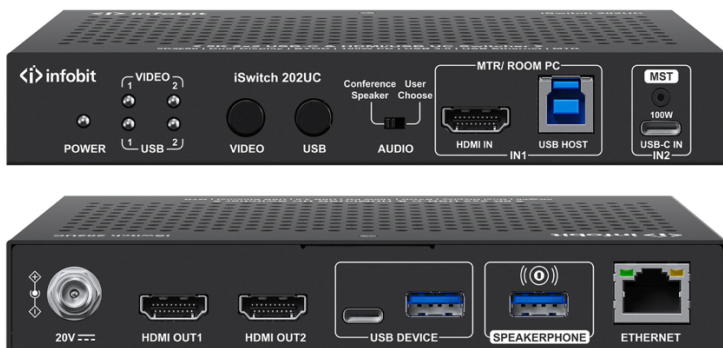


# iSwitch 202UC

## 5K 2x2 USB-C & HDMI/ USB UC Switcher

*User Manual V1.1*



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# 1. SAFETY



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.



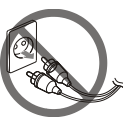
2. Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.



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.

## 2. INTRODUCTION

### 2.1 OVERVIEW

The **iSwitch 202UC** is a **dual-screen conference switcher** designed to simplify modern meeting room setups. It integrates **video switching**, **USB host switching**, and **docking** functions into a single solution, enabling seamless switching between a dedicated **BYOM Room PC** and a **user BYOD laptop**.

It provides two input options: a dedicated **Room PC input** (HDMI 2.0 + USB 3.0) and a **full-featured USB-C input** (**5K/4K** video signal, **5Gbps** USB data transmission and **100W** charging). It supports **automatic** and **manual** signal switching for **dual-screen** display applications. Through **MST** technology, the **iSwitch 202UC** supports independent dual-screen video output up to 5K/4K, allowing **extended** or **mirrored** displays for enhanced productivity.

The device enables connecting **USB peripherals**, such as conference **cameras** and **speakerphones**, to be shared between the Room PC and USB-C host. The device also supports **Ethernet Bridge** functionality, allowing the selected USB host to access the network through the Ethernet port.

### 2.2 FEATURES

- Supports **two-source switching** for dual-screen conferencing, with mirrored output of HDMI 2.0b + USB 3.0 Type-B and independent extended dual-screen output of full-featured USB-C with **MST**.
- Supports HDMI 2.0b video input and dual HDMI 2.0b outputs with resolutions up to **5120×2160@30Hz**, 5120×1440@60Hz, and 3840×2160@60Hz, with HDCP 2.3 compliance.
- The **USB-C input** supports DP Alt Mode (MST/SST), USB 3.0 data transmission up to **5Gbps**, up to **100W PD** charging, and Ethernet Bridge functionality.
- Provides three **USB 3.0** peripheral ports, including one **USB-C** port, one **USB-A** port, and one dedicated **USB-A SPEAKERPHONE** port for connecting a conference speakerphone.
- Supports **Ethernet Bridging** for the selected USB Host computer (connected to USB HOST or USB-C IN port) via the device's Ethernet port.
- Supports **automatic** and **manual video switching**. USB host switching supports **Follow mode** and **Independent mode**, and both video and USB host can be switched via front panel buttons and API commands.
- Supports automatic **CEC** control to power displays on/off based on the active status of the selected source.
- Supports **firmware upgrade** through the USB-C IN port.

## 2.3 PACKAGE CONTENTS

- 1 x iSwitch 202UC
- 1 x DC 20V Power Adapter with US/EU/UK/AU Pins
- 1 x 2m USB 3.2 Type-C to Type-C cable (5Gbit/s)
- 1 x 1.8m USB 3.2 Type-A to Type-B cable
- 4 x Mounting Brackets (with Screws)

## 2.4 SPECIFICATIONS

| Technical                          |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input/Output Video Signal Type     | <p>Input:</p> <ul style="list-style-type: none"> <li>• HDMI input supports HDMI 2.0b, up to 5120x2160@30Hz, 5120x1440@60, 3840x2160@60Hz and HDCP 2.3;</li> <li>• USB-C input supports USB 3.0, up to 5Gbps data transfer rate, 5K/4K video, 1G Ethernet and 100W charging.</li> </ul> <p>Output:</p> <p>HDMI 2.0b, up to 5120x2160@30Hz, 5120x1440@60, 3840x2160@60Hz and HDCP 2.3</p>                                        |
| Input/Output Resolutions Supported | <p>5120x2160<sup>5</sup>, 5120x1440<sup>8</sup>, 4096x2160<sup>5,8</sup>, 3840x2160<sup>5,8</sup>, 2560x1600<sup>8</sup>, 2560x1440<sup>8,9</sup>, 2560x1080<sup>8</sup>, 2048x1152<sup>8</sup>, 2048x1080<sup>8</sup>, 1600x1200<sup>8</sup>, 1920x1200<sup>8</sup>, 1080p<sup>8,9,10</sup>, 1080i<sup>8</sup> (Input only)</p> <p>5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = at 60 Hz, 9 = at 120Hz, 10 = at 240Hz</p> |
| USB Device                         | <p>2 x USB 3.0 type-A ports, supports 5Gbps data transfer rate and 1.5A current output;</p> <p>1 x USB 3.0 type-C port, supports 5Gbps data transfer rate and 1.5A current output.</p>                                                                                                                                                                                                                                         |
| Maximum Data Rate                  | <p>HDMI IN/OUT: 18Gbps</p> <p>USB-C IN: 5Gbps (per lane)</p>                                                                                                                                                                                                                                                                                                                                                                   |
| Audio Format                       | <p>Fully supports audio formats in HDMI 2.0/DP 1.2 specification, including PCM 2.0/5.1/7.1, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio and DTS:X</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                                                                 |
| ESD Protection        | Human-body Model: ±8kV (Air-gap discharge) / ±4kV (Contact discharge)                      |
| Power Supply          | DC 20V/6A                                                                                  |
| Power Consumption     | <ul style="list-style-type: none"> <li>• 6.6 W (without charging or USB loaded)</li> </ul> |

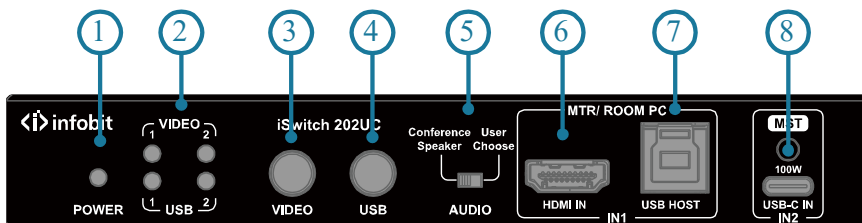
| General                      |                                                                                                                       |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| (Max)                        | <ul style="list-style-type: none"> <li>106.6 W (with 100w charging)</li> <li>29.1 W (with full USB loaded)</li> </ul> |
| Device Dimension (W x H x D) | 100.2mm x 25mm x 160mm / 3.94" x 0.98" x 6.3"                                                                         |
| Product Weight               | 0.45kg/0.99lb                                                                                                         |

## Transmission Distance

| Cable Type | Range                      | Supported Resolution  |
|------------|----------------------------|-----------------------|
| HDMI       | Input / Output: 15m / 50ft | 1080P@60Hz<br>4K@30Hz |
|            | Input / Output: 10m / 33ft | 4K@60Hz               |

# 3. PANEL OVERVIEW

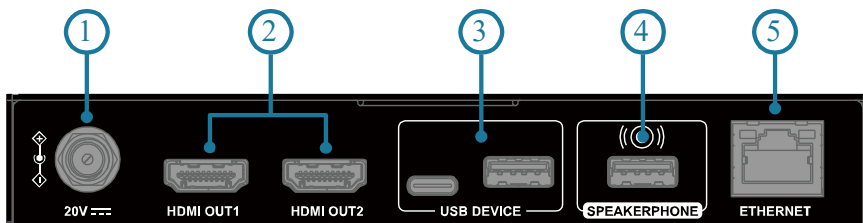
## 3.1 FRONT PANEL



| # | Name                                | Description                                                                                                                                                                                                                                                                                                                                       |
|---|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | POWER LED                           | On/Off: The device is powered on/off.                                                                                                                                                                                                                                                                                                             |
| 2 | VIDEO LEDs (1-2) and USB LEDs (1-2) | VIDEO LEDs (1-2): <ul style="list-style-type: none"> <li>On: The corresponding video input is selected.</li> <li>Off: The corresponding video is not selected.</li> </ul> USB LEDs (1-2): <ul style="list-style-type: none"> <li>On: The corresponding USB HOST is selected.</li> <li>Off: The corresponding USB HOST is not selected.</li> </ul> |
| 3 | VIDEO Button                        | Press to select video input.                                                                                                                                                                                                                                                                                                                      |
| 4 | USB Button                          | Press to select USB HOST.                                                                                                                                                                                                                                                                                                                         |
| 5 | AUDIO                               | The Audio DIP Switch configures the audio information in the HDMI EDID. Please refer to the "DIP Switch" section for details.                                                                                                                                                                                                                     |
| 6 | HDMI IN                             | Connect to an HDMI source.                                                                                                                                                                                                                                                                                                                        |

| # | Name     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7 | USB HOST | USB 3.2 & 3.0 Type-B port. Connect to a USB host device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 8 | USB-C IN | <p>USB 3.0 Type-C port. Connect to a USB-C device such as laptop.</p> <p>The full-featured USB type-C port supports the following features:</p> <ul style="list-style-type: none"> <li>Video: DP alt mode, with resolutions up to 5120x2160@30Hz, 5120x1440@60, 3840x2160@60Hz;</li> </ul> <p>With DP MST mode supported, the port can output two videos at the same time;</p> <ul style="list-style-type: none"> <li>USB: USB 3.0, 5Gbps;</li> <li>Charging: Maximum 100W charging function, supports PD 3.0 / 2.0 protocols.</li> </ul> <p>The following cable is recommended:<br/>USB Type-C to Type-C Cable (USB 3.2 Gen 1x1 or above).</p> |

## 3.2 REAR PANEL



| # | Name           | Description                                                                                                                                                                                                   |
|---|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | 20V            | Connect to the power adapter provided.                                                                                                                                                                        |
| 2 | HDMI OUT 1 & 2 | Connect to HDMI displays.                                                                                                                                                                                     |
| 3 | USB DEVICE     | <p>1 x USB 3.0 type-C port and 1 x USB 3.0 type-A port. Each USB device port supports data transfer rate up to 5Gbps, and supports 1.5A current output.</p> <p>Connect to USB devices such as USB camera.</p> |
| 4 | SPEAKERPHONE   | <p>USB 3.0 type-A port. Supports data transfer rate up to 5Gbps, and supports 1.5A current output.</p> <p>Connect to a speakerphone.</p>                                                                      |
| 5 | ETHERNET       | Connect to a local area network for USB HOST (based on the currently selected USB host) Ethernet bridge.                                                                                                      |

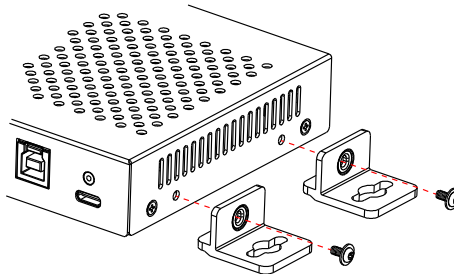
## 4. INSTALLATION AND WIRING

### Warnings:

- Before wiring, disconnect the power from all devices.
- During wiring, connect and disconnect the cables gently.

### 4.1 INSTALLATION

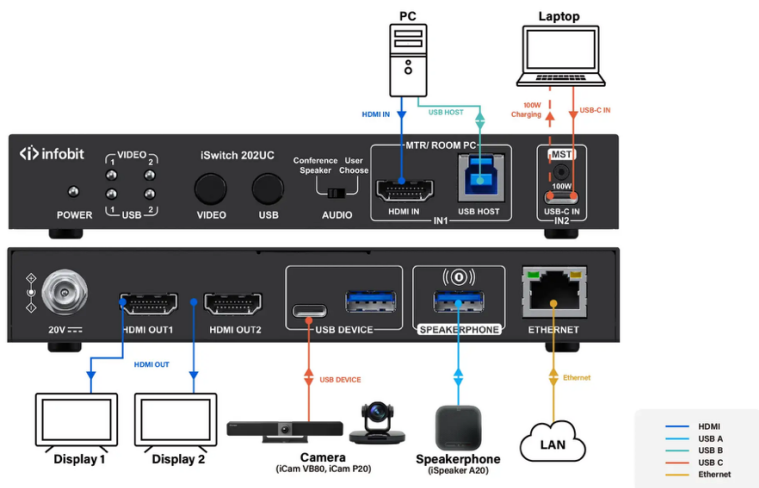
1. Attach the bracket to one side of the enclosure using the screws provided.  
The bracket is attached to the enclosure as shown.



2. Screw the brackets to the position as required (screws in this step are not included in the package).

### 4.2 WIRING

When the HDMI IN source is selected, the two connected displays output mirrored video. When the USB-C IN source is selected, the two connected displays output independent MST video streams.



- **Ethernet Bridge:** The USB-B port and USB-C IN port support Ethernet Bridge functionality. When the device's ETHERNET port is connected to a network, the currently selected USB host can access the network through the device.
- **Auto-CEC:** Supports automatic CEC control. The device detects whether the currently selected source has an active signal. When an active signal is detected, the connected display is automatically powered on; when no signal is detected, the connected display is automatically powered off, and users can set power off delay time via API command. Detail API commands, please refer to the separate document "*API Command Set\_iSwitch 202UC*".

## 5. SWITCHING INSTRUCTION

### 1. Video Switching

The video switching function supports automatic switching. By default, the auto switching function is enabled and can be enabled or disabled through API commands.

The auto switching function follows the First-In-Last-Out (FILO) principle:

- When a new active source is connected, the device automatically switches to the newly connected source.
- When the currently selected source is disconnected, the device switches to another source if an active signal is available. If no other active signal is

detected, the device remains on the current selection.

The video source can also be switched manually by pressing the VIDEO button on the front panel or by sending API commands.

**Note:** Detail API command information please refer to the separate document “*API Command Set\_iSwitch 202UC*”.

## 2. USB Host Switching

By default, the USB host switching follows the video switching. The USB switching mode can be configured through API commands as either Independent or Follow mode.

The USB host can be switched manually by pressing the USB button on the front panel or by sending API commands.

**Note:** Detail API command information please refer to the separate document “*API Command Set\_iSwitch 202UC*”.

### USB Switching Example

- By default, the USB-B host follows the HDMI IN source, and the USB-C host follows the USB-C IN source. When the video source is switched to HDMI IN or USB-C IN, all connected USB peripherals are routed to the corresponding USB host (USB-B host or USB-C host).
- In this mode, users can press the USB button on the front panel to manually switch the USB peripherals to the other USB host.
- Alternatively, users can set the USB switching mode to Independent through API commands. In this mode, switching the video source does not affect the USB host selection.

## 6. DIP SWITCH CONFIGURATION

The DIP switch on front panel is designed to configure audio mode.



- **Conference Speakerphone:** The HDMI EDID excludes audio capability, and the device does not present itself as an audio device to the laptop. Audio input and output are handled through the connected USB conference

speakerphone.

- **User Choose:** The HDMI EDID includes audio capability, and the device presents itself as an audio device to the laptop. If a USB conference speakerphone is connected, the laptop will detect two available audio devices, allowing the user to manually select the preferred audio device.

**Note:** The **Conference Speakerphone** mode is recommended for standard meeting room deployments to prevent multiple audio devices from being detected and avoid audio device selection confusion.

## 7. API COMMAND CONTROL

The device supports basic control such as video switching via API commands via USB-C IN port.

Before sending API commands to control the device, ensure the serial ports between this device and PC are configured correctly. A professional RS232 serial interface software (e.g., Serial Assist) may be needed as well.

| Parameters   | Default Value |
|--------------|---------------|
| Baud Rate    | 115200 bps    |
| Data bits    | 8 bits        |
| Parity       | None          |
| Stop bits    | 1 bit         |
| Flow control | None          |

**Note:** Detail API command information please refer to the separate document “*API Command Set\_ iSwitch 202UC*”.