PIXELHUE

EP4 Pro

Fiber Extender

User Manual

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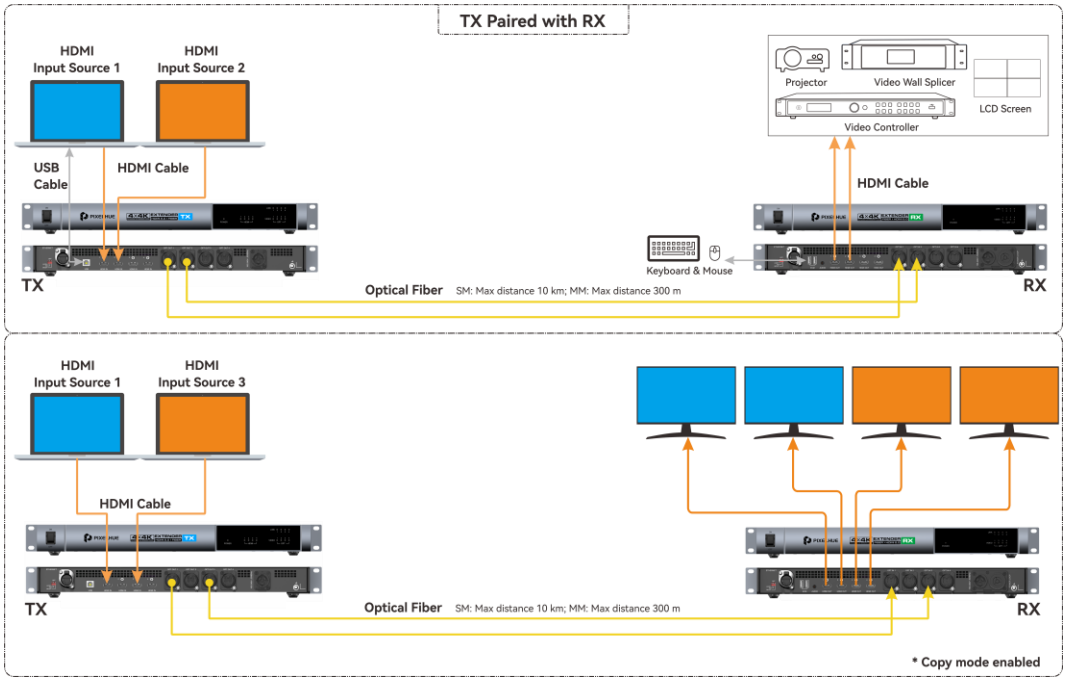
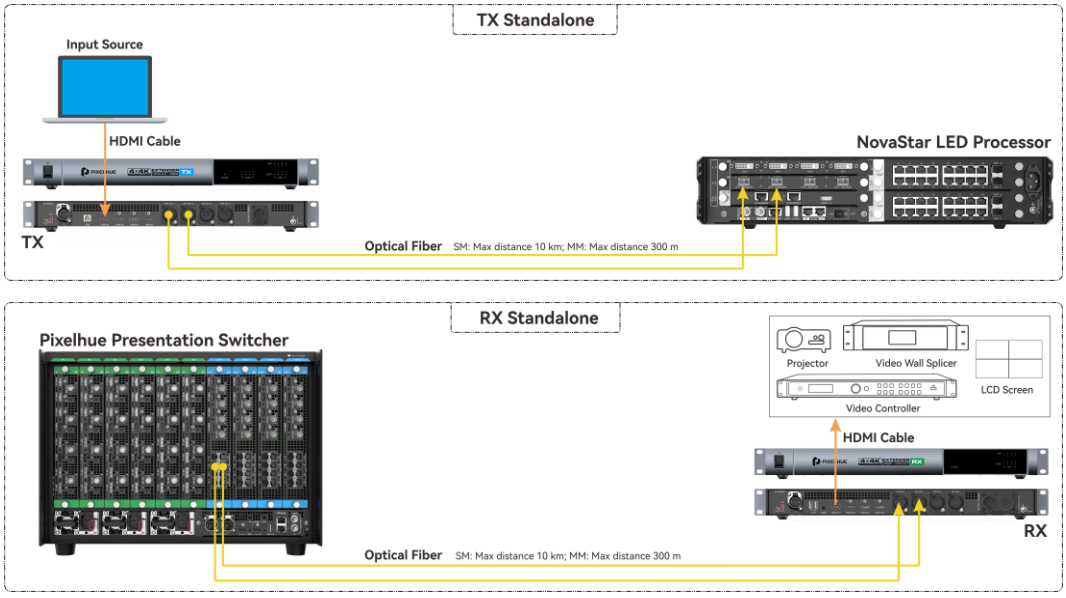
1 Applications

Paired Use



Standalone Use



2 Software Installation

2.1 Obtain Software

The BCTools installation package can be obtained through the following methods:

- Obtain the BCTools installation package from the device provider and copy it to your control computer.
- Contact your sales or technical engineer to obtain the software installation package and copy it to your control computer.

2.2 Software Installation

Extract the software package to the computer, double click the BCTools.exe installation package, and follow the prompts to complete the installation of the software.

BCTools currently supports installation on Windows 7 and above systems only.

3 Device Update

3.1 Device Update via Ethernet Port

Prerequisites

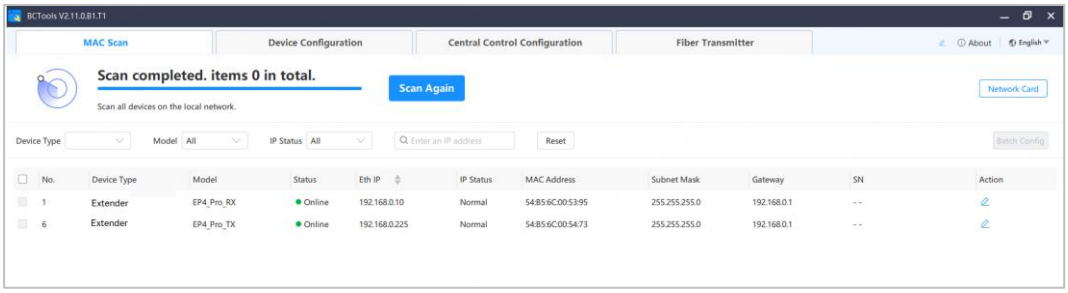
- Before update, it is recommended to disconnect all inputs and outputs (HDMI cables). When performing a peer-to-peer update, a stable fiber connection to the target device is required.
- Ethernet port update is unavailable in Ethernet passthrough mode.

Operating Procedure

Step 1 Launch BCTools.

Step 2 In the **MAC Scan** interface, click **Scan** to search for the devices.

All the EP4 Pro devices on the current network segment are listed.

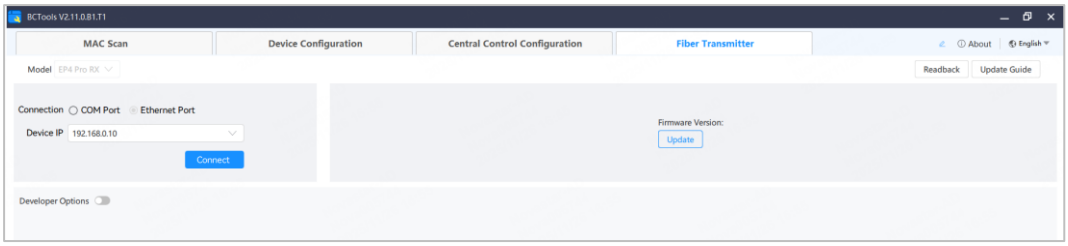


Step 3 Navigate to the **Fiber Transmitter** interface.

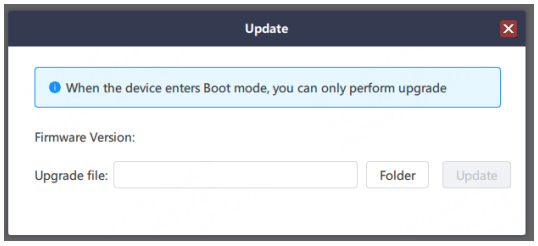
Step 4 Select **Ethernet Port** in the **Connection** section.

Step 5 Select the device IP address and click **Connect**. The device will automatically connect.

Once successful, the device model will appear next to **Model** at the top.



Step 6 Click **Update** on the right to enter the firmware update interface.



The EP4 Pro devices support the peer-to-peer update. In the pop-up window, click **Folder** to select the appropriate folder update package.

- If updating TX on TX, select the TX path and update package in the dialog.
- If updating RX on TX, select the RX path and update package accordingly.

Step 7 Click **Update**, and the system will begin updating the device firmware.

After the update, click **Readback** in the upper right to view the updated version information.

Step 8 Upon completion, the device will automatically restart.

3.2 Device Update via COM port

3.2.1 Connections

- Connect the control computer to the left USB connector of the RX device using a USB cable.

Figure 3-1 RX device connection

- Connect the USB connector of the TX device to the control computer using a USB cable.

Figure 3-2 TX device connection

3.2.2 Device Update

Prerequisites

- The corresponding device update package has been obtained.
- The device has been connected to the control computer.

Operating Procedure

Step 1 Disconnect all inputs and outputs from the device to be updated.

Step 2 Unplug the power supply of the device to ensure a complete shutdown.

Step 3 On the device rear panel, toggle the BOOT switch downward to enable the BOOT mode.

Step 4 Connect the control computer to the device using a USB cable.

Step 5 Plug in the power supply for the device to initiate power-up.

Step 6 Launch BCTools.

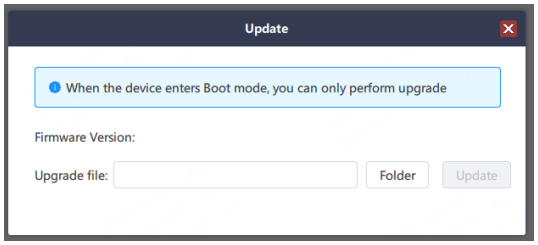
Step 7 Navigate to the **Fiber Transmitter** interface.

Step 8 In the **Connection** section, click the dropdown next to **COM Port** and select the device COM port.

Step 9 Click **Connect**, and the device will automatically connect.

Once successful, the device model will appear next to **Model** at the top.

Step 10 Click **Update** on the right to enter the firmware update interface.



Step 11 Click **Folder** to choose the folder containing the update files.

Step 12 Click **Update**, and the system will begin updating the device firmware.

After the update, click **Readback** in the upper right to view the updated version information under **Firmware Version**.

Step 13 Once the update is complete, set the BOOT DIP switch on the device front panel upward to **OFF**, disabling the BOOT mode.

If the update fails, adjust the device port number and try updating again.

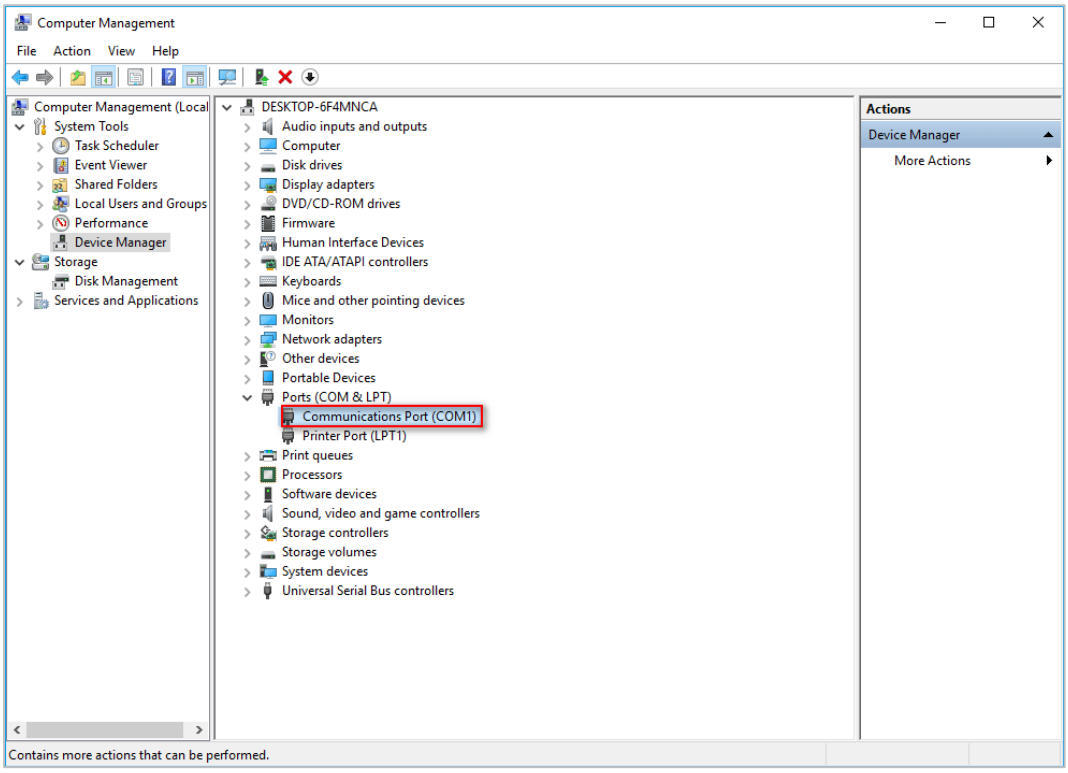
Modify COM Port Number

If the device update fails, modify the COM port number and retry the update.

Step 1 On the computer desktop, right click **This PC**, select **Manage**, and enter the **Computer Management** interface.

Step 2 Click **Ports** to expand the port list interface.

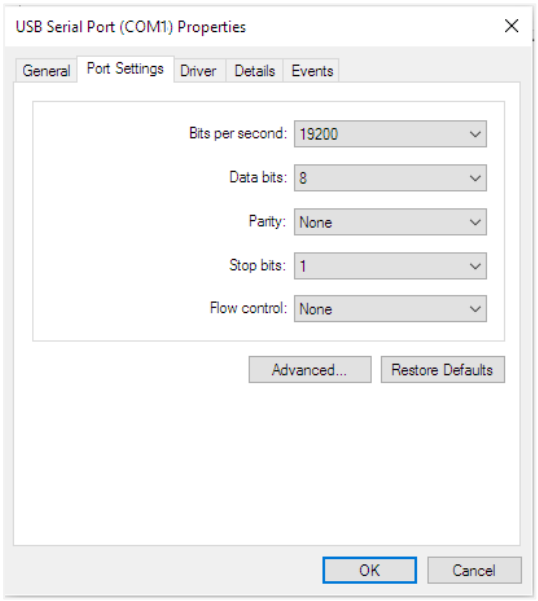
Figure 3-3 Computer management



Step 3 Right click the target serial port, select **Properties**, and enter the serial port properties interface.

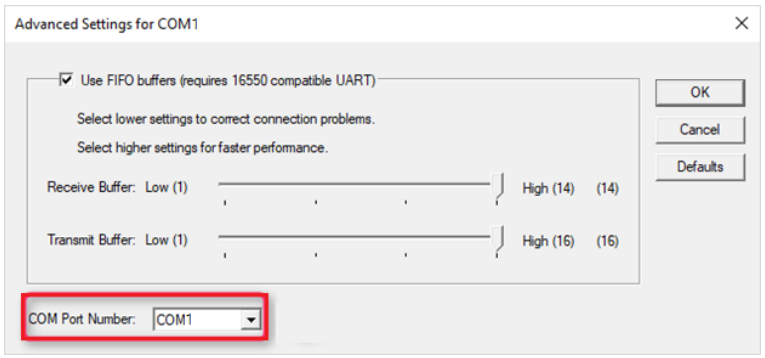
Step 4 Select **Port Settings** to enter the port settings interface.

Figure 3-4 Port settings



Step 5 Click **Advanced** to enter the advanced settings interface.

Figure 3-5 Advanced settings



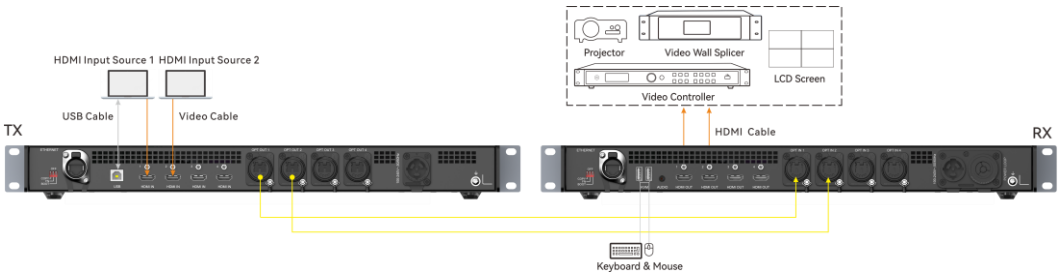
Step 6 Click the dropdown box next to **COM Port Number** and select the port number.

Step 7 Click **OK** to complete the port number settings and return to the **Computer Management** interface to view the updated port number.

After modifying the COM port number, use BCTools to update the device again.

4 Device Connections and Applications

4.1 TX and RX Paired



- When RX and TX are paired, a single connector supports up to 4096×2160@60Hz.
- For KVM control, it is advisable to use the recommended mouse brands, which have undergone rigorous compatibility testing with EP Pro devices to ensure a more stable and reliable experience.

For specific mouse brands and models, please consult your technical support.

4.1.1 Direct Output

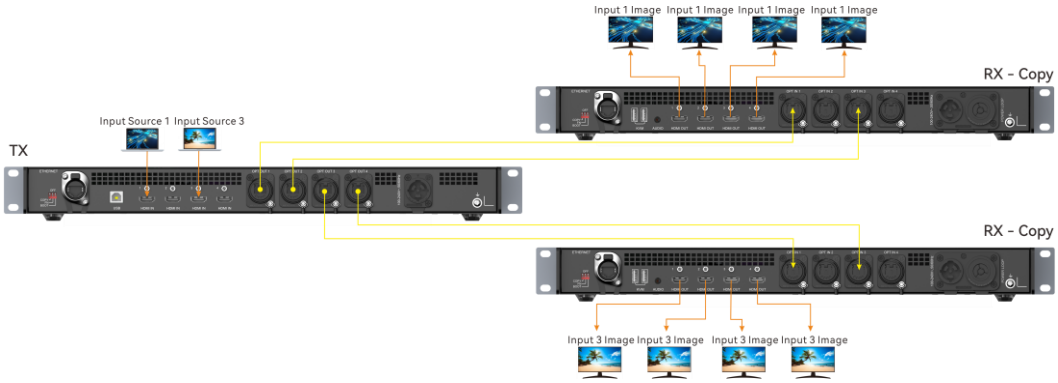
When the COPY switch on both TX and RX is set to OFF, the input image on TX's HDMI IN can be output through the corresponding RX's HDMI OUT connector.

4.1.2 Copy Output

TX and RX Copy Output Enabled

When the input copy functions on both TX and RX are enabled, the input images from TX's HDMI IN 1 and HDMI IN 3 can be copied for output.

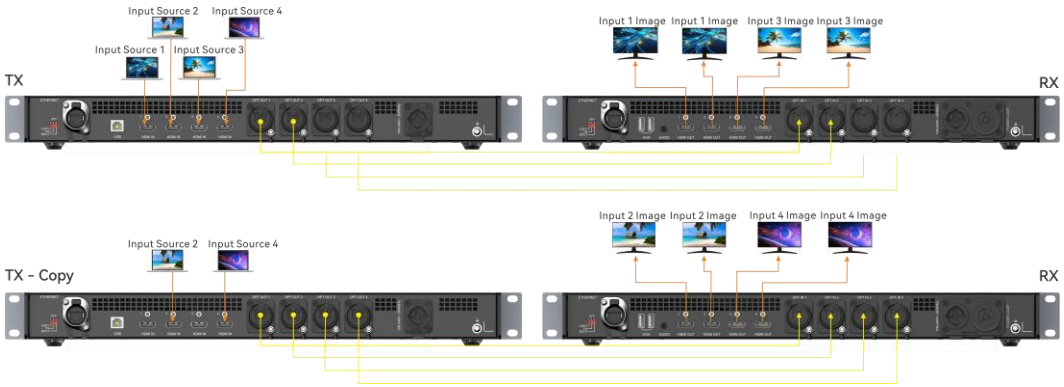
- When all four HDMI inputs on TX are active:
  - RX's HDMI OUT 1 and HDMI OUT 2 copy HDMI IN 1.
  - RX's HDMI OUT 3 and HDMI OUT 4 copy HDMI IN 3.
  - No output for HDMI IN 2 and HDMI IN 4
- When HDMI IN 1 and HDMI IN 3 on TX are inactive:
  - RX's HDMI OUT 1 and HDMI OUT 2 copy HDMI IN 2.
  - RX's HDMI OUT 3 and HDMI OUT 4 copy HDMI IN 4.



Either TX or RX Copy Output Enabled

When either TX or RX has copying enabled:

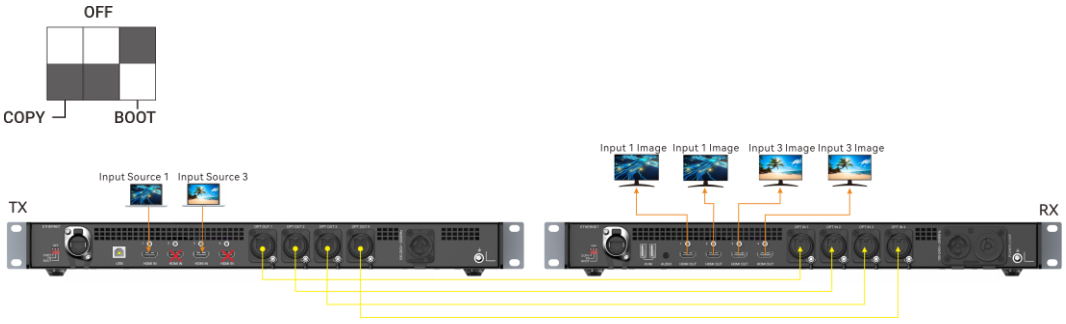
- TX's OPT1 and OPT2 copy HDMI IN 1; if HDMI IN 1 is disconnected, they copy HDMI IN 2.
- TX's OPT3 and OPT4 copy HDMI IN 3; if HDMI IN 3 is disconnected, they copy HDMI IN 4.
- RX's HDMI OUT 1 and HDMI OUT 2 copy OPT1.
- RX's HDMI OUT 3 and HDMI OUT 4 copy OPT3.
- No output for RX's OPT2 and OPT4



4.1.3 Forced Lossless Output

EP4 Pro devices support forced lossless output, allowing a single 4K×2K@60Hz image to be input and output via two OPT ports.

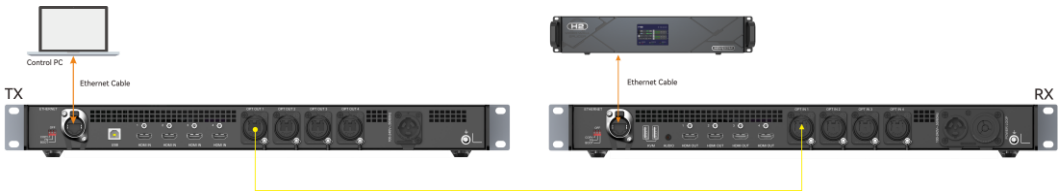
Toggle the COPY DIP switch and the adjacent one downward to enable the forced lossless output feature.



- TX:
  - OPT OUT 1 and OPT OUT 2 mosaick (left and right) and output the uncompressed image of HDMI IN 1. HDMI IN 2 is not active.
  - OPT OUT 3 and OPT OUT 4 mosaick (left and right) and output the uncompressed image of HDMI IN 3. HDMI IN 4 is not active.
- RX:
  - HDMI OUT 1 and HDMI OUT 2 copy each other, outputting the mosaic image of OPT IN 1 and OPT IN 2.
  - HDMI OUT 3 and HDMI OUT 4 copy each other, outputting the mosaic image of OPT IN 3 and OPT IN 4.

4.1.4 Ethernet Passthrough

This feature acts as a virtual Ethernet cable. It enables seamless integration and remote management of backend equipment directly from the front-end control computer's web or control software, eliminating the need for physical proximity.

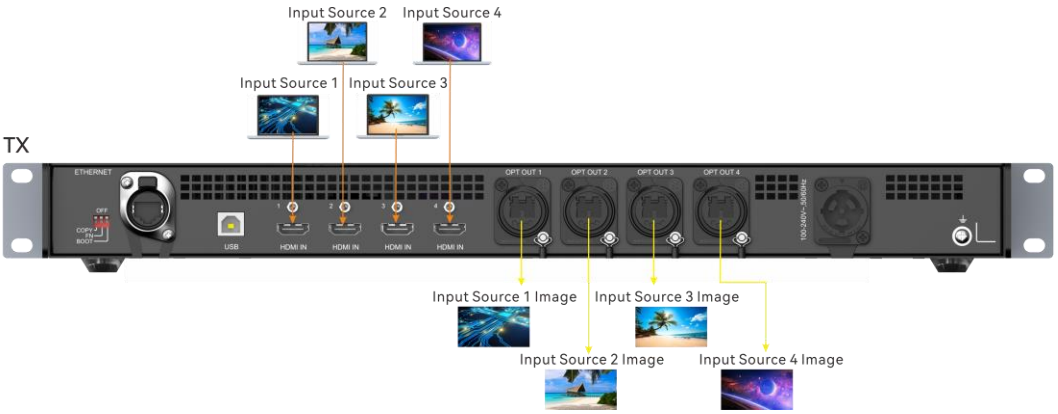


4.2 TX Standalone

4.2.1 Direct Output

When the input source resolution is DL (3840×1080@60Hz) or below, the OPT port corresponds to the HDMI connector for output.

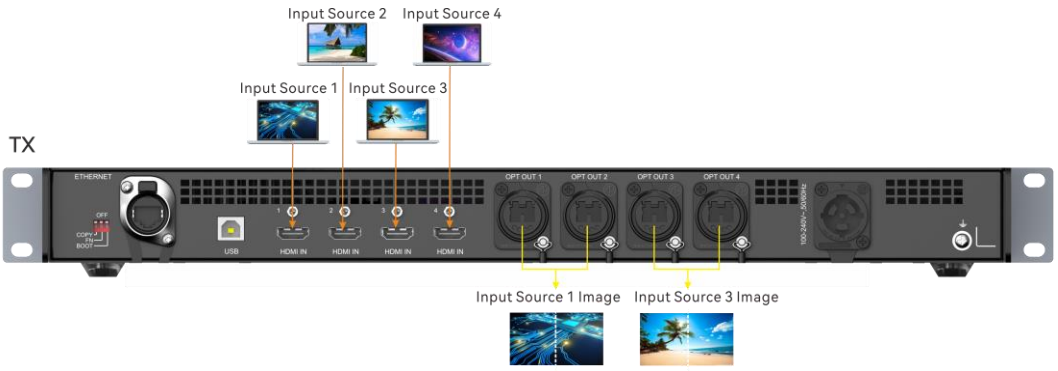
- OPT 1 outputs HDMI 1.
- OPT 2 outputs HDMI 2.
- OPT 3 outputs HDMI 3.
- OPT 4 outputs HDMI 4.



4.2.2 Mosaic Output

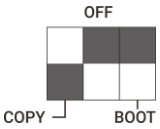
When the input source resolution is DL (3840×1080@60Hz) or above, two OPT ports mosaick the HDMI output.

- When all 4 HDMI input connectors are connected:
  - OPT 1 and OPT 2 mosaick and output HDMI 1 content.
  - OPT 3 and OPT 4 mosaick and output HDMI 3 content.
  - HDMI 2 and HDMI 4 content will not be output.
- When HDMI 1 and HDMI 3 are not connected:
  - OPT 1 and OPT 2 mosaick and output HDMI 2 content.
  - OPT 3 and OPT 4 mosaick and output HDMI 4 content.



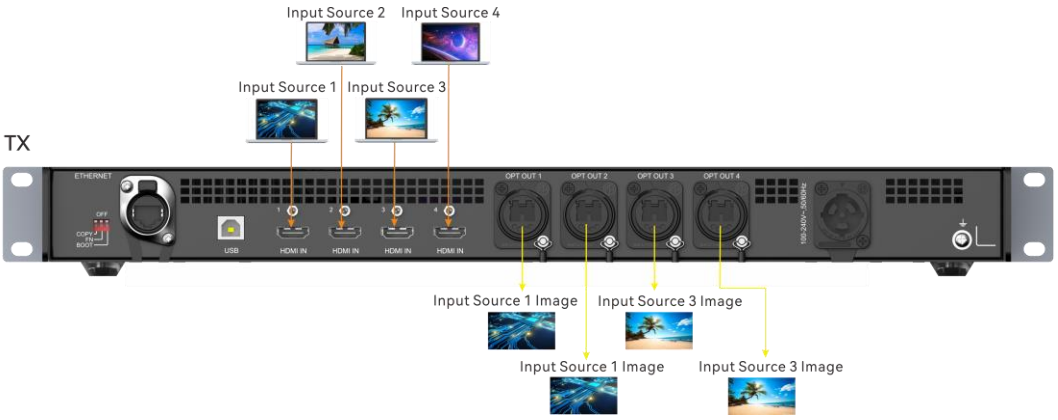
4.2.3 Copy Output

Toggle the COPY switch downward to enable the copy function.



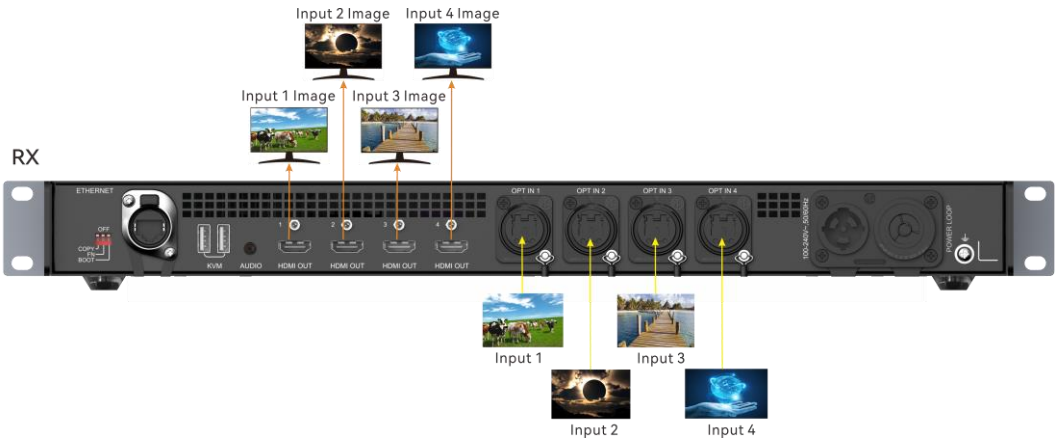
When the input source is DL (3840×1080@60Hz) or below, two OPT ports copy and output the HDMI content.

- When all 4 HDMI input connectors are connected:
  - OPT 1 and OPT 2 copy and output HDMI 1 content.
  - OPT 3 and OPT 4 copy and output HDMI 3 content.
  - HDMI 2 and HDMI 4 content will not be output.
- When HDMI 1 and HDMI 3 are not connected:
  - OPT 1 and OPT 2 copy and output HDMI 2 content.
  - OPT 3 and OPT 4 copy and output HDMI 4 content.



4.3 RX Standalone

4.3.1 Direct Output



4.3.2 Mosaic Output

When the input is from a switcher, the RX device automatically mosaicks the OPT input signals for output.