

SD-WP31CS

**3x1 Wallplate Transmitter Switcher with
HDMI and USB-C**

SEADA

Showing the World

User Manual

VER 1.0

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1. Introduction

SD-WP31CS is a HDBaseT 3x1 Wallplate Transmitter Switcher which supports two HDMI and one Type-C interfaces. which is designed to switch and extend HDMI or Type-C input signal to far-end display device, and the transmission distance is up to 131ft/40m at 4K and 229ft/70m at 1080P video by using a single CATx cable.

All interfaces on SD-WP31CS support EDID management via hotkeys or PC software control. SD-WP31CS supports P bi-directional PoC function which means users only need to power the HDBaseT receiver or transmitter to provide power to the whole system.

SD-WP31CS supports two-way infrared function enabling ultra-long-distance control of infrared devices. Moreover SD-WP31CS can be used as control panels to send the command lines to control the devices via the serial port of the receiver or via the serial port on SD-WP31CS. the buttons can be programmed using PC control software.

SD-WP31CS can be widely used in video conferencing, education, receptions and so on where video to be displayed on large-screen display and multimedia display control are needed. SD-WP31CS is also suitable for long-distance video and audio transmission systems in airports, railway stations and sports centres.

2. Features

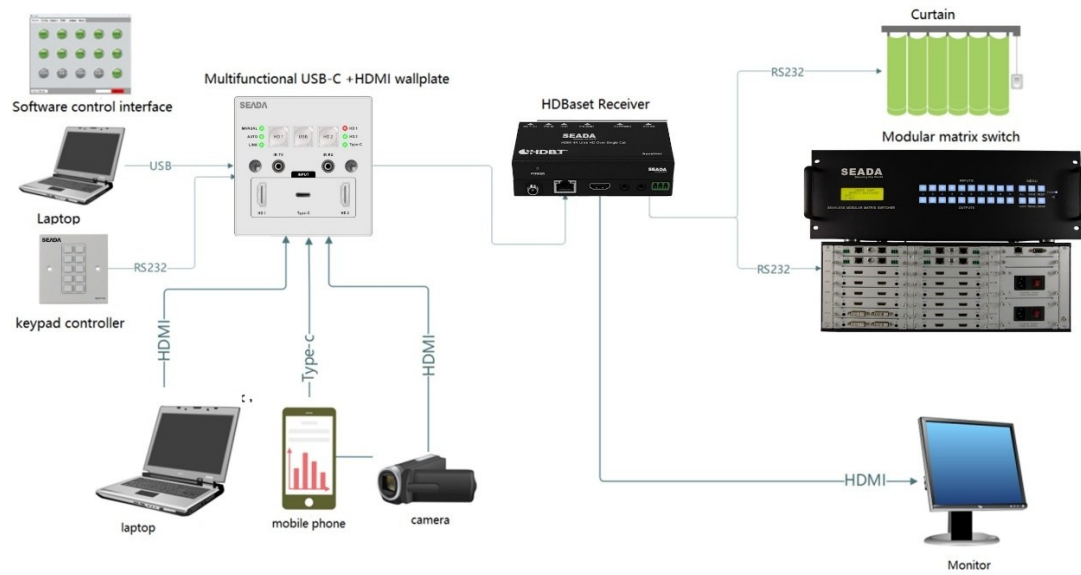
- Support 1080P60, 3840*2160P30, 4096*2160P30 and other resolutions
- Support EDID management
- Support two-way infrared
- Support reverse control
- Transmission distance: 220ft/70m at 1080P60 resolution, 110ft/35m at 4K30 resolution via Cat5e/Cat6
- Support POC (power over cable)
- LED working indicator
- Supports automatic switching and manual switching modes

3. Specifications

Model	SD-WP31CS
Input	2*HDMI 1*TYPE-C
Output	1*HDBaseT (RJ 45)
Standard Protocol	HDMI 2.0
Resolution	4096*2160P60 4:2:0, 4096*2160P30 4:4:4, 3840*2160P30 4:4:4, 1920*1200P60, 1920*1080P60
Transmission distance	1080p60Hz 70 meters, 4K60Hz 4:2:0 or 4K30 4:4:4 35 meters
power supply	DC 12V 1.5A
Size	86 *86 *38mm
Weight	0.245kg
Power consumption	9.5W
Operating temperature	-10 ~ +40°C
Storage temperature	-20°C ~55°C

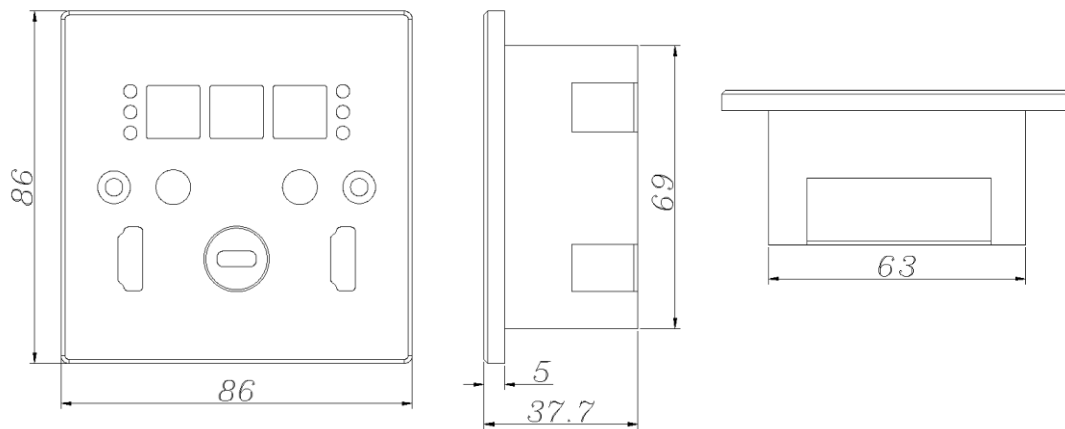
4. Connection Diagram

4.1. Connection Diagram



4.2 Dimension

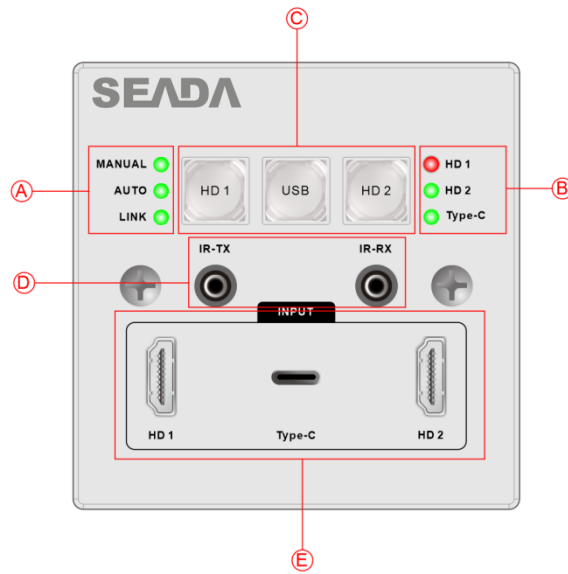
Panel Dimension(mm)



5. Packing List

Name	QTY	Name	QTY
SD-WP31CS	1	3Pin Phoenix Terminal	1
12V 1.5A Power Adapter	1	2Pin Phoenix terminal	1
Infrared Transmitter	1	Dust cap	2
Infrared Receiver	1	Screw, M4*20 silver	2

6. Panel Introduction



A	Status Indicator	MANUAL: Manual light is on meaning under the manual mode AUTO: Auto light is on meaning under the auto switching mode LINK: Connection indicator No network cable plugged in: LINK light is off Connection failed: LINK light is red Connection successful: LINK lights is green
B	Signal Indicator	When the input sources are available the corresponding indicator lights are green
C	Key Switch	HD1 button: short press to switch to HDMI1 channel USB button: short press to switch to TYPC-C channel HD2 button: short press to switch to HDMI2 channel
D	Two-way infrared	IR-TX infrared transmission, IR-RX infrared receiver
E	Input interface	2*HDMI, 1*TYPE-C

Function keys:

EDID setting: Press and hold HD1 AND USB button for 10 seconds to cycle switch EDIDs.

The HD1 light turns on for 2 seconds, indicating Bypass

The HD1 and USB lights are on for 2 seconds at the same time, which is 4K30 EDID

HD1, USB and HD2 lights are on for 2 seconds at the same time, which is 1080P60 EDID

Automatic and manual switching: Press and hold the HD2 and USB buttons 10 seconds to switch between automatic and manual modes.

External control: Press and hold HD1、 USB and HD2 buttons for 5 seconds to send the corresponding Ctrl1, Ctrl2 and Ctrl3 commands

Manual mode: In manual mode, you need to press the button manually to switch

Automatic mode: There are two states in automatic mode: one is the last-inserted-first-out state, and the other is to automatically jump to the input with signal when there is no signal.

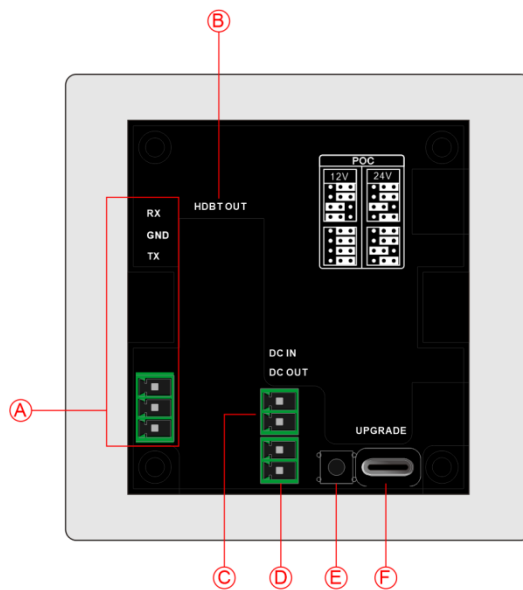
Last In, first Out: The signal inserted later will be the first out signal in automatic mode.

For example: When HD1 input is in progress, inserting HD2 input will automatically switch to HD2 signal

No signal state: When the input signal 'manually switched to' is turned off, it will automatically switch to the input channel with signal

For example: When the HD1 signal is being output, there is a signal input to HD2, If the HD1 signal source is disconnected, it will automatically jump to the HD2 signal

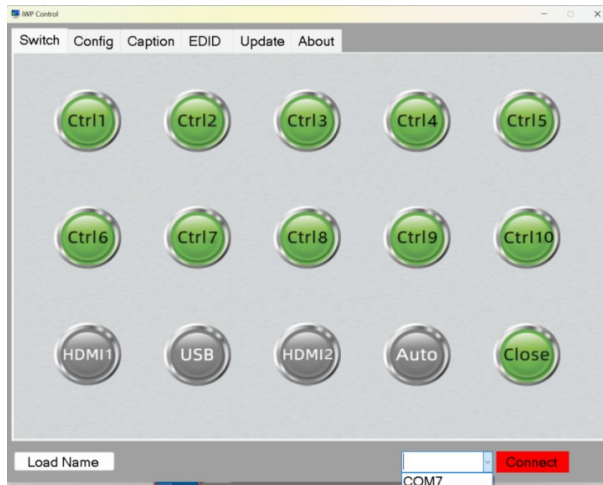
Back side:



A	External Control	Multi-function button output interface, bidirectional RS232
B	HDBT OUT	HDBaseT interface, to connect HDBaseT receiver
C	Power port IN	DC 12V1.5A power input
D	Power port OUT	Provide 12V output, power cannot exceed 5W
E	Reset button	Engineer upgrade mode
F	Control port	Type-C interface, connect to the computer to log in to the client

7. 7. Software Control

7.1. Operation Instructions:



Physical connection: There is a Type-C port on the back panel of the transmitter. Use a USB to Type-C cable to connect to the computer.

After the physical connection is completed, use the WP-Control PC software to connect to the device. Open the software as shown below, select the COM port number in the lower right corner, and click Connect to connect. If the connection is successful, it will be displayed in green.

7.2. Switch Interface:

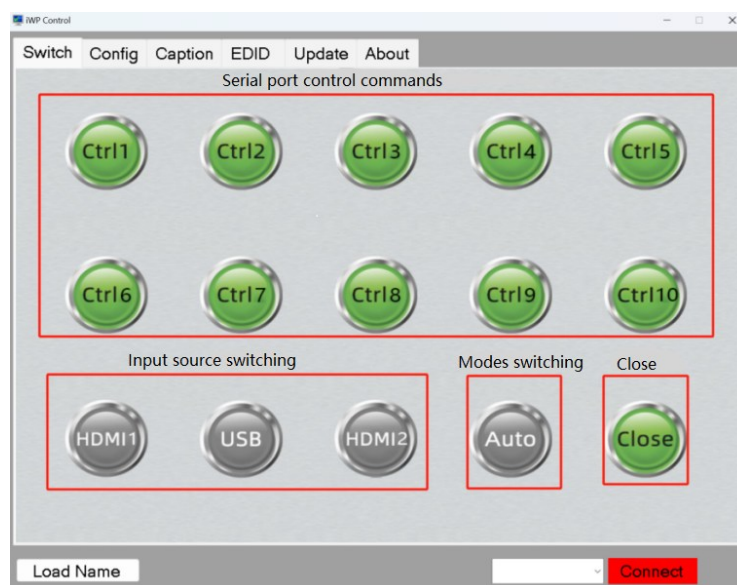
The switching interface is divided into four areas: command sending, signal switching, mode switching, and channel cancellation.

Command sending: 10 different commands can be entered in the panel, corresponding to Ctrl1 to Ctrl10

Signal switching: HD1, USB, HD2 correspond to three interfaces on the panel, click on that to switch to the current input

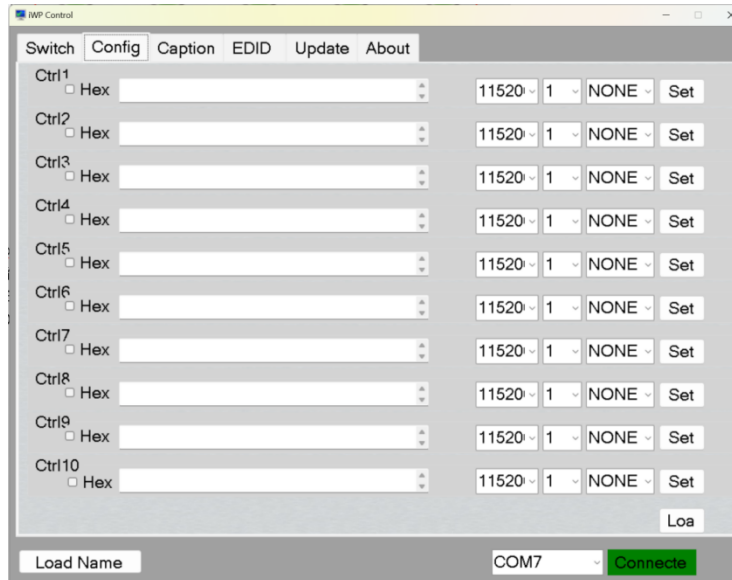
Mode switch: switch to another mode currently in use, divided into automatic switching and manual switching

Channel Close: Close all current input channels



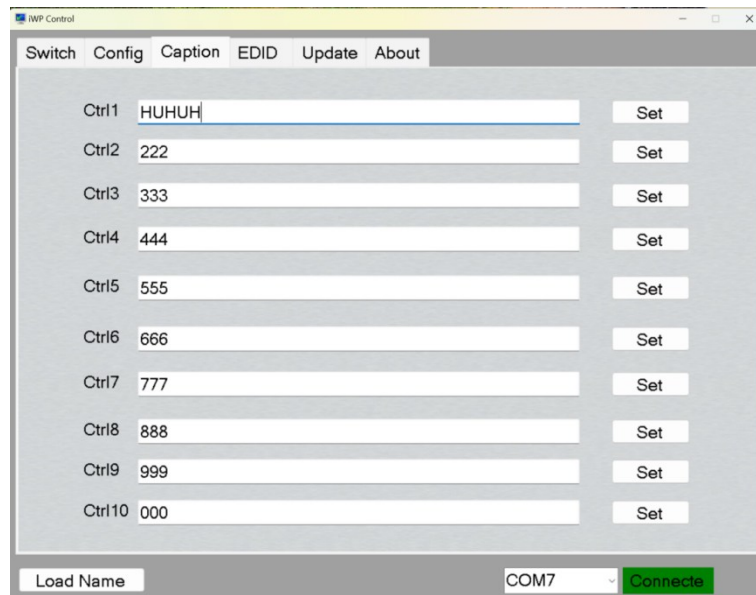
7.3. Config Setting Interface:

The Config setting interface supports filling in 10 commands, corresponding to the 10 keys Ctrl1 to Ctrl10 on the Switch interface. The commands can support ASCII code, HEX code, and the baud rate can be customized.



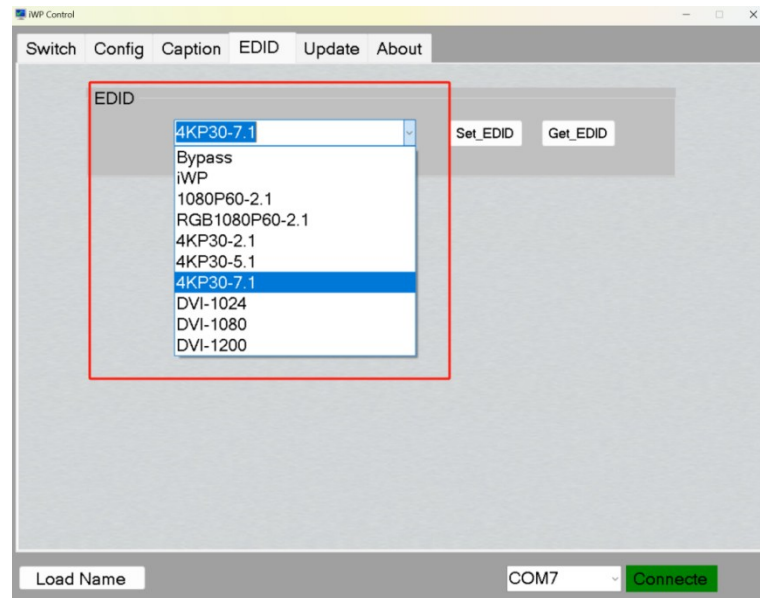
7.4. Caption Title Interface:

Supports modification of the names of 10 keys from Ctrl1 to Ctrl10



7.5. EDID Interface

Modify the EDID of each channel. After modifying the EDID, you need to unplug and plug video source to enable the new EDID handshake.

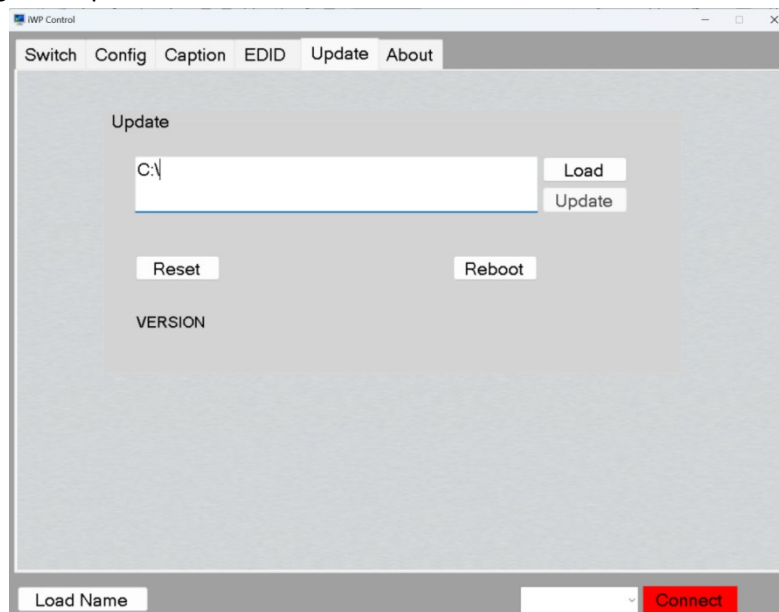


7.6. Update Interface

Upgrade mode: Press and hold the HD1 and HD2 buttons at the same time, then power on. When the HD1, USB, and HD2 buttons light up at the same time, it means that you have entered the upgrade mode.

At this time, open the host computer software and enter the Update upgrade interface. Click Load to select the upgrade file and select the APP.bin file.

After selecting the file, click Update. After the upgrade is done, the HD1, USB, and HD2 buttons will flash quickly, and the system will automatically restart after the flashing is complete.



8. Serial Port Commands

RS232 communication protocol and central control command code description:

Use direct connection, RS232 Phoenix terminal definition (from top to bottom): RX GND TX

Communication protocol: (baud rate 115200, data bit 8, stop bit 1, check bit none)

Commands	Functions
HD1.	Switch to HD1 channel
USB.	Switch to USB channel
HD2.	Switch to HD2 channel
CTRL{X}.	Send serial port commands, up to 10
MANUAL.	Switch to manual switching
AUTO.	Switch to automatic switching
CLOSE.	Close the current input channel