User Manual

MPTP-T40S-8k

40G HDMI EXTENDER w/eARC over HDBT3.0

Version: MPTP-T40S-8k_V1.0

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 July, 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.

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, fire, magnets.
- 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.

Table of Contents

1. Product Introduction

MPTP-T40S-8k is a 1 HDMI in and 1 HDMI out 40G 8K HDMI Extender, it contains a TX and a RX,and other needed accessories, the product supports highest 8K 30Hz 4:4:4 10bit or 4K 120Hz 4:4:4 10bit video which fits the requirement of most users.

It supports extend 40m max at 8K resolution using CAT 6A ethernet cable, and also support eARC technology, advanced EDID & HDCP management and interactive IR pass-through. With these function, MPTP-T40S-8k can be used in most scenarios, for example: meeting room, sports bar, shopping center and other commercial use.

1.1 Features

- 8K/40G HDMI extension at 40m
- Supports eARC from HDMI or SPDIF
- Supports HDMI loop out
- Supports audio de-embedded
- Supports EDID/HDCP manage
- Supports two-way IR & PoC.

1.2 Packing List

MPTP-T40S-8k-TX	x1
MPTP-T40S-8k-RX	x1
24V 1.5A DC power supply (EU plug)	x1
Mounting ear with screw	x4
Mounting root	x1
User Manual	x1

Note: *Please check all accessories in the package, and contact your distributor immediately if any damage or defect in the components is found.*

2. Specification

	Transmitter	Receiver
Video		
Input	1 x HDMI IN	1 x HDBT IN
Input Connector	1 x HDMI connector	1 x RJ45
Input Resolution	Support up to 8K@30Hz 4:4:4 10bit or 4K@120Hz 4:4:4 10bit	
Output	1 x HDBT OUT 1 x HDMI LOOP OUT	1 x HDMI OUT
Output Connector	1 x RJ45 1 x HDMI OUTPUT	1 x Type-A female HDMI
Output Resolution	Support up to 8K@30Hz 4:4:4 10bit or 4K@120Hz 4:4:4 10bit	
Audio		
Output	1 x Digital SPDIF OUTPUT 1 x L/R Analog OUTPUT 1 x HDMI digital OUTPUT	1 x Digital SPDIF OUTPUT 1 x L/R Analog OUTPUT 1 x HDMI digital OUTPUT
Output Connector	1 x Optical fiber connector 1 x 3.5mm jack female connector 1 x HDMI connector	1 x Optical fiber connector 1 x 3.5mm jack female connector 1 x HDMI connector
Digital SPDIF Audio Format	PCM 2.0, Dolby Digital, DTS, DTS-HD	
Analog Stereo Audio Format	PCM 2.0	
HDMI digital Audio Format	All HDMI supported Audio formats	
Control		
Control Port	I x IR IN 1x1 IR OUT	I x IR IN 1x1 IR OUT
EDID & HDCP Management	1 x 4 Pin DIP switch	/
eARC Management	/	1 x 1 Pin DIP switch

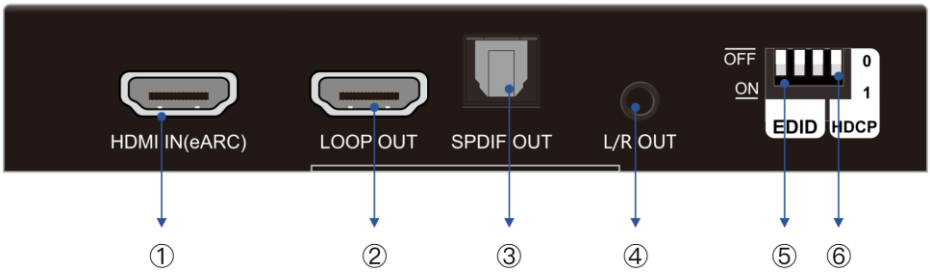
Firmware Upgrade	1 x USB-C 1 x 1 Pin DIP switch	1 x USB-C 1 x 1 Pin DIP switch
General		
Bandwidth	40Gbps	
HDMI Standard	2.0	
HDCP Version	Input: HDCP 2.3, HDCP 2.2/1.4 compliant. Support HDCP management.	
Two-way PoC	Supported two-way 24V	
HDMI V2.0 Cable Length	8K@30Hz 4:4:4 10bit ≤ 40m, 4K@30Hz 4:4:4 10bit ≤ 70m	
Transmission Standard	HDBaseT 3.0	
Transmission Distance	8K@30Hz 4:4:4 10bit ≤ 40m, 4K@30Hz 4:4:4 10bit ≤ 70m	
Operation Temperature	-5°C to +55°C (+23° to +131°F)	
Storage Temperature	-25°C to +70°C (-13°F to +158°F)	
Relative Humidity	10% to 90%, non-condensing	
Power Supply	DC 24V 1.5A	
Dimension (W x H x D)	120.0mm x 21.7mm x 115.0mm	120.0mm x 21.7mm x 115.0mm
Net Weight	340±10g	360±10g

Note: *Please use high-quality HDMI cable fully compliant with HDMI2.0 for reliable transmission and connection.*

3. Panel Description

3.1 TX Front Panel and Rare Panel

Front Panel



① **HDMI IN (eARC):** Connect with HDMI source/input and eARC output**.**

② **LOOP OUT :** Connect to display for local HDMI Output.

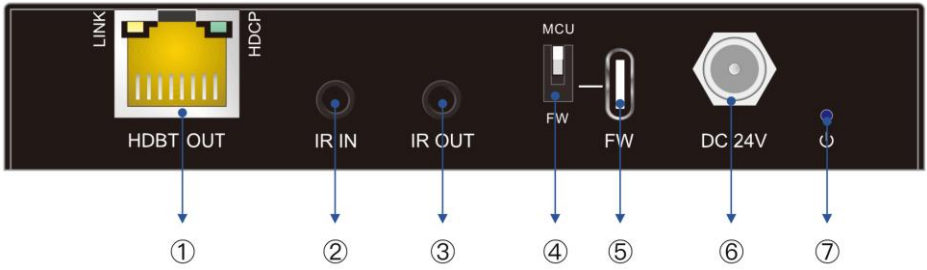
③ **SPDIF OUT :** Connect to speaker with optical fiber for eARC/ARC output.

④ **L/R OUT :** Connect to speaker with 3.5mm jack cable for eARC/ARC output.

⑤ **EDID SWITCH:** Switch to change EDID or switch to user defined EDID.

⑥ **HDCP SWITCH:** Switch to change HDCP mode.

Rare Panel



① **HDBT OUT :** Connect with RX**.**

② **IR IN :** Connect to a 3.5mm jack IR receiver or IR passthrough.

③ **IR OUT :** Connect to a 3.5mm jack IR emitter or IR passthrough.

④ **1 Pin DIP switch :** to choose update MCU or firmware.

⑤ **USB-C:** Connect to PC for MCU or firmware upgrade.

⑥ **DC power connector:** Connect to a 24V 1.5A power supply.

⑦ **Power LED indicator:** A red and blue power LED indicator,to show power status. blue light on shows working, red light on shows standby

3.2 TX EDID Management

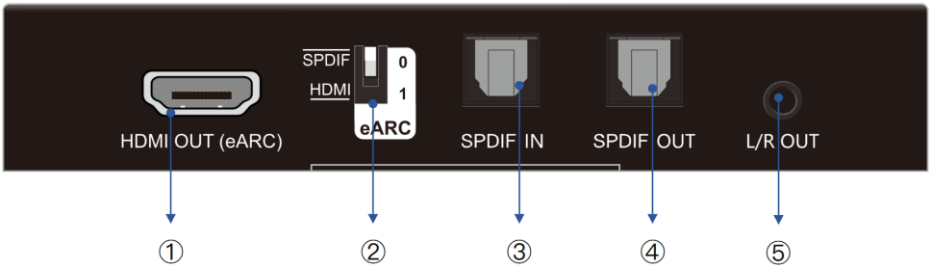
Number	EDID	Vedio	Audio
1	000	EDID Passthrough	Passthrough
2	001	1920x1080p@60Hz 4:4:4 8bit	2CH PCM
3	010	3840x2160p@60Hz 4:4:4 HDR	7.1 CH Dolby HD/ DTS-HD/ PCM 5.1 DTS / Dolby
4	011	3840x2160p@120Hz 4:2:0 8bit	2CH PCM
5	100	3840x2160p@120Hz 4:4:4 8bit	7.1 CH Dolby HD/ DTS-HD/ PCM 5.1 DTS / Dolby
6	101	7680x4320p@30Hz 4:4:4 8bit	7.1 CH Dolby HD/ DTS-HD/ PCM 5.1 DTS / Dolby
7	110	7680x4320p@300Hz 4:2:0 8bit	2CH PCM
8	111	User defined EDID	User defined

3.3 TX HDCP Management

Number	status	HDCP	Meanings
1	0	Passive	No HDCP for input and output
2	1	Active	Input support HDCP ,Output HDCP follow Display

3.4 RX Front Panel and Rear Panel

Front Panel



① **HDMI OUT :** Connect to HDMI display device or eARC Display.

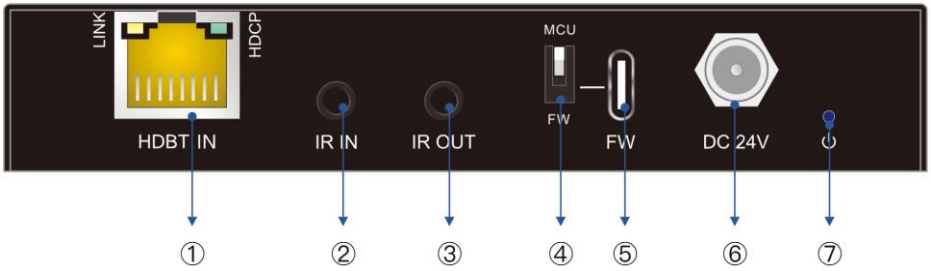
② **1 Pin DIP switch :** Switch to choose eARC audio, HDMI or SPDIF.

③ **SPDIF IN :** Connect to optical fiber for eARC input.

④ **SPDIF OUT :** Connect to optical fiber for eARC output.

⑤ **L/R OUT:** connect to 3.5mm jack cable for audio separation,same as SPDIF.

Rare Panel



① **HDBT IN:** Connect to TX.

② **IR IN:** Connect to a 3.5mm jack IR receiver or IR passthrough.

③ **IR OUT :** Connect to a 3.5mm jack IR emitter or IR passthrough.

④ **1 Pin DIP switch :** to choose update MCU or firmware.

⑤ **USB-C:** Connect to PC for MCU or firmware upgrade..

⑥ **DC power connector:** Connect to a 24V 1.5A power supply.

⑦ **Power LED indicator:** A red and blue power indicator,to show power status. blue light on shows working, red light on shows standby.

4. RS232 Control

Connect the control device (PC) to the USB-C port of MPTP-T40S-8k, the MPTP-T40S-8k can be controlled by sending RS232 commands via RS232 control software installed in PC.

The USB-C supports pass-through function, in additional, RS232 commands can be transmitted bi-directional between MPTP-T40S-8k and receiver, so it is able to control a third-party device from local or remote. The baud rate supports 2400, 4800, 9600(default), 19200, 38400, 57600 or 115200.

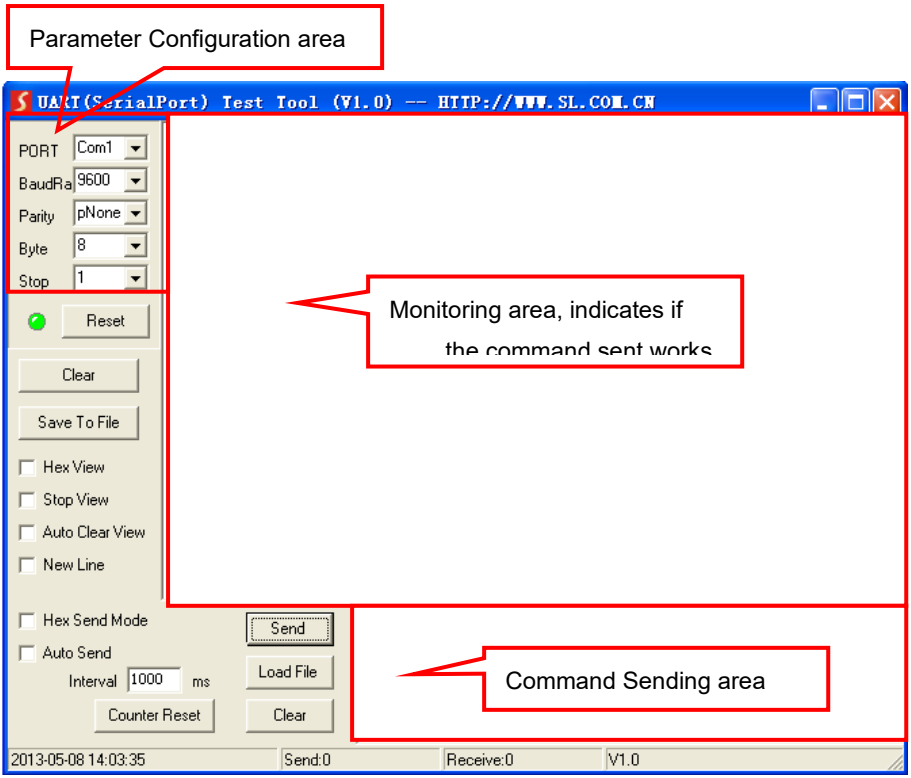
4.1 RS232 Control Software

- **Installation:** Copy the control software file to the computer connected with MPTP-T40S-8k.
- **Uninstallation:** Delete all the software files in corresponding file path.
- **Basic Settings:**

First to connect MPTP-T40S-8k with all input devices and output devices needed, then to connect it with a computer which is installed with RS232 control software. Finally, double-click the software icon to run this software.

Here we take the software **CommWatch.exe** as example. The icon is showed as below:

The interface of the control software is showed as below:



Please set the parameters of COM number, bound rate, data bit, stop bit and the parity bit correctly, and then the command is ready to be sent in Command Sending Area.

4.2 RS232 Command

Communication protocol: RS232 Communication Protocol

4.2.1 RS232 Commands for TX

Baud rate: 9600(Default) Data bit: 8 Stop bit: 1 Parity bit: none

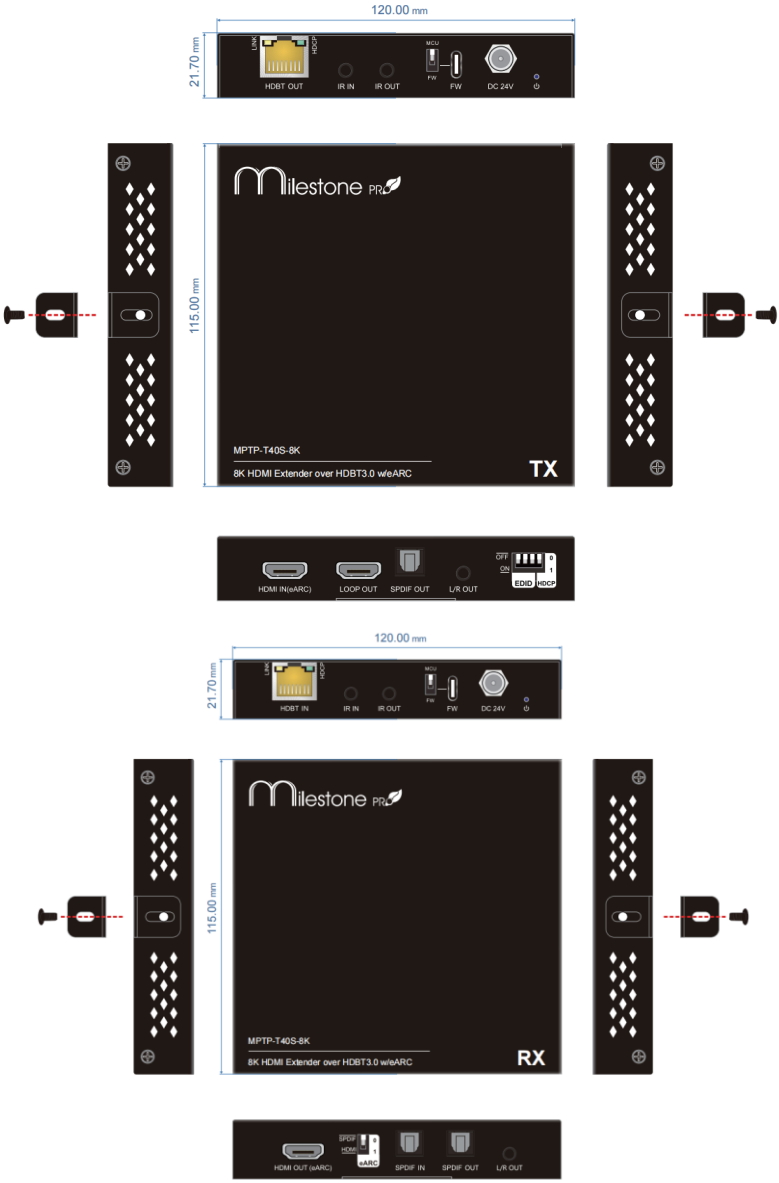
Commands	Description	Example feedback
STATUS	Query whole system status	- Model name:MPTP-T40S-8k - Model type: 8K HDMI Extender over HDBT3.0 w/eARC - FW Version: 0.0.0a - Power: on - Local RS232 baudrate: 9600 - Input EDID: 1 - HDCP: on - ARC mode: HDMI
RESET	Factory Reset	OK: Factory Default.
BAUDRATE:<x>	Set Device Control RS232 Baud Rate. Support to set using preset number and Baud Rate. 1:2400 2:4800 3:9600 4:19200 5:38400 6:57600 7:115200	OK: Set baudrate to 9600.
POWER:ON	Power ON	OK: Power on.
POWER:OFF	Power OFF	OK: Power off.
POWERSTATUS	Query power status	Power: on
EDIDU	Upgrade EDID through RS232 port After received command, device will inform you to send EDID file(must	OK: User define EDID upgraded.

	be .bin format) in 10s. You can change user defined EDID manually after finished.	
HDCP:DIP	Set to use DIP switch mode 1 means passive, no HDCP for input and output. 0 means active, INPUT support HDCP ,OUTPUT HDCP follow DISPLAY	OK: HDCP no support. OK: HDCP follow output.
HDCP:ON	Output HDCP1.4	OK: HDCP on.
HDCP:OFF	turn off Output HDCP	OK: HDCP off.
HDCPSTATUS	Query input and output HDCP Status	- HDCP: on

4.2.2 RS232 Commands for RX

Commands	Description	Example feedback
STATUS	Query whole system status	- Model name: MPTP-T40S-8k - Model type: 8K HDMI Extender over HDBT3.0 w/eARC - FW Version: 0.0.0a - Local RS232 baudrate: 9600 - ARC mode: HDMI
RESET	Factory Reset	OK: Factory Default.
BAUDRATE:<x>	Set Device Control RS232 Baud Rate Support to set using preset number and Baud Rate 1:2400 2:4800 3:9600 4:19200 5:38400 6:57600 7:115200	OK: Set baudrate to 9600.

5. Panel Drawing



6. Troubleshooting & Maintenance

Problems	Potential Causes	Solutions
Output image with snowflake	Bad quality of the connecting cable.	Try another high-quality cable.
	Fail or loose connection.	Make sure the connection is good
No output image when switching	No signal at the input / output end.	Check with oscilloscope or multimeter if there is any signal at the input/ output end.
	Fail or loose connection.	Make sure the connection is good.
	The extender is broken.	Send it to authorized dealer for repairing.
POWER indicator doesn't work or no respond to any operation	Fail connection of power cord.	Make sure the power cord connection is good.
Static becomes stronger when connecting the video connectors	Bad grounding.	Check the grounding and make sure it is connected well.
Cannot control the device by control device (e.g. a PC) through RS232 port	Broken RS232 port.	Send it to authorized dealer for checking.

Note: *If your problem still remains after following the above troubleshooting steps, please contact your local dealer or distributor for further assistance.*

7. Customer Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. There terms and conditions may be changed without prior notice.

1) Warranty

The limited warranty period of the product is fixed 3 years.

2) Scope

These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

3) Warranty Exclusion

- Warranty expiration.
- Factory applied serial number has been altered or removed from the product.
- Damage, deterioration or malfunction caused by:
  - ✓ Normal wear and tear.
  - ✓ Use of supplies or parts not meeting our specifications.
  - ✓ No certificate or invoice as the proof of warranty.
  - ✓ The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
  - ✓ Damage caused by force majeure.
  - ✓ Servicing not authorized by distributor.
  - ✓ Any other causes which do not relate to a product defect.
- Shipping fees, installation or labor charges for installation or setup of the product.

4) Documentation

Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defeat has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of distributor.

Remarks: Please contact your local distributor for further assistance or solutions.