

DATA SHEET

4K HDMI2.0, USB2.0, RS-232 HDBaseT Extender HDCX-100-TR

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HDMI 4K HD-BaseT Extender, HDCX-100-TR

Description

The new HDMI2.0 HD-BaseT extender, HDCX-100 has one CAT5e or CAT6 cable connection and is designed compact enough to be fitted in to various installation environment.

The HDCX-100 with the same mechanical dimension for each of transmitter and receiver enables to transmit the HDMI2.0 up to uncompressed 4K UHD(3,840X2,160) at 60Hz (YCbCr4:2:0) supporting all HDMI2.0 features (CEC, EDID and HDCP) including USB2.0 and RS-232 control.

Between its transmitter and receiver, CAT5e/CAT6 connection by RJ45 connector gives clean, secure and easy installation. The maximum extension is 100m(330feets) from graphic source to display.

The shipping group is as follows;

- 1) One (1) pair of Transmitter and Receiver
- 2) Two (2) +5V/2A power adaptors
- 3) One (1) 3pin connector for RS-232
- 4) User Manual

Options

- 1) Mounting Bracket for HDCX-100-TR

Features

- ◆ Support 4K@60Hz and HDMI2.0 Standard
4K UHD(3,840X2,160) at 60Hz (YCbCr 4:2:0)
- ◆ Transmits HDMI2.0, USB2.0, RS232 signal up to 100m (328feet) over one (1) CAT5e/CAT6 cables.
- ◆ Support HDCP1.4 / 2.2 Standard
- ◆ Compact Design and bracket allows easy installation even a small space
- ◆ Lossless Image Quality with no Frame Dropping
- ◆ USB2.0 ports for HID, Mass Storage and VCP
- ◆ Plug and Play
- ◆ Mounting bracket for HDCX-100(option)
- ◆ Size (WDH): 44mm x 73mm x 25mm
- ◆ Power supplying: +5V, 2A power adapter
- ◆ Certifications: CE / FCC

Applications

- ◆ Digital Signage
- ◆ Home Theater
- ◆ Control Rooms
- ◆ KVM applications
- ◆ Any 4K Ultra High-Definition HDMI Display Solutions

Technical Specification

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 (Ultra HD Video)	1080p@60Hz,48bpp, 1080p@60Hz 3D, 4K2K/30Hz/4:4:4and 4K2K/60Hz/4:2:0 video format

HDBT Specification

HDBT FEATURE	SUPPORT
ARC	NO
Video & Audio	YES
LAN	NO
IR	NO
RS-232	YES
Send Power to Tx	NO
Send Power to Rx	NO
USB	YES

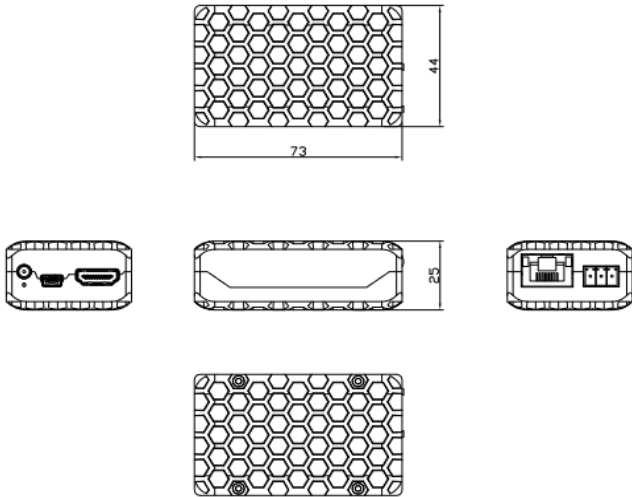
Supported Resolution

Resolution	Input	Output
640X480@60	Yes	Yes
720X480@60	Yes	Yes
720X576p@60	Yes	Yes
800X600@60	Yes	Yes
1024X768@60	Yes	Yes
1280X720@50	Yes	Yes
1280X720p@50	Yes	Yes
1280X720p@60	Yes	Yes
1280X1024@60	Yes	Yes
1360X768@60	Yes	Yes
1600X1200@60	Yes	Yes
1920X1080i@50	Yes	Yes
1920X1080i@60	Yes	Yes
1920X1080p@24	Yes	Yes
1920X1080p@25	Yes	Yes
1920X1080p@30	Yes	Yes
1920X1080p@50	Yes	Yes
1920X1080p@60	Yes	Yes
1920X1200@60(RB)	Yes	Yes
3840X2160@24	Yes	Yes
3840X2160@25	Yes	Yes
3840X2160@30	Yes	Yes
3840X2160@60	Yes	Yes
3840X2160@60(YUV420)	Yes	Yes
4096X2160@24	Yes	Yes

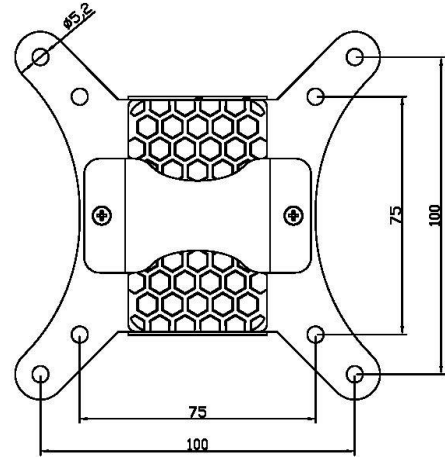
HDCX-100 Drawing

Drawing of Module

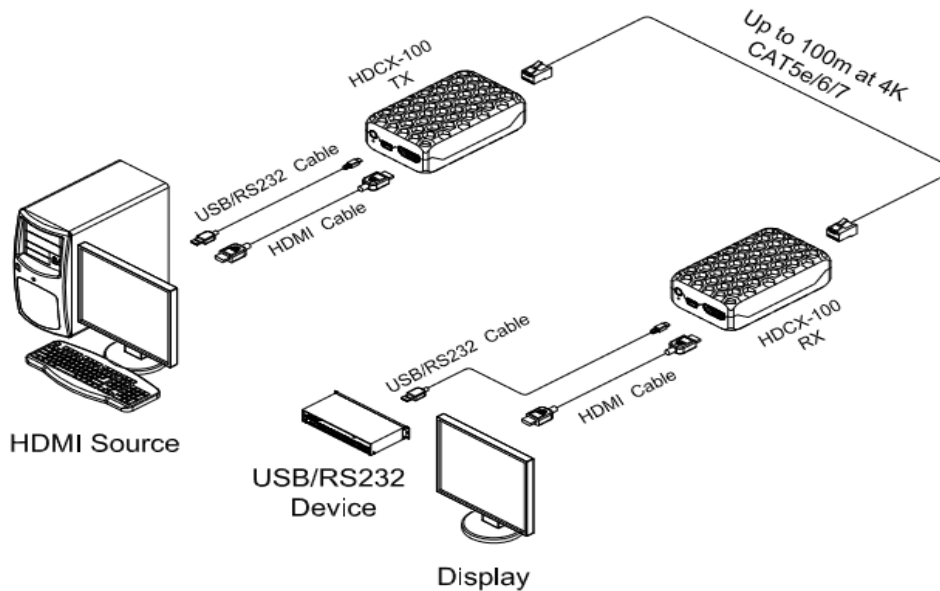
Dimension [mm]



Bracket installed Diagram



Connection Diagram



HDMI Pin Description

Pin	Symbol	Functional Description
1	CH2+	TMDS Data Signal Channel 2 Positive
2	GND	TMDS Data Signal Channel 2 Shield
3	Ch2-	TMDS Data Signal Channel 2 Negative
4	CH1+	TMDS Data Signal Channel 1 Positive
5	GND	TMDS Data Signal Channel 1 Shield
6	CH1-	TMDS Data Signal Channel 1 Negative
7	CH0+	TMDS Data Signal Channel 0 Positive
8	GND	TMDS Data Signal Channel 0 Shield
9	CH0-	TMDS Data Signal Channel 0 Negative
10	CLK+	TMDS Clock Channel Positive
11	GND	TMDS Clock Signal Shield
12	CLK-	TMDS Clock Channel Negative
13	CEC	Consumer Electronic Control
14	Reserved	Not used
15	SCL	DDC For Clock
16	SDA	DDC For Data
17	GND	DDC/CEC Ground
18	5V	5 V Input for Transmitter from Host 5 V Output for Monitor from Receiver
19	Hot plug Detect	Signal is driven by monitor to enable the system to identify the presence of a monitor

RS-232C Pin Description

Pin	Symbol	Functional Description
1	Received Line Signal Detector	Connected with Pin4 & Pin6 in module
2	RD	Data Receive: Uplink ↔ Downlink
3	TD	Data Transmit: Uplink ↔ Downlink
4	Data Terminal Ready	Connected with Pin1 & Pin6 in module
5	GND	Signal Ground
6	Data Set Ready	Connected with Pin1 & Pin4 in module
7	Request To Send	Connected with Pin8 in module
8	Clear To Send	Connected with Pin7 in module
9	NC	