz, 720p@50/60Hz 1080p@24/25/30/50/60Hz, 1080i@50/60Hz 4096 x 2160@24/25/30/50/60Hz 3840 x 2160@24/25/30/50/60Hz DP/USB-C: 800x600@60 Hz, 1024x768@60Hz 1280x768@60Hz, 1280x800@60Hz 1280x960@60Hz, 1280x1024@60Hz 1360x768@60Hz, 1366x768@60Hz 1440 x900@60Hz, 1600 x900@60Hz |

| | |
|-----------------------|--|
| | <p>1600 x1200@60Hz, 1680 x1050@60Hz 1920 x1080@60Hz, 1920 x1200@60Hz 1280x720P@50Hz, 1280x720P@60Hz 1920x1080P@50Hz, 1920x1080P@60Hz 3840x2160@50Hz, 3840x2160@60Hz 4096x2160@50Hz, 4096x2160@60Hz</p> <p>VGA:</p> <p>640 x 480@60Hz, 800 x 600@60Hz 1024 x 768@60Hz, 1280 x 720@60Hz 1280 x 768@60Hz, 1280 x 800@60Hz 1280 x 1024@60Hz, 1360 x 768@60Hz 1366 x 768@60Hz, 1400 x 1050@60Hz 1440 x 900@60Hz, 1600 x 1200@60Hz 1680 x 1050@60Hz, 1920 x 1080@60Hz 1920 x 1200@60Hz</p> <p>NOTE: 4096x2160/3840x2160@50Hz/60Hz is based on chroma sub-sampling 4:2:0 8-bit only</p> |
| Input Video Level | 0.5-1.0 V p-p |
| Maximum Pixel Clock | 297MHz |
| Output | <p>1 x HDMI OUT</p> <p>1 x HDBT OUT</p> |
| Output Signal Type | <p>HDMI2.0 with 4k@60Hz (Chroma sub-sampling 4:2:0 8-bit only);</p> <p>HDBT2.0</p> |
| Video Impedance | 100 Ω |
| Transmission distance | <p>Cat 5e: 3840x2160: max. 90m; 1080P: max. 100m</p> <p>Cat 6/6a/7: 3840x2160: max. 100m; 1080P: max. 100m</p> |
| General | |

| | |
|---------------------------------|---|
| Operating Temperature | 0°C to 45°C (32°F to 113°F) |
| Storage Temperature | -20°C to 70°C (-4°F to 158°F) |
| Humidity | 10% to 90%, non-condensing |
| Surge Protection | Voltage: ± 1 kV |
| Power Supply | DC12V 2A |
| Power Consumption (Maximum) | 14.5W |
| Device Dimension (W x H x D) | 220mm x 42mm x 150mm |
| Product Weight | 0.97kg |
| ESD Protection | Human-body Model: ± 8 kV(Air-gap discharge) ± 4 kV(Contact discharge) |

RX

| Technical | |
|--------------------|--|
| Input | 1 x HDBT IN 2 x HDMI IN |
| Input Signal Type | HDMI2.0 with 4k@60Hz (Chroma sub-sampling 4:2:0 8-bit only); HDBT2.0 |
| Resolution Support | 800x600@60Hz, 1024x768@60Hz 1280x768@60Hz, 1280x800@60Hz 1280x960@60Hz, 1280x1024@60Hz 1360x768@60Hz, 1366x768@60Hz 1440x900@60Hz, 1400 x 1050@60Hz 1600x900@60Hz, 1600x1200@60Hz 1680x1050@60Hz, 1920x1200@60Hz 480p@60Hz, 576p@50Hz, 720p@50/60Hz |

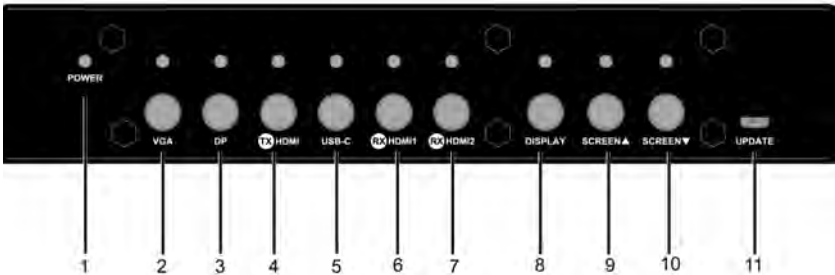
| | |
|------------------------------|--|
| | 1080p@24/25/30/50/60Hz, 1080i@50/60Hz 4096 x 2160@24/25/30/50/60Hz 3840 x 2160@24/25/30/50/60Hz NOTE: 4096x2160/3840x2160@50Hz/60Hz is based on chroma sub-sampling 4:2:0 8-bit only |
| Input Video Level | 0.5-1.0 V p-p |
| Maximum Pixel Clock | 297MHz |
| Output | 1 x HDMI OUT |
| Output Signal Type | HDMI2.0 |
| Video Impedance | 100 Ω |
| Transmission distance | Cat 5e: 3840x2160: max. 90m; 1080P: max. 100m Cat 6/6a/7: 3840x2160: max. 100m; 1080P: max. 100m |
| General | |
| Operating Temperature | 0°C to 45°C (32°F to 113°F) |
| Storage Temperature | -20°C to 70°C (-4°F to 158°F) |
| Humidity | 10% to 90%, non-condensing |
| Surge Protection | Voltage: ± 1 kV |
| Power Supply | DC12V 2A |
| Power Consumption (Maximum) | 16.5W |
| Device Dimension (W x H x D) | 220mm x 42mm x 150mm |
| Product Weight | 0.95kg |
| ESD Protection | Human-body Model: ± 8 kV(Air-gap discharge) ± 4 kV(Contact discharge) |

Cat X Cable Specification

| Cable Type | Range | Pixel Clock Rate | Video Data Rate | Supported Video |
|------------|-------|------------------|--------------------------------|--|
| Cat 5e | 100m | <=22 5MHz | <=5.3Gbps (HD Video) | Up to 1080p 60Hz 36bpp (data rates lower than 3Gbps or below 225 MHz TMDS clock) |
| | 90m | >225 MHz | 5.3Gbps (Ultra HD Video) | 1080p 60Hz 48bpp, 1080p 60Hz 3D, 4K2K/30Hz/4:4:4 and 4K2K/60Hz/4:2:0 video formats |
| Cat 6/6a/7 | 100m | | | |

Panel Layout

TX (Front Panel)



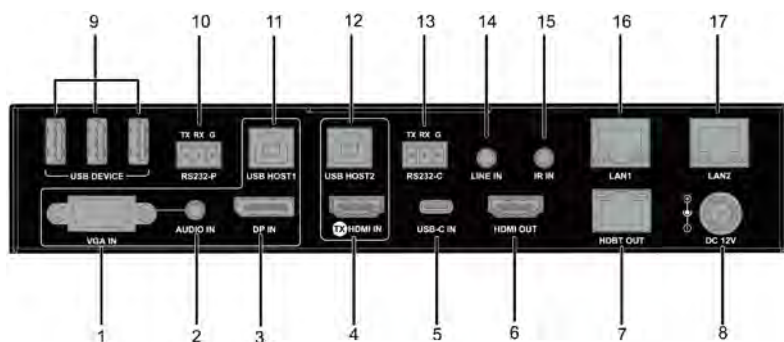
| No. | Name | Description |
|-----|---|---|
| 1 | Power LED (Red) | Lights on if the device is powered on. |
| 2 | VGA IN Selection Button and LED | VGA IN selection button: press the button to select VGA source as input. LED: LED is located on the top of the button. Blue —There is a VGA source input but not be selected. Reddish blue —There is a VGA source input and be selected. Orange —There is no VGA source input but be selected. Gray —There is no VGA source input and not be selected. |
| 3 | DisplayPort IN Selection Button and LED | DisplayPort IN selection button: press the button to select DisplayPort source as input. LED: LED is located on the top of the button. Blue —There is a DP source input but not be selected. |

| No. | Name | Description |
|-----|-------------------------------------|--|
| | | <p>Reddish blue—There is a DP source input and be selected.</p> <p>Orange—There is no DP source input but be selected.</p> <p>Gray—There is no DP source input and not be selected.</p> |
| 4 | TX HDMI IN Selection Button and LED | <p>TX HDMI IN selection button: press the button to select TX HDMI source as input.</p> <p>LED: LED is located on the top of the button.</p> <p>Blue—There is a HDMI source input but not be selected.</p> <p>Reddish blue—There is a HDMI source input and be selected.</p> <p>Orange—There is no HDMI source input but be selected.</p> <p>Gray—There is no HDMI source input and not be selected.</p> |
| 5 | USB-C IN Selection Button and LED | <p>USB-C IN selection button: press the button to select USB-C source as input.</p> <p>LED: LED is located on the top of the button.</p> <p>Blue—There is a USB-C source input but not be selected.</p> <p>Reddish blue—There is a USB-C source input and be selected.</p> <p>Orange—There is no USB-C source input but be selected.</p> <p>Gray—There is no USB-C source input and not be selected.</p> |
| 6 | RX HDMI 1 | RX HDMI 1 selection button: press the button |

| No. | Name | Description |
|-----|--------------------------------------|---|
| | Selection Button and LED | <p>to select RX HDMI source as input.</p> <p>LED: LED is located on the top of the button.</p> <p>Blue—There is a HDMI source input but not be selected.</p> <p>Reddish blue—There is a HDMI source input and be selected.</p> <p>Orange—There is no HDMI source input but be selected.</p> <p>Gray—There is no HDMI source input and not be selected.</p> |
| 7 | RX HDMI 2 Selection Button and LED | <p>RX HDMI 2 selection button: press the button to select RX HDMI source as input.</p> <p>LED: LED is located on the top of the button.</p> <p>Blue—There is a HDMI source input but not be selected.</p> <p>Reddish blue—There is a HDMI source input and be selected.</p> <p>Orange—There is no HDMI source input but be selected.</p> <p>Gray—There is no HDMI source input and not be selected.</p> |
| 8 | Display Control Button and LED(Blue) | <p>Display control button:</p> <p>Short press—set all the displays on;</p> <p>Hold press for 3s—set all the displays off.</p> <p>LED: LED is located on the top of the button, lights on when you press the button.</p> |
| 9 | Screen△ Button and LED(Blue) | <p>Screen△ Button: press to set the screen closed.</p> <p>LED: LED is located on the top of the button,</p> |

| No. | Name | Description |
|-----|-----------------------------|---|
| | | lights on when you press the button. |
| 10 | Screen▽Button and LED(Blue) | Screen▽ Button: press to set the screen open. LED: LED is located on the top of the button, lights on when you press the button. |
| 11 | Update Port | Connect to your PC for updating with our update software tool. (Reserved) |

TX (Rear Panel)



| No. | Name | Description |
|-----|---------------------|--|
| 1 | VGA IN Ports | Connects to VGA source device, controlled by the VGA button on the front panel. |
| 2 | Audio IN Port | Connect to an audio source, follow the VGA input source device. |
| 3 | DisplayPort IN Port | Connects to DisplayPort source device |
| 4 | TX HDMI IN Port | Connects to HDMI source device, controlled by the TX HDMI button on the front panel. |
| 5 | USB-C IN Port | Connects to USB-C source device, such as MacBook. Controlled by the USB-C button on the front panel. |

| No. | Name | Description |
|-----|-------------------------|--|
| 6 | HDMI OUT Port | Connects to HDMI display device. |
| 7 | HDBT OUT Port | Connects to a HDBT receiver like RX for video support. |
| 8 | Power Port | Connects to a DC 12V power adapter. |
| 9 | USB Ports | Connects to USB devices. |
| 10 | RS232 Pass Through Port | Connects to a RS232 controller or RS232 controllable device for pass through. |
| 11 | USB Host 1 | Connects to a PC which is followed with port1 (VGA IN) and port3 (DP IN), when the source is be selected, the host PC can be connected to other USB devices (3 devices on TX and 3 devices on RX). |
| 12 | USB Host 2 | Connects to a PC which is followed with port4 (HDMI IN), when the source is be selected, the host PC can be connected to other USB devices (3 devices on TX and 3 devices on RX). |
| 13 | RS232 Control Port | Connects to a RS232 controller or RS232 controllable device for API controlling. Note: It is disabled to control a projector. We do not recommend to connect a projector to TX. |
| 14 | LINE IN | Connects to an audio device such as MIC. |
| 15 | IR IN | Connects to an IR Receiver cable for passing through the remote signal to RX. |
| 16 | LAN 1 | Connects to Ethernet. |
| 17 | LAN 2 | Connects to Ethernet. |

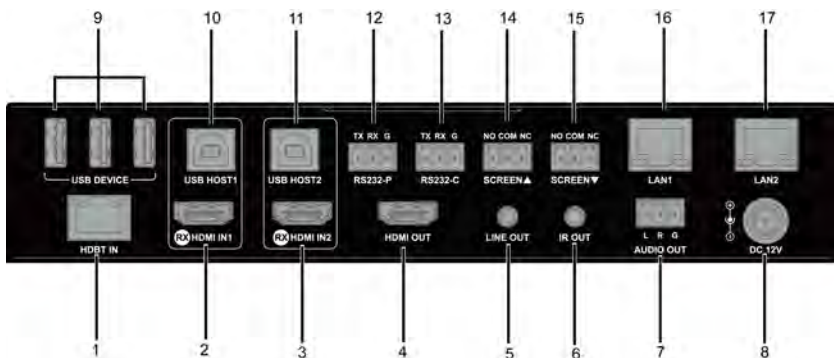
RX (Front Panel)



| No. | Name | Description |
|-----|---------------------------------------|--|
| 1 | Power LED (Red) | Lights on if the device is powered on. |
| 2 | HDBT Button and LED | <p>HDBT signal selection button: press the button to select HDBT signal as input.</p> <p>LED: LED is located on the top of the button.</p> <p>Blue—There is a HDBT source input but not be selected.</p> <p>Reddish blue—There is a HDBT source input and be selected.</p> <p>Orange—There is no HDBT source input but be selected.</p> <p>Gray—There is no HDBT source input and not be selected.</p> |
| 3 | RX HDMI IN 1 Selection Button and LED | <p>RX HDMI IN 1 selection button: press the button to select RX HDMI source as input.</p> <p>LED: LED is located on the top of the button.</p> <p>Blue—There is a HDMI source input but not be selected.</p> <p>Reddish blue—There is a HDMI source input and be selected.</p> <p>Orange—There is no HDMI source input</p> |

| No. | Name | Description |
|-----|---------------------------------------|--|
| | | <p>but be selected.</p> <p>Gray—There is no HDMI source input and not be selected.</p> |
| 4 | RX HDMI IN 2 Selection Button and LED | <p>RX HDMI IN 2 selection button: press the button to select RX HDMI source as input.</p> <p>LED: LED is located on the top of the button.</p> <p>Blue—There is a HDMI source input but not be selected.</p> <p>Reddish blue—There is a HDMI source input and be selected.</p> <p>Orange—There is no HDMI source input but be selected.</p> <p>Gray—There is no HDMI source input and not be selected.</p> |
| 5 | Display Control Button and LED(Blue) | <p>Display control button:</p> <p>Short press—set all the displays on;</p> <p>Hold press for 3s—set all the displays off.</p> <p>LED: LED is located on the top of the button, lights on when you press the button.</p> |
| 6 | Screen△Button and LED(Blue) | <p>Screen△Button: Press to set the screen closed.</p> <p>LED: LED is located on the top of the button, lights on when you press the button.</p> |
| 7 | Screen▽Button and LED(Blue) | <p>Screen▽ Button: Press to set the screen open.</p> <p>LED: LED is located on the top of the button, lights on when you press the button.</p> |
| 8 | Update Port | Connects to your PC for updating the unit with our update software tool.(Reserved) |

RX (Rear Panel)



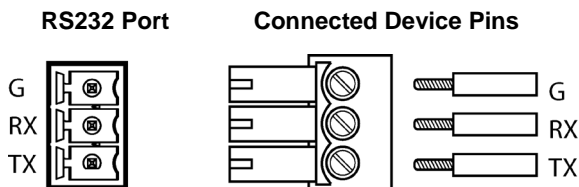
| No. | Name | Description |
|-----|-------------------|--|
| 1 | HDBT IN Port | Connects to a HDBT transmitter like TX for video support. |
| 2 | RX HDMI IN 1 Port | Connects to HDMI source device, controlled by the RX HDMI 1 button on the front panel. |
| 3 | RX HDMI IN 2 Port | Connects to HDMI source device, controlled by the RX HDMI 2 button on the front panel. |
| 4 | HDMI OUT Port | Connects to HDMI display device. |
| 5 | LINE OUT | Connects to an audio device such as an earphone. |
| 6 | IR OUT | Connects to an IR emitter cable for emitting remote signal from TX. |
| 7 | AUDIO OUT | Connects to an audio system with the phoenix connector. |
| 8 | Power Port | Connects to a DC 12V power adapter. |
| 9 | USB Ports | Connects to USB devices. |
| 10 | USB Host 1 | Connects to a PC which is followed with port2 (RX HDMI IN1), when the source is be selected, the |

| No. | Name | Description |
|-----|-------------------------|---|
| | | host PC can be connected to other USB devices (3 devices on TX and 3 devices on RX). |
| 11 | USB Host 2 | Connects to a PC which is followed with port3 (RX HDMI IN2), when the source is be selected, the host PC can be connected to other USB devices (3 devices on TX and 3 devices on RX). |
| 12 | RS232 Pass Through Port | Connects to a RS232 controller or RS232 controllable device for pass through. |
| 13 | RS232 Control Port | Connects to a projector for API controlling. |
| 14 | Screen Δ Port | Connects to the screen with phoenix connector for setting the screen closed. |
| 15 | Screen ∇ Port | Connects to the screen with phoenix connector for setting the screen open. |
| 16 | LAN 1 | Connects to Ethernet. |
| 17 | LAN 2 | Connects to Ethernet. |

Pin Assignments and Wiring

RS232

Connects to a RS232 controller or RS232 controllable device with the 3-pole, 3.5mm captive screw connectors. Wire as shown below:



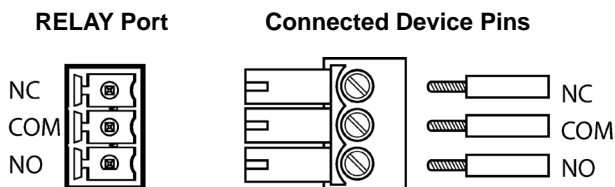
Pin 1 - Transmit-

Pin 2 - Receiver

Pin 3 - Ground

RELAY

Connects to a projector screen with the 3-pole, 3.5mm captive screw connectors. Wire as shown below:



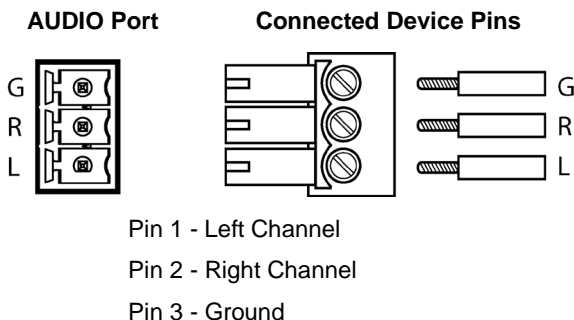
Pin 1 - Normal Open-

Pin 2 - Common

Pin 3 - Normal Close

AUDIO OUT

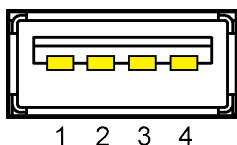
Connect to audio system such as an amplifier with the 3-pole, 3.5mm captive screw connector. Wire as shown below:



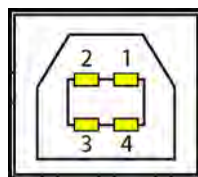
USB

There are two kinds of USB connector, one is USB Female Type A, and the other one is USB Female Type B.

USB Female Type A



USB Female Type B



Pin 1 - V Bus (Power 5V)
Pin 2 - Data-
Pin 3 - Data+
Pin 4 - Ground

Typical Application

1. Connect HDMI/VGA/DP/USB-C source devices to HDMI IN/VGA IN/DP IN/USB-C IN ports of TX or RX.

Note: The softcodec provides users to connect BYOD wireless system to the HDMI IN as a source. Connect the BYOD system HDMI display to the softcodec HDMI IN port.

2. Firmly connect display devices such as TV or projector to HDMI OUT ports of the TX and RX, ensuring both source and display devices are compatible and correctly configured to accept the signal.
3. Connect a good quality, well-terminated Cat 5e/6/6a/7 cable with an RJ45 connector wired to 568B standard at both ends from the HDBT OUT ports of TX to the HDBT IN ports of the RX.

Note: For more information of cable, please refer to the cable specification section.

4. Connect PC to USB HOST ports with USB cables.
5. Connect USB devices to the USB DEVICE ports of TX and RX.

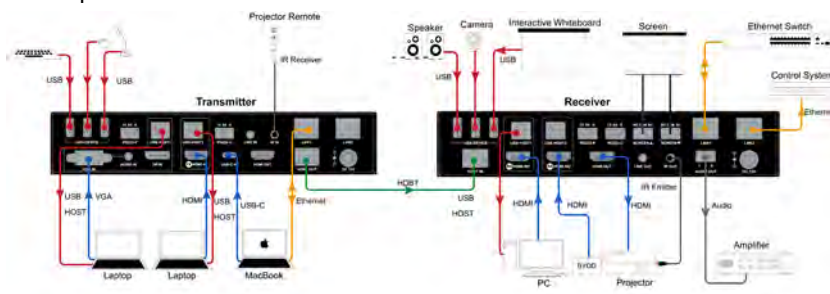
Combining above 4 and 5 steps--The PC which is followed with the source which port under the USB HOST port, the white box on the panel represents one group, when the source is be selected, the host PC in the same group can be connected to other USB devices (3 devices on TX and 3 devices on RX). In addition, the USB-C is already built in recognizable function, when you selected USB-C input, the PC can be connected to other USB device directly.

Note: For more information, please refer to USB Control section.

6. Connects audio system such as an amplifier to the AUDIO OUT port on RX with the phoenix connector.
7. Connect a MIC to the LINE IN port on TX and a speaker or earphone to the LINE OUT port on RX. This is used for audio transmission.

8. Plug the IR emitter into the IR OUT port of RX and plug the IR broadband receiver into the IR IN port of TX. Users can control the display such as projector which is at RX side with its remote.
9. Connects the LAN ports to Ethernet device such as an Ethernet switch.
10. Connect power to the TX and RX, power on all input sources, displays.

Note: Once power is restored, it will automatically switch to the source selected before power restored.



Auto Switch

Softcodec allows users to attend the web UI to set the auto switch on/off. (For more information, please refer to Web UI section.)

When the auto switch is on: (On is by default)

- Once power is restored, it will automatically switch to the source selected before power restored only if there is no active source before, under this situation, the units will output signal following priority order: VGA > DP > TX HDMI IN > USB-C > RX HDMI1> RX HDMI2.
- When there is a new source input during operation, the units will priority to output this source.
- Once power is restored, it will switch to the next highest priority source, if there is no other source, it will remain the current source signal.

When the auto switch is off:

Users switch the source only by manual.

USB Control

Please connect your PC and other USB devices before operation.

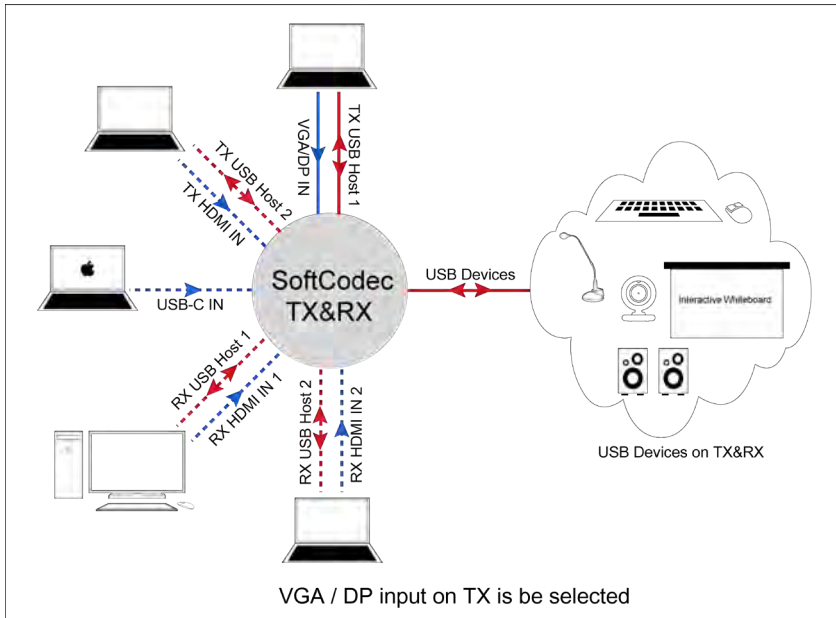
- Connect a PC to the USB HOST ports with USB cables.
- Connect USB devices to the USB DEVICE ports of TX and RX.

Combining above two steps--The PC which is followed with the source which port under the USB HOST port, the white box on the panel represents one group. When the source in the seam group is be selected, the host PC can be connected to other USB devices (3 devices on TX and 3 devices on RX).

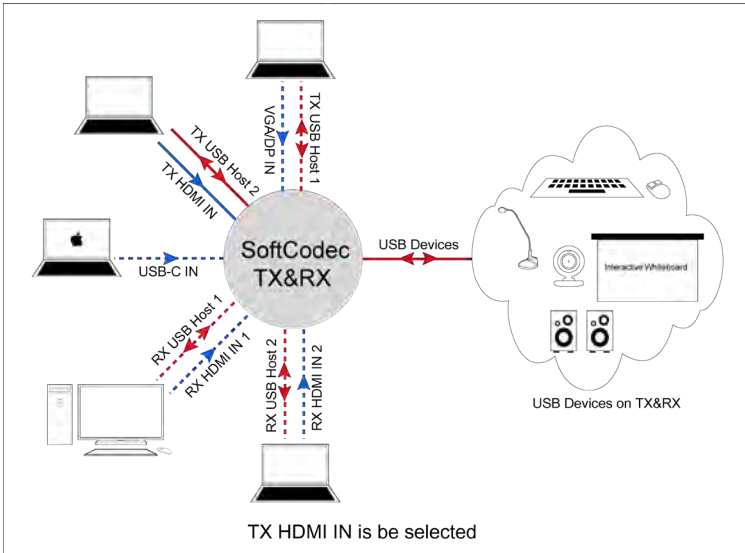
Please refer to the following diagrams.

Note: The USB-C is already built in recognizable function, when you selected USB-C input, the PC can be connected to other USB device directly.

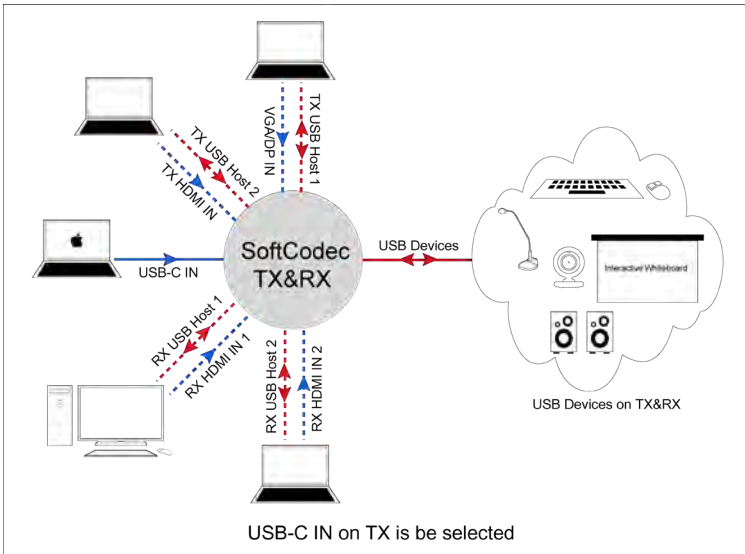
1. VGA / DP source on TX is be selected:



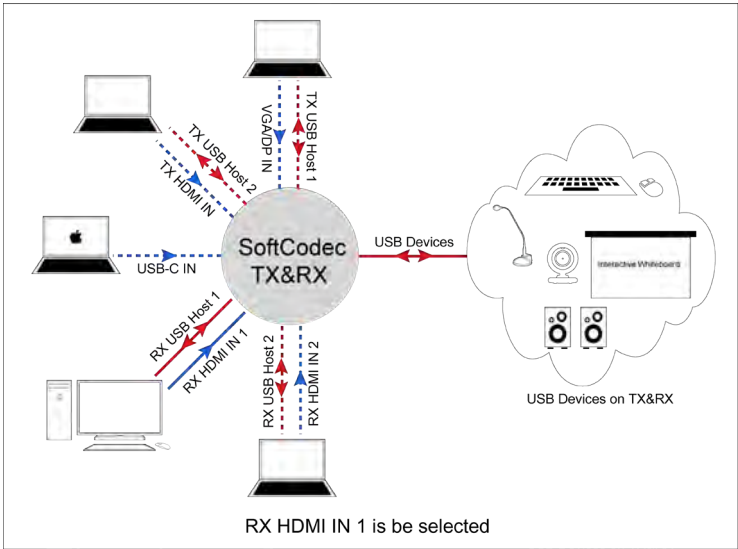
2. TX HDMI IN source on TX is be selected:



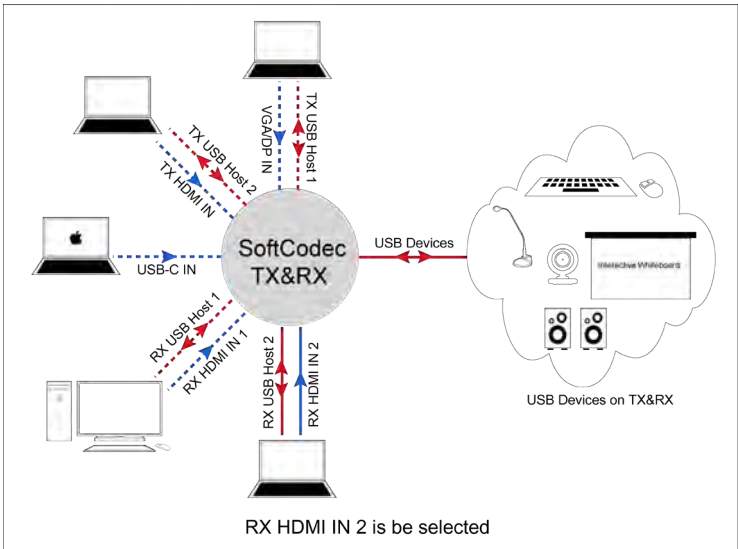
3. USB-C source on TX is be selected:



4. RX HDMI IN 1 on RX is be selected:



5. RX HDMI IN 2 on RX is be selected:



| Group | UDB HOST | Source IN | Description |
|-------|---------------|-----------------|--|
| 1 | TX USB Host1 | VGA IN DP IN | Only if the VGA or DP is selected, the PC which is connected to USB HOST 1 can be connected to USB devices. |
| 2 | TX USB Host 2 | TX HDMI IN | Only if the TX HDMI IN is selected, the PC which is connected to USB HOST 2 can be connected to USB devices. |
| 3 | - | USB-C | When the USB-C input is selected, the PC can be connected to other USB device directly. |
| 4 | RX USB Host 1 | RX HDMI IN 1 | Only if the RX HDMI IN is selected, the PC which is connected to USB HOST 1 can be connected to USB devices. |
| 5 | RX USB Host 2 | RX HDMI IN 2 | Only if the RX HDMI IN is selected, the PC which is connected to USB HOST 2 can be connected to USB devices. |

Web UI

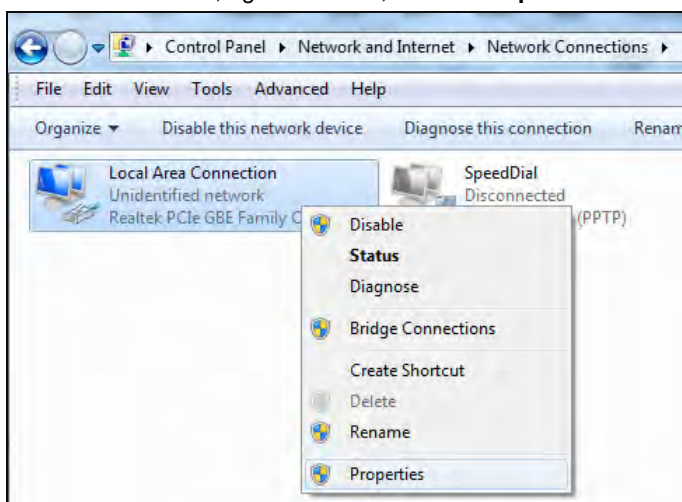
Softcodec offers users a Web interface for changing settings and controlling the set, and the IP address is 192.168.1.121 by default.

Access the Web Interface

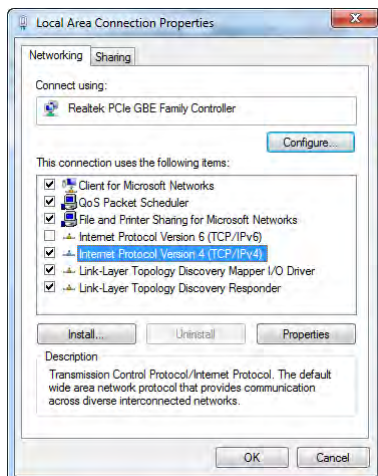
Step 1. To use the Web interface, connect a computer to the LAN port of softcodec using a straight UTP cable.

Step 2. Set a static IP address for the computer.

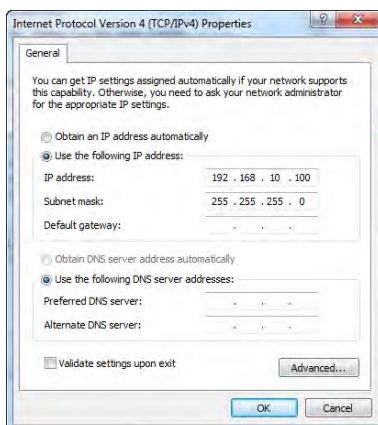
Go to **Control Panel > Network and Internet > Network Connections > Local Area Connections**, right click on it, choose **Properties**.



Double click **Internet Protocol Version 4 (TCP/IPv4)**



Choose **Use the following IP address**, input **192.168.1.100** as IP address, **255.255.255.0** as **Subnet mask**, and then click on **OK**, click on **OK** again.

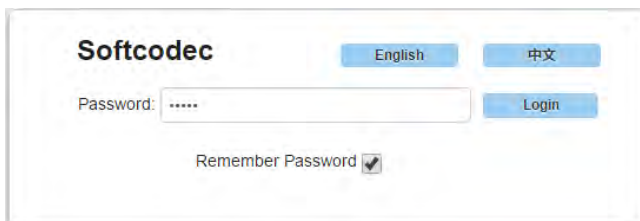


Note: The IP address of the computer and switcher should be in the same network segment. As the sofecodec's IP address is 192.168.1.121, the computer's IP should be 192.168.1.X (X denotes 2~255).

Step 3. Type the IP address 192.168.1.121 into a web browser.

Note: Chrome, Safari, Firefox, Opera and IE10+ are supported. Make sure the web browser is the latest version.

A login screen will appear:



The login screen features the 'Softcodec' logo at the top left. To its right are two buttons: 'English' and '中文'. Below the logo is a 'Password:' label followed by a text input field containing six asterisks. To the right of the password field is a 'Login' button. Below the password field is a 'Remember Password' checkbox, which is currently checked.

The default password is **admin**.

After logging in, the main screen appears. It contains three submenus:

1. Status
2. Config
3. Setting



The main screen has a top navigation bar with three tabs: 'Status', 'Config', and 'Setting'. The 'Status' tab is selected. On the right side of the navigation bar are 'English' and 'FR' buttons. The main content area is divided into two sections: 'TX' and 'RX'. Each section contains a table of connection status, a 'TX Switch' or 'RX Switch' column with colored indicator lights, a photograph of the device, and a legend at the bottom.

| TX Info: | | TX Switch: |
|------------|------------|------------|
| VGA: | Active | ● |
| DP: | Not Active | ● |
| TX HDMI: | Not Active | ● |
| USB-C: | No Signal | ● |
| RX HDMI 1: | Not Active | ● |
| RX HDMI 2: | Active | ● |

Display:

Screen:

Legend: ● Active ● Active signal ● Not Active ● No Signal

| RX Info: | | RX Switch: |
|------------|------------|------------|
| HDBT: | No Signal | ● |
| RX HDMI 1: | Not Active | ● |
| RX HDMI 2: | Active | ● |

Display:

Screen:

Legend: ● Active ● Active signal ● Not Active ● No Signal

Web Interface Introduction

Status

The Status submenu includes two parts:

- TX
- RX

On this page, users can verify switch status, all the displays on/off, the projector screen open/closed.



Config

The Config submenu includes five parts:

- Auto Switch
- Input HDCP
- EDID
- Display

- Relay Controller

Status

Config

Setting

English

SPSC

Auto Switch

Auto Switch:

ON

Input HDCP

TX HDMI

ON

USB-C

ON

RX HDMI 1

ON

RX HDMI 2

ON

EDID

VGA Input

1192x1200@60Hz 2CH

✓ Apply

DP Input

3840x2160@50Hz 2CH (with 4K@60 420)

✓ Apply

TX HDMI Input

3840x2160@50Hz 2CH (with 4K@60 420)

✓ Apply

USB-C Input

3840x2160@50Hz 2CH (with 4K@60 420)

✓ Apply

RX HDMI Input 1

3840x2160@50Hz 2CH (with 4K@60 420)

✓ Apply

RX HDMI Input 2

3840x2160@50Hz 2CH (with 4K@60 420)

✓ Apply

Display

Auto Display Control

Auto Display Control

ON

Delay Time(min)

2

(1-30 min)

UART Baud Rate Setting

UART Baud Rate:

9600

Display Control Commands

Enter Commands in Hex Or Text:

Hex

Text

End Flag

NONE

'

"

0x

Power On Code

123

Save

Power Off Code

456

Save

Relay Controller

Relay Mode:

LR575

Auto Switch

Users can enable or disable the Auto Switch function in this column. Auto Switch on is by default. For more information, please refer to the Auto Switch section on page 22.

When set it off, users switch the source only by manual.

Altium

www.altium.com

Auto Switch

Auto Switch:

ON

Input HDCP

In this column, user can enable/disable the HDCP of TX HDMI, USB-C, RX HDMI 1, RX HDMI 2 ports.

ON: it means input port support HDCP.

OFF: it means input port do not support HDCP.

Input HDCP

TX HDMI
ON

USB-C
ON

RX HDMI 1
ON

RX HDMI 2
ON

EDID

In this column, users are able to set the input EDID to satisfy the requirements. Click Apply to take effect.

EDID

VGA Input

1920x1200@60Hz 2CH

✓ Apply

DP Input

3840x2160@30Hz 2CH (with 4K@60 420)

✓ Apply

TX HDMI Input

3840x2160@30Hz 2CH (with 4K@60 420)

✓ Apply

USB-C Input

3840x2160@30Hz 2CH (with 4K@60 420)

✓ Apply

RX HDMI Input 1

3840x2160@30Hz 2CH (with 4K@60 420)

✓ Apply

RX HDMI Input 2

3840x2160@30Hz 2CH (with 4K@60 420)

✓ Apply

Display

In this column, users are able to control the displays.

Auto Display Control

On: Users are enabled to set the delay time, for example 2 minutes, when there is no signal input for 2 mins, the display will automatic switch off.

UART Baud Rate Setting-Drop-down is used for setting the baud rate of connected display. The baud rate is available to set for 9600, 19200, 38400, 57600, 115200.

Display Control Commands

Hex: Check this option represents the command is Hexadecimal format.

Text: Check this option represents the command is character format.

End Flag: Choose the end flag of command. The command could be end with none, "\r", "\n" or "\r\n"

Power on Code: Input the power on command of connected display, and click save button to take effect.

Power off Code: Input the power off command of connected display, and click save button to take effect.

The screenshot shows a software interface for configuring a display. It is divided into three main sections: 'Auto Display Control' with a toggle set to 'ON' and a 'Delay Time(min)' of 2; 'UART Baud Rate Setting' with a dropdown set to 9600; and 'Display Control Commands'. The 'Display Control Commands' section has 'Enter Commands In Hex Or Text' with 'Text' selected, 'End Flag' set to '\r\n', 'Power On Code' set to 123, and 'Power Off Code' set to 456. Each code field has a 'Save' button.

Relay Controller

In this column, users are able to set the relay mode, Latch or momentary.

Latch: Level triggered.

Momentary: Pulse triggered. The same time users can set the delay time (1~10 second).

The screenshot shows a simple interface for the 'Relay Controller'. It contains a single dropdown menu labeled 'Relay Mode' which is currently set to 'Latch'.

Setting

The Config submenu includes eight parts:

- Generic Setting
- Automatic Logout
- Network
- Password

- Welcome Menu Custom Web UI LOGO
- Firmware Upgrade
- System
- Firmware Version

Status

Config

Setting

English

IPX

Generic Setting

Key Lock:

ON

Automatic Logout

Enable:

ON

Overtime (min)

5

Network

IP Mode:

Static

IP Address:

196.168.1.121

Subnet Mask:

255.255.255.0

Apply

Note

LAN Module will automatically reboot after changing Network setting.

Password

Login Password:

New Password:

Confirm New Password:

Apply

Note

Password must be 4 to 16 characters in length (alphanumeric only).

Welcome Menu - Custom Web UI LOGO

File:

Choose Picture

Browse

Upload

Clear

Note

You must upload an image in PNG format with a resolution of 292x80 pixels.

Firmware Upgrade

ARM File:

Choose File

Browse

Upgrade

Note

Please upload the required file.

System

Factory Default

Reboot

Firmware Version

ARM

MCU (TX)

MCU (RX)

Generic Setting

In this column, users can set the key lock on/off.

On: Users are disabled to use the panel buttons to switch the sources and

displays.

Off: Users are enabled to use the panel buttons to switch the sources and displays.



Generic Setting

Key Lock:

On

Automatic Logout

In this column, users can set the auto logout on/off.

On: Users are enabled to set the overtime for example 5 minutes, when there is no any operation on web UI for 5 min, it will automatic logout. Overtime is available to set for 5, 10, 15, 20, 25, 30min.

Off: Web UI will not automatic logout.



Automatic Logout

Enable: On

Overtime (min): 5

Network

In Network column, the user can modify the network settings. Static or DHCP.



Network

IP Mode: Static

IP Address: 196.166.1.121

Subnet Mask: 255.255.255.0

✓ Apply

Note: LAN Module will automatically reboot after changing Network setting.



Network

IP Mode: Static

IP Address: 196.166.1.121

Subnet Mask: 255.255.255.0

✓ Apply

Note: LAN Module will automatically reboot after changing Network setting.

It is in Static mode by default.

If you choose **DHCP**, make sure the softodec can obtain an IP address from a DHCP server such as a router

Password

In Password column, the user can modify the login password for User.

Password

Login Password:

New Password:

Confirm New Password:

Note: Password must be 4 to 16 characters in length (alphanumeric only).

Welcome Menu- Custom Web UI Logo


In this column, the user can modify the Logo on the top left corner.

Welcome Menu - Custom Web UI LOGO

File: C:\fakepath\Deer.png

Note: You must upload an image in PNG format with a resolution of 292x80 pixels.

Browse the picture file, then click Upload. The logo will appear at the right place.



Status Config Setting

Generic Setting

Key Lock:

Firmware Upgrade

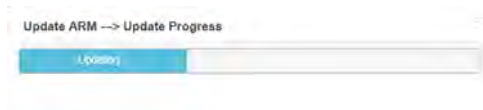
In this column, the user can update the ARM of softcodec.

Firmware Upgrade

ARM File: C:\fakepath\EX0301-ND03-D30-ARM-V1.4.tar.gz

Note: Please upload the required file.

Browse the upgrade file, then click Upgrade.

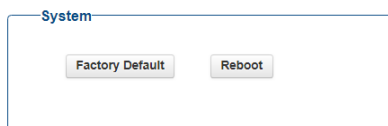


Wait for the blue progress bar complete.



Upgrade is complete. Users can refresh to login again.

System



In this column, users can set the softcodec to factory default or reboot the softcodec.

Factory Default: Click the button. A window pops up.



Click OK to take effect.

Reboot: Click the button. A window pops up.



Click OK to take effect.

Firmware Version

In this column, the user can scan the firmware version.

| Firmware Version | |
|------------------|--|
| ARM | |
| MCU (TX) | |
| MCU (RX) | |

RS232 Control

Advanced users may also choose to control the Softcodec through RS232 control port. A UART cable is needed to connect a PC or control system to the softcodec. The API command for RS232 control is available below. A professional RS232 serial interface software may be needed as well. Before executing the API command, please ensure the RS232 interface and the control PC are configured correctly.

| Parameters | Value |
|--------------|------------|
| Baud Rate | 115200 bps |
| Data Bits | 8 bit |
| Parity | None |
| Stop Bits | 1 bit |
| Flow Control | None |

API Command List

Please refer to the separate document “API Command Set_TX & RX”.

Warranty Terms and Conditions

For the following cases Altium shall charge for the service(s) claimed for the products if the product is still remediable and the warranty card becomes unenforceable or inapplicable.

1. The original serial number (specified by Altium) labeled on the product has been removed, erased, replaced, defaced or is illegible.
2. The warranty has expired.
3. The defects are caused by the fact that the product is repaired, dismantled or altered by anyone that is not from a Altium authorized service partner. The defects are caused by the fact that the product is used or handled improperly, roughly or not as instructed in the applicable User Guide.
4. The defects are caused by any force majeure including but not limited to accidents, fire, earthquake, lightning, tsunami and war.
5. The service, configuration and gifts promised by salesman only but not covered by normal contract.
6. Altium preserves the right for interpretation of these cases above and to make changes to them at any time without notice.



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