CH-735RX

USB 3.2 over Category Cable Receiver with PoE

Operation Manual

Ver 1.01

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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.
- Please completely disconnect the power when the unit is not in use to avoid wasting electricity.

VERSION HISTORY

REV.	DATE	SUMMARY OF CHANGE
Ver 1.00	2026/4/29	Initial Release
Ver 1.01	2026/6/16	Updates package contents

CONTENTS

1. INTRODUCTION

This USB 3.2 Gen1 extender is designed to extend signal from one USB host to multiple USB devices for up to 100 meters (328 feet) when paired with transmitter from the homologous series.

This receiver enables the extension from the USB-C host to 3 local USB devices and USB devices on the transmitter. When the unit is powered by transmitter, it supports 802.3at Power over Ethernet (PoE) PD up to 25W, USB-C provides 5V/1A. When the receiver is powered from local power, USB-C can provide up to 60W (PD3.0 compliance) to the connected device. Additionally, USB-C can function as either a host or device, enhancing the flexibility of any installation. The unit also features a hotkey for convenient firmware update.

2. APPLICATIONS

- Remote USB extension
- Security and monitoring
- Smart classroom and device integration
- Industrial control
- Conference room and boardroom comprehensive USB over IP functionality extension

3. PACKAGE CONTENTS

- 1× USB 3.2 over Category Cable Receiver with PoE
- 1× 24V/5A DC Power Adapter
- 1× Power Cord
- 1× Operation Manual

4. SYSTEM REQUIREMENTS

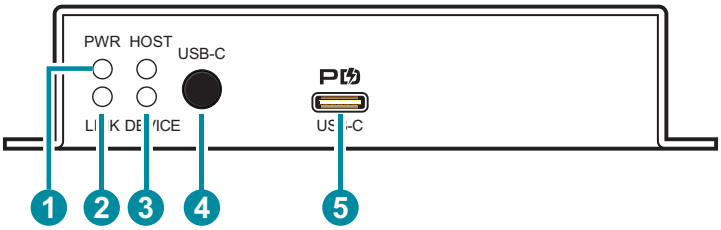
- The use of industry standard Cat.6, Cat.6A or Cat.7 cable is highly recommended
- The use of host computer with an available USB 3.2 Gen 1 Type-C port is highly recommended

5. FEATURES

- Support 4 USB 3.2 Gen1 device ports (include USB-C)
- Support Point-to-Point transmission
- Transmission up to 100 meters (328 feet)
- 3 USB-A ports provide 5V/0.9A of power respectively
- USB-C supports USB-PD up to 60W (PD3.0 compliance) when powered by local power
- Configurable USB-C port as host or device
- Can be powered by compatible transmitter supporting the 802.3at PoE standard (Optional)
- The host can control multiple USB devices on transmitter side and receiver side
- Support hotkey for easy firmware updates

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel



1. **POWER LED:** This LED will illuminate to indicate the unit is on and receiving power.

   Note: When the firmware update is active the LED will blink.

2. **LINK LED:** This LED will illuminate solidly when a live connection with a compatible transmitter is active.

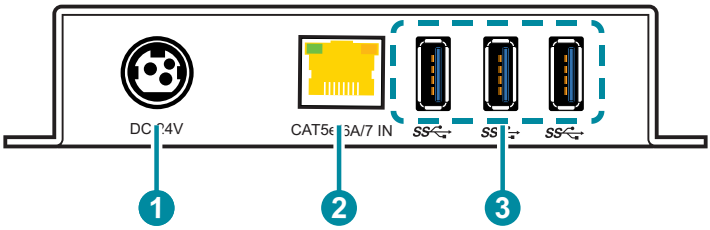
3. **HOST & DEVICE LEDs:** The illuminated LED indicates which USB Mode is currently active.

4. **USB-C Button:** Press and hold the button for 5 seconds to toggle the USB-C port between HOST and DEVICE Mode.

5. **USB 3.2 Port (Type-C):** In Host mode, connect directly to a USB host such as a PC or laptop to extend their USB functionality to devices connected to the USB ports on the currently connected transmitter. In Device mode, connect directly to a standard USB device such as a mouse, keyboard or flash drive to extend their USB functionality to the host currently connected to the transmitter's USB-C port. Firmware update is also available on this port.

   Note: 60W of power can be provided to connected USB-C devices, but only when the unit is powered locally.

6.2 Rear Panel



1. **DC 24V Port:** Plug the 24V DC power adapter into this port and connect it to an AC wall outlet for power.
2. **CAT 5e/6A/7 IN Port:** Connect to a compatible transmitter with a single cable for transmission and reception of all data signals.
3. **USB 3.2 Device Ports (Type-A):** Connect directly to a standard USB device such as a mouse, keyboard or flash drive to extend their USB functionality to the host currently connected to the transmitter or receiver's USB-C port.

   Note: Type-A port can provide up to 5V/0.9A (4.5W) power.

6.3 System Control

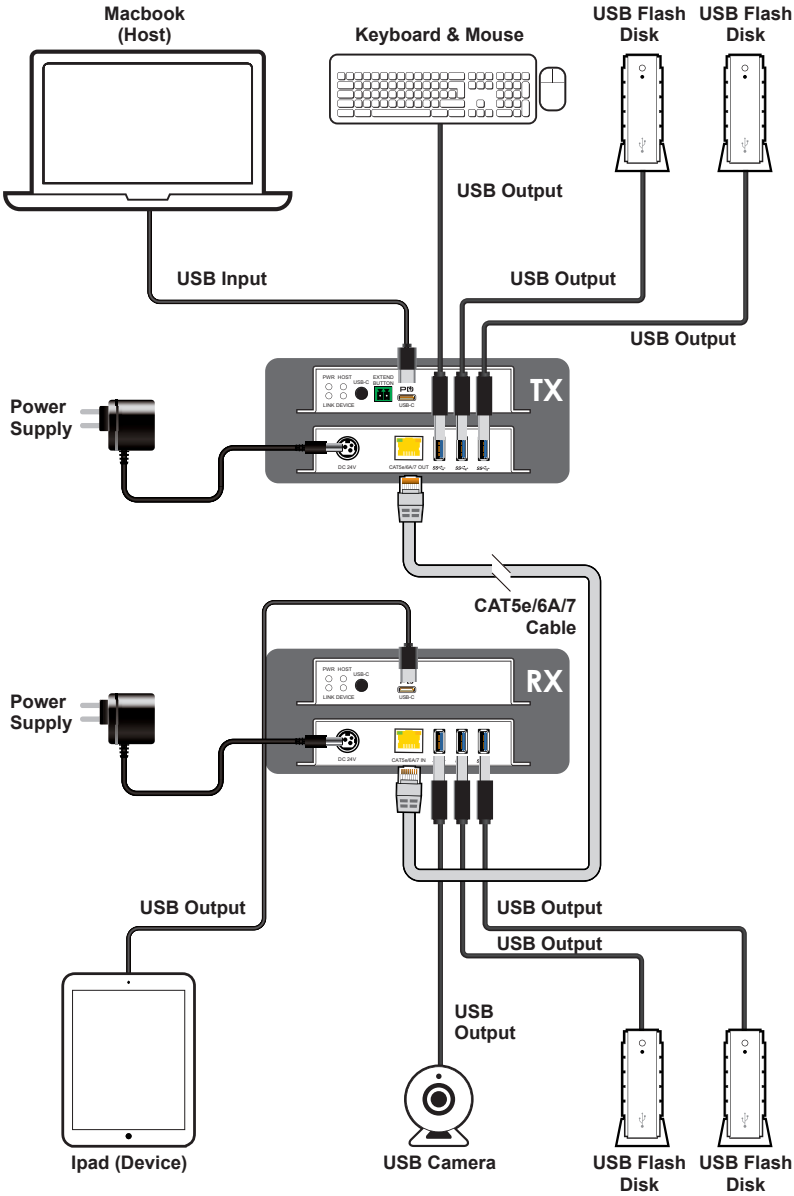
6.3.1 Firmware Update

To update the firmware via USB, connect your PC to the Type-C port and do the following steps. After the upgrade is complete, the unit will reboot automatically.

Note: Do not disconnect the USB-C cable or remove power while the POWER LED is blinking. Interrupting the update process may corrupt the firmware.

- Connect your PC to USB-C port.
- Press and hold the “USB-C” button while power up the unit. A virtual USB drive (labeled “USB Drive” or similar) will appear on the host computer.
- Open the virtual USB drive and copy the compatible and properly named (UsbcR_213f_CYP_Vx.xx.bin) firmware file into it.
- After the file is copied, the folder window will close automatically. During the update process, the unit will be flashing the POWER LED on the front of the unit.
- Wait for the POWER LED to return to a steady solid green state. After the upgrade is complete, the unit will reboot automatically.

7. CONNECTION DIAGRAM



8. SPECIFICATIONS

8.1 Technical Specifications

USB-C Bandwidth	5Gbps
HDBaseT Bandwidth	6/6 Gbps
Input Port	1×Cat.5e/6A/7 (RJ-45)
Output Ports	3×USB 3.2 (Type-A)
Bi-directional Port	1×USB 3.2 (Type-C)
Power Supply	24V/5A DC (US/EU standards, CE/FCC/UL certified)
ESD Protection (HBM)	±12kV (Air Discharge) ±8kV (Contact Discharge)
Dimensions (W×H×D)	128mm×25mm×108mm [Case Only] 128mm×25mm×112.5mm [All Inclusive]
Weight	210g
Chassis Material	Metal (Aluminum)
Chassis Color	Black
Operating Temperature	0˚C – 40˚C/32˚F – 104˚F
Storage Temperature	-20˚C – 60˚C/-4˚F – 140˚F
Relative Humidity	20 – 90% RH (Non-condensing)
Power Consumption	75W(full load)

8.2 Cable Specifications

Cable Length	USB 3.2
	5Gbps
Ethernet Cable	
Cat.5e	50m
Cat.6	70m
Cat.6A/7	100 m (straight) 90 m (with patches)

8.3 HDBaseT Features

HDBaseT Feature Set	Receiver
Video & Audio Extension	Unsupported
LAN Extension	Unsupported
Send power to Transmitter	Unsupported
Accept power from Transmitter	Supported (PoE)
IR Extension	Unsupported
RS-232 Extension	Unsupported
USB 3.2 Extension	Supported

9. ACRONYMS

ACRONYM	COMPLETE TERM
Cat.5e	Enhanced Category 5 cable
Cat.6	Category 6 cable
Cat.6A	Augmented Category 6 cable
Cat.7	Category 7 cable
Mbps	Megabits per second
Gbps	Gigabits per second
PD	Powered Device
PoE	Power over Ethernet
PSE	Power Sourcing Equipment
UAC	USB Audio Class
USB	Universal Serial Bus
UVC	USB Video Class

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