

User Manual



MPTP-HDUC

18G USB-C Extender over HDBaseT 3.0



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Version: MPTP-HDUC_2026V1.0

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Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated till September 19th, 2025. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

FCC Statement

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. It 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 commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



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SAFETY PRECAUTIONS

To ensure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment.
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

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1. Product Introduction

MPTP-HDUC is an extender that delivers crystal-clear video transmission with USB-C input supporting resolutions up to 4K@60Hz 4:4:4 or 1080p video signals over distances up to 100 meters, ensuring reliable performance across long cable runs. The system supports two-way 24V Power over Cable (PoC), simplifying installation by allowing power to be supplied from either end. Additionally, the USB-C input benefits from PD charging, keeping connected devices powered during use. An extra USB-A port enables KVM control, marking it ideal for interactive workspaces and remote desktop applications.

1.1 Features

- USB-C video up to 4K@60Hz 4:4:4.
- Transmit 4K@60Hz 4:4:4 or 1080p up to 100m.
- Supports two-way 24V PoC.
- Provide PD charging for USB-C IN.
- Extra USB-A for KVM control.

1.2 Package List

- 1 x MPTP-HDUCT
- 1 x MPTP-HDUCR
- 4 x Mounting Ears with 4 Screws
- 8 x Rubber feet
- 1 x Power Adapter
- 1 x User Manual

Note: Please contact your distributor immediately if any damage or defect in the components is found.

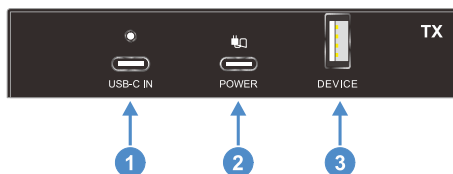
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2. Specifications

Transmitter	
Video Input	1 x USB-C, up to 4K@60Hz 4:4:4 in DP Alt Mode.
Audio Input	1 x USB-C, for digital audio input.
Video Output	1 x RJ-45 for HDBT OUT
USB-C Power	1 x USB-C with PD 3.0, up to 100W
USB-A	1 x USB 2.0 Type-A
Receiver	
Video Input	1 x RJ-45 for HDBT IN
Video Output	1 x USB-C, up to 4K@60Hz 4:4:4 in DP Alt Mode, Provide up to 5V/0.5A
	1 x HDMI 2.0 Type-A, up to 4K@60Hz 4:4:4
Audio Output	1 x USB-C, 1 x HDMI 2.0 Type-A, both for outputting digital audio
General	
Control	1 x USB-C, for transmitting motion commands from the USB-C touch screen.
HDBT Standard	HDBaseT 3.0
HDBT Transmission Distance	4K@60Hz 4:4:4 or 1080p → 100m
HDMI Cable Length	4K@60Hz 4:4:4 → 5m, 4K@30Hz 4:4:4 → 10m, 1080p → 15m
Operation Temperature	-10°C ~ +55°C
Storage Temperature	-25°C ~ +70°C
Relative Humidity	10%-90%
Power	DC 24V/1.25A
Power Consumption	Less than 23.1W
Dimension (W x H x D)	TX / RX: 210 x 110 x 12.5mm
Net Weight	TX / RX: 335g

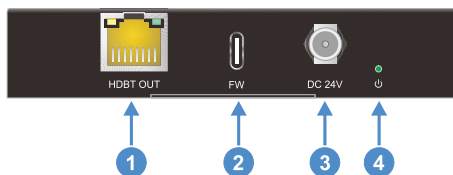
3. Panel Description

3.1 Transmitter Front Panel



- ① **USB-C IN:** Connects to the USB-C video source.
- ② **POWER:** Connects to an USB-C power adapter, and pass the power to USB-C IN.
- ③ **DEVICE:** One USB 2.0 Type-A port, connects to mouse, keyboard, etc.

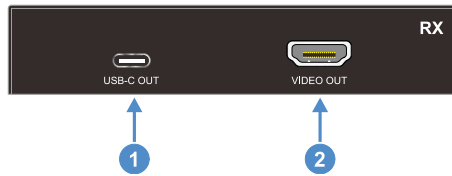
3.2 Transmitter Rear Panel



- ① **HDBT OUT:** Connects to the HDBT IN on receiver. The LINK LED (green LED) illuminates when there is a valid HDBaseT link between the transmitter and the receiver. The HDCP LED (yellow LED) illuminates when the video contains HDCP content, and the HDCP LED flashes when there is no HDCP.
- ② **FW:** To upgrade Valens chipsets on transmitter or receiver.
- ③ **DC 24V:** DC power connector. If the receiver is already connected to a power adapter, leave this port disconnected.
- ④ **POWER LED:** Illuminates green when power is applied.

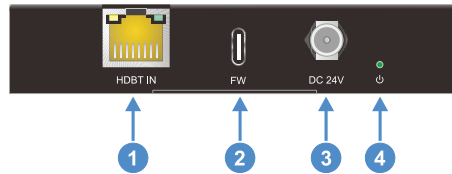
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3.3 Receiver Front Panel



- ① **USB-C OUT:** Connects to a USB-C display, touch screen, or VR glasses.
- ② **VIDEO OUT:** Connects to a display. It copies the image of the USB-C OUT.

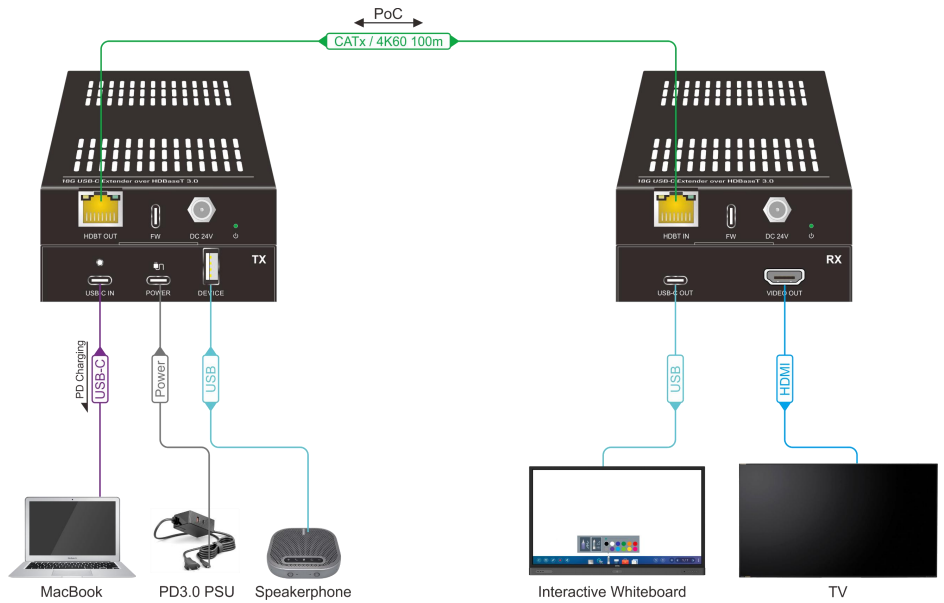
3.4 Receiver Rear Panel



- ① **HDBT IN:** Connects to the HDBT IN on receiver. The LINK LED (green LED) illuminates when there is a valid HDBaseT link between the transmitter and the receiver. The HDCP LED (yellow LED) illuminates when the video contains HDCP content, and the HDCP LED flashes when there is no HDCP.
- ② **FW:** To upgrade Valens chipsets on transmitter or receiver, or the MCU on receiver.
- ③ **DC 24V:** DC power connector. If the receiver is already connected to a power adapter, leave this port disconnected.
- ④ **Power LED:** Illuminates green when power is supplied.

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4. System Connection



5. EDID Management

- When only the USB-C OUT or VIDEO OUT is connected to a display, the EDID from that display will be passed to the source device.
- When both USB-C OUT and VIDEO OUT are connected to two displays simultaneously, only the EDID from the display connected to USB-C OUT will be passed to the source.

If the display connected to the HDMI port supports a lower resolution than the one connected to the USB-C port, the video output to the HDMI display will automatically be downscaled to match its supported resolution.

6. HDCP Management

Display Video Signal Source	HDCP 2.2	HDCP 1.4	NO HDCP
HDCP 2.2	HDCP 2.2	NO SIGNAL OUT	NO SIGNAL OUT
HDCP 1.4	HDCP 1.4	HDCP 1.4	NO SIGNAL OUT
NO HDCP	NO HDCP	NO HDCP	NO HDCP

7. Upgrade the MCU

Please follow below instructions to upgrade the MCU:

1. Connect your PC to the RX via an USB-C cable.
2. Plug the power adapter into the RX.
3. Then a virtual USB drive – BOOTLOADER - will be available on your PC.
4. Prepare the firmware file (*.APP), and rename it to '**08009000.APP**'.
5. Copy that paste the '08009000.APP' to the root directory of the virtual USB drive – BOOTLOADER. And upgrading will automatically be started.
6. Wait a couple of seconds, until you see a file named 'SUCCESS' is created, that means it finishes upgrading the MCU.
7. Unplug the USB cable, re-plug in the power adapter.

Note, MCU is on the RX only, the TX does NOT have the MCU.