TechLogix Networx

Technical Specifications

TL-TP100-HDC2

100m 4K/60 HDMI & Control Twisted Pair Extender Set

Features at a Glance

- 18G HDMI (4K@60) up to 100m
- ARC on HDMI, Analog, and Optical Inputs and Outputs
- Deep color, DTS-HD, Dolby TrueHD compatible
- HDR compatible
- Light compression (2:1 ratio) on signals over 10G
- Single twisted pair transmission
- HDMI 2.0 / HDCP 2.2
- Built-in RS232, IR & Ethernet transmission
- Ethernet ports on send & receive
- Diagnostic LEDs

The TechLogix TL-TP100-HDC2 revolutionizes high-bandwidth HDMI signal distribution by leveraging HDBaseT technology to transmit 18G HDMI signals, including HDR and 4K@60 4:4:4, up to 100m (330 ft.) over standard twisted pair cabling.

The system works by lightly compressing signals above 10G for twisted pair transport, and then uncompressing the signal at the destination end.

Flexible options for ARC (Audio Return Channel) allow the receiver to accept HDMI, analog, or digital optical. The transmitter can output the audio on HDMI, analog, or digital optical outputs.
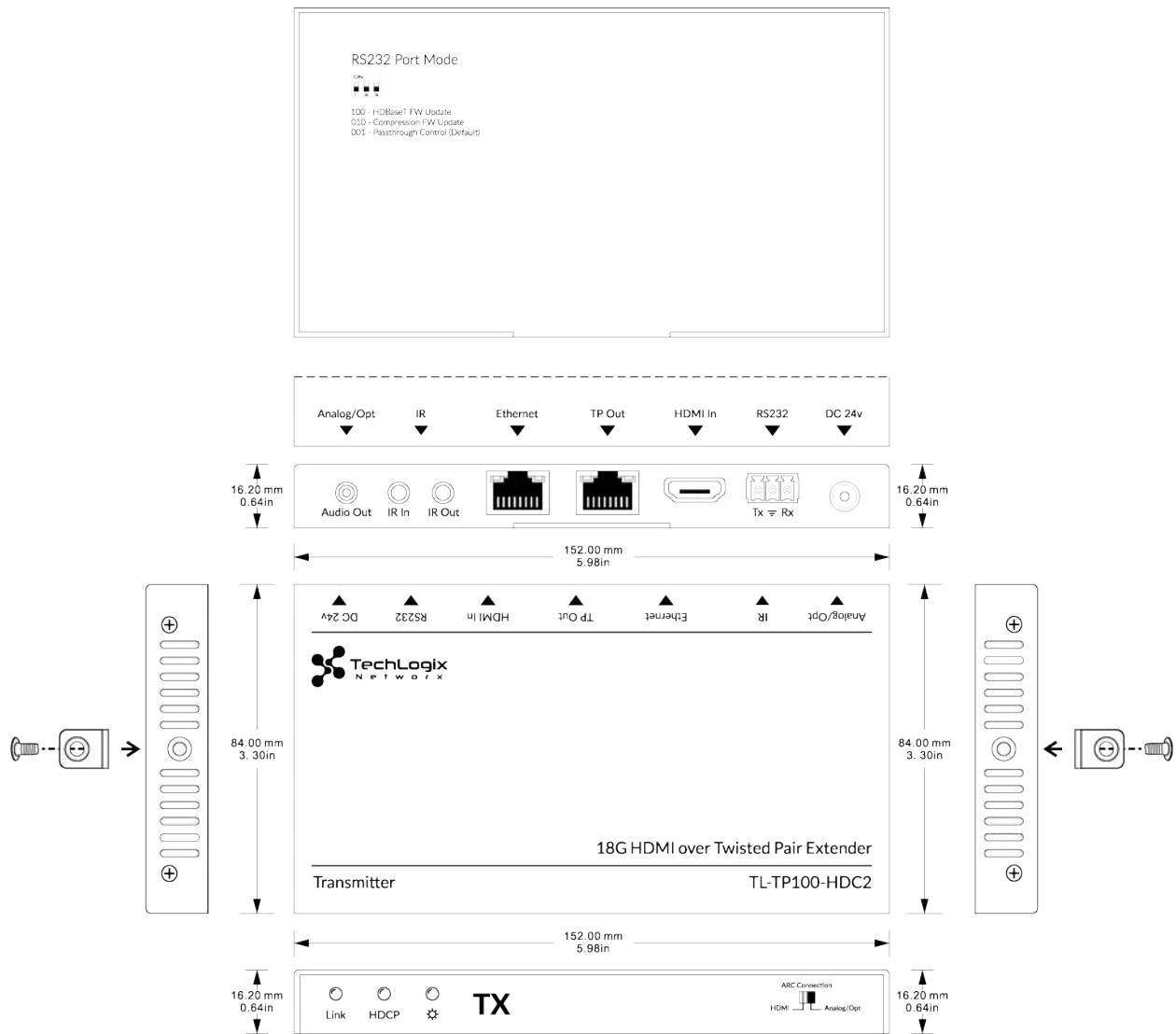
Additional built-in features such as flexible power with Port-Saver™ protection, IR and RS232 signal distribution, and Ethernet pass-through make the TL-TP100-HDC2 extremely powerful and extremely flexible.

Specifications

I/O Connections (Transmitter)

HDMI Input	HDMI Type A Receptacle (supports ARC)
Audio Output	3.5mm TRS / Mini-TOSLINK Combo (Stereo analog / Optical Digital)
Twisted Pair	8P8C port (Shielded RJ45) with Port-Saver™ protection
IR Input	3.5mm TRS Jack
IR Output	3.5mm TS Jack
RS232	3pin phoenix socket (Tx/Gnd/Rx)
24V DC Power	5.5 mm Outside Diameter, 2.1 mm Inside Diameter Barrel (Locking)
Ethernet	8P8C port (Shielded RJ45)

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Supported Video and Audio

Maximum Distances	1080p/720p: 100m (330 ft.) 4K@30/10G: 100m (330 ft.) 4K@60/18G: 100m (330 ft.)
Maximum Video Compatibility	4K@60Hz 4:4:4 HDR supported
Video Compliance	HDMI 2.0, HDCP 2.2, and CEC (Consumer Electronics Control)
HDCP Compatibility	HDCP 2.2 Conversion – output version matches sink (display) version
Embedded Audio (HDMI)	Up to PCM 8 channel, Dolby Digital TrueHD, and DTS-HD Master Audio
Embedded Audio (Analog)	PCM 2 channel 48kHz
Embedded Audio (Digital Optical)	Up to PCM 2 channel, 7.1 Dolby Digital Plus, and 7.1 DTS-HD
Input DDC Signal	5.0 volts p-p (TTL)
Input Video Signal	0.5 to 1.0 volts p-p
Ethernet Transmission Speed	Adaptive 10M/100M (max) / full duplex or half duplex
IR Carrier Frequency Range	33-55kHz at 5 volts

HDBaseT Signal Characteristics

Maximum Distance	100m (330 ft.)
Cable Requirements	Solid core shielded Category 5e, Category 6 or greater with TIA/EIA-568B crimp pattern
Bandwidth	10.2 Gbps

Compression Signal Characteristics

Compression ratio	Up to 2:1 (adaptive for signals above 10.2gbps)
Compression type	Color Space Conversion (VLC)

Chassis and Environmental	
Enclosure	Painted aluminum
Dimensions	152mm x 109mm x 16mm
Shipping Weight	0.71Kg (1.55 lbs) (Tx+Rx)
Operating Temperature (Environment)	-10° to +40° C
Operating Temperature (Chassis)	45° C
Operating Humidity (Environment)	10% ~ 90%
Storage Temperature (Environment)	-15° to +70° C
Storage Humidity (Environment)	0%~55%
Power, ESD, Regulatory	
Maximum Power Consumption	20W (max)
Power Supply	24V DC
ESD Protection	15KV
Port-Saver Protection™	Twisted Pair connections employ 802.3af PoE controllers which do not send power unless connected to a request port. Network switch ports or Ethernet ports will not be damaged by accidental cross-patching.
Regulatory	CE, FCC
Other	
Standard Warranty	3 Year
Diagnostic Indicators	Power, Link, and HDCP LEDs
Network Indicators	Link Speed and Activity
Included Items	Installation Guide, power supply, US power cord, mounting "L" brackets (4 ea), mounting screws (4 ea), IR Transmitter, IR Receiver, 3.5mm Toslink Adapters (2 ea)

Transmitter – Line Drawing

RS232 Port Mode

ON

100 - HDBaseT FW Update
010 - Compression FW Update
001 - Passthrough Control (Default)

| Analog/Opt | IR | Ethernet | TP Out | HDMI In | RS232 | DC 24v |

16.20 mm
0.64in

Audio Out   IR In   IR Out   Tx ⇌ Rx

16.20 mm
0.64in

152.00 mm
5.98in

DC 24v   RS232   HDMI In   TP Out   Ethernet   IR   Analog/Opt

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N e t w o r x

84.00 mm
3. 30in

84.00 mm
3. 30in

18G HDMI over Twisted Pair Extender

Transmitter   TL-TP100-HDC2

152.00 mm
5.98in

16.20 mm
0.64in

Link   HDCP   ☼   **TX**

ARC Connection
HDMI ▭ Analog/Opt

16.20 mm
0.64in

Receiver – Line Drawing

RS232 Port Mode

100 - HDBaseT FW Update
010 - Compression FW Update
001 - Passthrough Control (Default)

Analog/Opt   IR   Ethernet   TP In   HDMI Out   RS232   DC 24v

16.20 mm
0.64in

Audio Out   IR In   IR Out   Tx ÷ Rx

16.20 mm
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DC 24v   RS232   HDMI Out   TP In   Ethernet   IR   Analog/Opt

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18G HDMI over Twisted Pair Extender

Receiver   TL-TP100-HDC2

152.00 mm
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Link   HDCP   ☼   **RX**   ARC Connection   HDMI   Analog/Opt

16.20 mm
0.64in