



DIREKTRONIK

4K HDMI2.0, USB2.0, RS-232 HD-BaseT Extender



User's Manual for the 25-0566 - HDCX-100-TR



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Welcome!

Congratulations on your purchase of the 4K HD-BaseT extender, HDCX-100-TR. This manual contains information that will assist you in installing and operating the product.

Product Description

New HD-BaseT 4K HDMI2.0 extender, HDCX-100-TR is designed compact enough to be fitted into various installation environments, and enables to transmit 4K UHD (3840x2160) @ 60Hz 4:2:0 (or 30Hz 4:4:4), USB2.0 and RS-232 signal up to 100m (330feet) over one (1) CAT5e or CAT6 cable.

USB2.0 could access to printers, scanners, touch panels and external storages as well as HID and VCP. Its max speed is 280Mbit /sec.

RS-232 serial interface offers device-to-device and device-to-controller connections to build up control system for A/V integration.

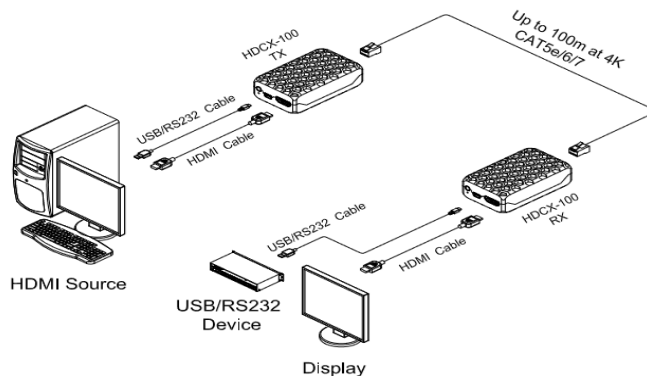


Figure 1 – Overall Connection of HDCX-100-TR

The Shipping Group of HDCX-100-TR;

- One (1) Transmitter (Tx) and One (1) Receiver (Rx)
- Two (2) DC +5V,2A power adapter
- One (1) 3pin connector for RS-232
- User's Manual
- Optional Product:** Mounting Bracket for HDCX-100

System Requirements for Setup

- Hardware requirements**
 - DVD, Blu-Ray or media receiver with standard HDMI ports.
 - PC with HDMI port regardless of OS version.
 - Any HDMI TVs, monitors and Projectors are applicable.
 - Proper initial trial of the entire platform with its application using a short length copper cable is recommended prior to install with the product.
- Software requirements**
 - No special needs, but make sure that media contents protected by HDCP should be played with HDCP certified players and TVs.
- Connection Advisory**
 - It is highly recommend that HDMI media source is directly connected into HDMI display output via HDCX-100-TR without connection to incompatible distributor, switcher and selector.

Installation

Important: Please keep the installation procedure below. Improper or no operation may result if the start-up sequence is not correctly followed.

Step 1

Carefully unpack the contents in the shipping group.

Step 2

Connect one (1) CAT5e or CAT6 cable between the transmitter and the receiver.

Step 3

Connect the transmitter to the HDMI receptacle of PC or other HDMI video source equipment by HDMI cable

If necessary, connect the RS-232 cable between 3pin terminal of HDCX-100 and D-sub 9pin of PC and the USB cable between receptacle USB of HDCX-100 and receptacle USB of PC.

Step 4

Connect the receiver to the HDMI display over HDMI copper cable.

If necessary, connect the RS-232 cable and USB cable to RS-232 device and USB device.

Step 5

Power on the HDMI source and display. Power on both transmitter and receiver by using supplied power supply.

Note 1. Indicator information of HDCX-100

HDCX-100 LED Indicator	Enable	Disable
Blue LED(POWER)	ON	OFF
Green LED(LINK)	ON	OFF
Yellow LED(HDCP)	ON	OFF

1-3 Installation

Note 2: Be recommended NOT to use any other intermediate cables or adapters between source and transmitter and display and receiver except the supplied cable to avoid undesirable performance degradation.

Note 3: Be recommended to use the SFTP cable between transmitter and receiver to prevent a signal interference problem.

In case of UTP cable, please use the straight type cable.

(Be recommended to NOT to use the rolled cable type to avoid undesirable performance degradation.)

Step 7

If the system does not work properly, go to the page 1-5 trouble shooting.

▪ Bracket installation guide (Mounting Bracket is optional)

The following image provides instruction for installing the transmitter and/or receiver unit(s) in the bracket of HDCX-100-TR

Step 1. Put on the HDCX-100 unit on bottom bracket.

Step 2. Line up holes between top bracket and bottom bracket.

Step 3. Install countersink screws.

Step 4. Ensure the unit is installed securely

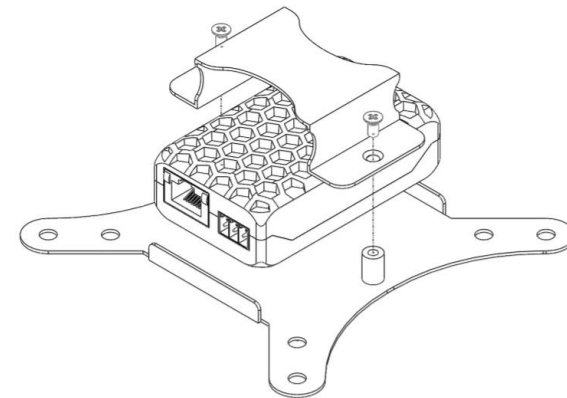


Figure 2 – Bracket installation of HDCX-100-TR

1-4 Installation

Troubleshooting

The display shows only black screen.

- Ensure that all plugs and jacks used by supplied power supplies are firmly connected. Ensure that the LED ON.
- Ensure that the HDMI ports are firmly plugged in to the source and display.
- Ensure that the transmitter and receiver modules plugged correctly to the source and display respectively.
- Check if the HDMI source and display are powered on and properly booted.
- Reset the system by de-plugging and re-plugging the transmitter HDMI port or receiver HDMI port, or by de-plugging and re-plugging the USB to DC plug cables that are plugged to transmitter and receiver module.
- Re-boot up the system while connecting the module.

Screen is distorted or displays noises.

- Check if the graphic resolution is properly set. Go to the display properties and tap the settings. Ensure that the resolution sets less than 4K UHD (3840x2160) at 60Hz (YCbCr 4:2:0) refresh ratio.
- Reset the system.
- Power down, disconnect and reconnect the CAT5e/CAT6 cable or DC power adaptors, and power up.

Maintenance

No special maintenance is required for the HD-BaseT system cables and power supplies. Ensure that the cables and power modules are stored or used in a benign environment free from liquid or dirt contamination.

There are no user serviceable parts. Refer all service and repair issues to Opticis or its authorized local distributor.

Technical Support and Service

For commercial or general product support, contact your reseller. For technical service, contact Opticis by email techsupp@opticis.com or visit its website at www.opticis.com.

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Product Specifications

Video Bandwidth	3.4GHz
Transmitter	
Input Port	1 X HDMI, 1 X RS232, 1 X USB2.0
Output Port	1 X CAT5e or CAT6
Receiver	
Input Port	1 X CAT5e or CAT6
Output Port	1 X HDMI, 1 X RS232, 1 X USB2.0
LED Indicator	Power(Blue), Link(Green), HDCP(Yellow)
HDMI Cable length	1m
RS232 Baud Rate	115200bps
Power supply	5V/2A DC Power
ESD Protection	Yes
Dimensions	44 * 73 * 25mm (WDH)
Chassis Material	AL
Silkscreen Color	Black
Operating Temperature	0°C~50°C
Storage Temperature	-20°C~75°C
Relative Humidity	40°C / 95%RH
Power Consumption	<10W

CAT5e/6/7 Cable specification

Cable Type	Range	Pixel Clock Rate	Video Data Rate	Supported Video
CAT5e	100m	<=225MHz	<=5.3Gbps (HD Video)	Up to 1080p@60Hz 36bpp (Data rates lower than 5.3Gbps or below 225MHz TMDS clock)
	90m			
CAT6/CAT6a/CAT7	100m	>225MHz	>5.3Gbps (UHD Video)	1080p@60Hz, 48bpp, 1080p@60Hz 3D, 4K2K/30Hz/4:4:4 and 4K2K/60Hz/4:2:0 video format

1-7 Product Specifications

Warranty Information

1 (One) Year Warranty

Opticis warrants this optical HDMI module to be free from defects in workmanship and materials, under normal use and service, for a period of one (1) year from the date of purchase from Opticis or its authorized resellers.

If a product does not work as warranted during the applicable warranty period, Opticis shall, at its option and expense, repair the defective product or part, deliver to customer an equivalent product or part to replace the defective item, or refund to customer the purchase price paid for the defective product.

All products that are replaced will become the property of Opticis.

Replacement products may be new or reconditioned.

Any replaced or repaired product or part has a ninety (90) day warranty or the remainder of the initial warranty period, whichever is longer.

Opticis shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to Opticis for repair under warranty or not.

Warranty Limitation and Exclusion

Opticis shall have no further obligation under the foregoing limited warranty if the product has been damaged due to abuse, misuse, neglect, accident, unusual physical or electrical stress, unauthorized modifications, tampering, alterations, or service other than by Opticis or its authorized agents, causes other than from ordinary use or failure to properly use the product in the application for which said product is intended.

Dispose of Old Electrical & Electronic Equipment

(Applicable in the European Union and other European countries with separate systems)



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

1-8 Warranty Information

Opticis Locations

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For order support, please contact our Distributor or Reseller.

For technical support, check with the Opticis web site www.opticis.com or
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