

## Professional grade CAT5, CAT6 and CAT7 Twisted Pair HDMI extenders

### Highlight features

- Precise manual or automatic cable equalizing
- Pixel Accurate Reclocking
- Dual Output with built-in distribution amplifier
- Advanced EDID management
- RS-232 pass-through
- Remote power with 3 modes:  
local / remote-send / remote-receive



The Lightware HDMI-TP 200 series extenders can transmit HDMI or DVI-D signals over two CAT5, CAT6 or CAT7 cables. They fully support HDMI 1.3a signals with or without HDCP encryption.

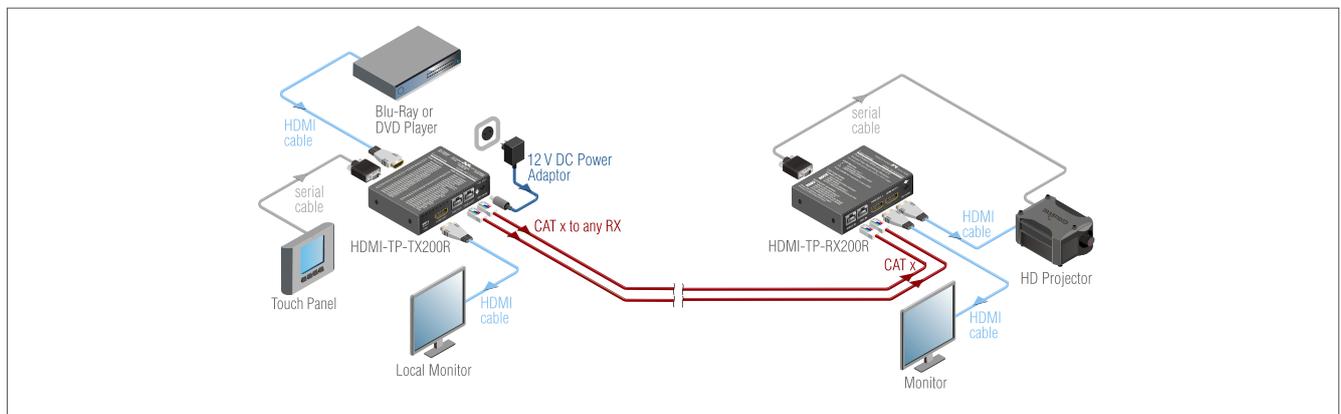
**Cross compatibility** between all the devices in the product series is ensured thanks to Lightware's attentive design. Any transmitter can be paired with any receiver without restriction. With Lightware's hybrid modular matrix concept, it is even possible to connect an extender box directly to the matrix router using an MX-HDMI-TP series Input or Output board (MX-HDMI-TP-IB or MX-HDMI-TP-OB).

**Power source** can be set by jumper for local supply with plug-in adaptor, or for remote supply through TP CATx cable. All devices can be mounted on rack shelf or used standalone.

Supporting HDMI 1.3 standard, these products can be seamlessly connected to BluRay players, set top boxes, AV receivers or even Apple TV.

**USB Control** allows Device Settings (like EDID Management); Firmware Upgrades; and realtime Signal status query (like HDCP status, DVI or HDMI mode, Signal presence etc.) from any laptop, computer or control system.

### Standalone operation



**Dual Output** is available on both units through a built-in distribution amplifier. HDMI-TP-TX200R has a local monitor HDMI output to enable easy monitoring of the outgoing signal and HDMI-TP-RX200R has two identical HDMI Outputs.

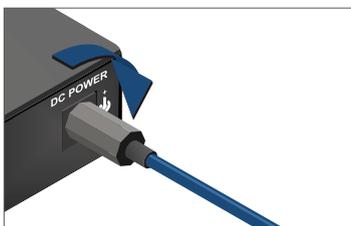
**Advanced EDID Management** – the well known Lightware technology – is built in the 200 series extenders. Using the Factory, Custom or Transparent EDID emulation the user can fix and lock EDID data on the transmitter's Input connector. Advanced EDID Management eliminates noise and bit errors on DDC lines and fixes the resolution, video and audio parameters emulated to the source.

**Pixel Accurate Reclocking:** this unique feature in Lightware 200 series Twisted pair extenders provides an exceptional signal regeneration capability. The circuitry cleans the signal from noise and jitter caused by long cable runs. This makes the Output signal stable with sharp transitions and accurate timing.

**Equalization** on the receiver's RJ45 Input connectors is available for automatic adaptive or fine tunable manual operation. In manual mode the 25 turn trimpot allows the most accurate setting between 0 and 40 dB values. This helps by tweaking the given cable loss even on the highest 1080p resolution.



### Locking DC plug



Twist 90° clockwise to lock

### Transmitter and receiver front and back view



HDMI-TP-TX200R



HDMI-TP-RX200R

### Compatibility table:

- [http://www.lightware.eu/pdfs/tp\\_extenders\\_cross\\_comp.pdf](http://www.lightware.eu/pdfs/tp_extenders_cross_comp.pdf)

### Comparison chart:

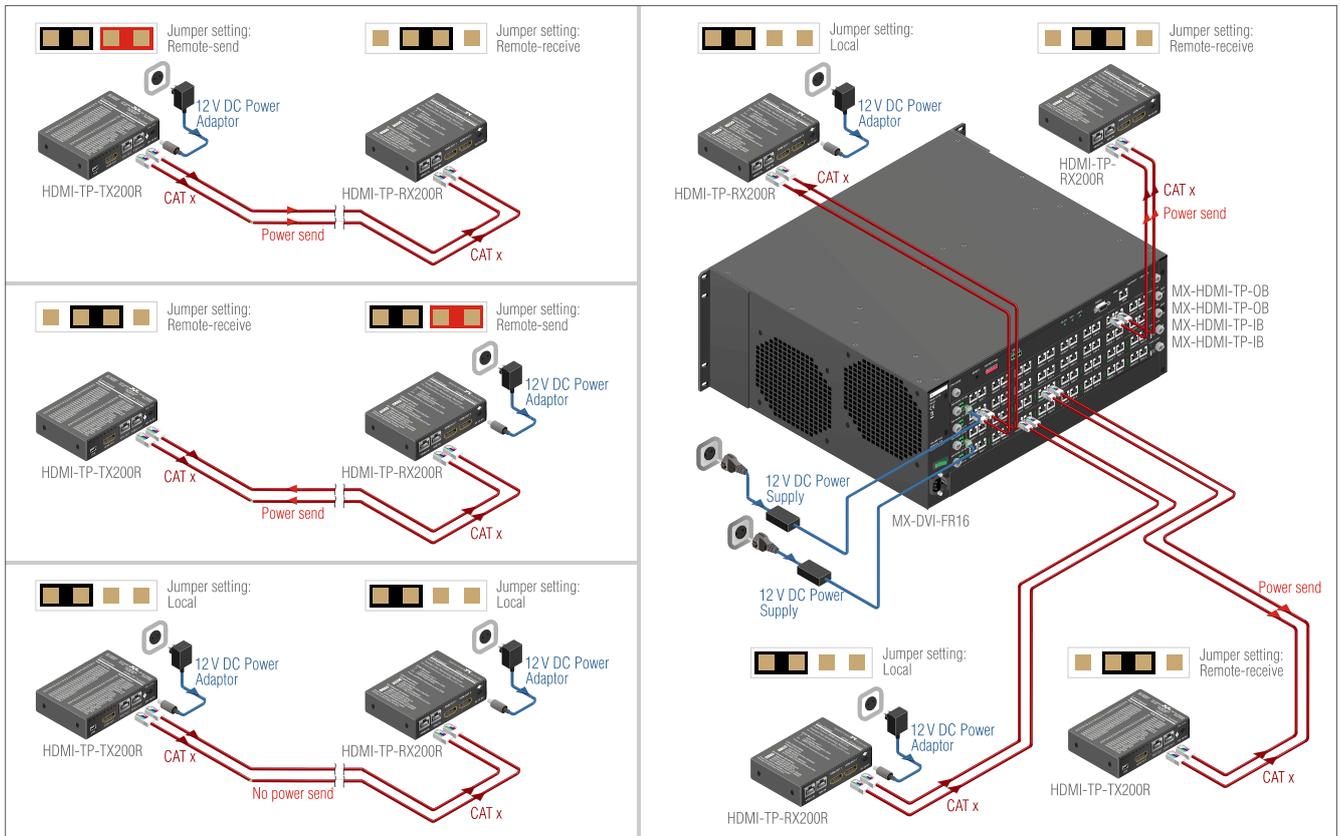
- [http://www.lightware.eu/pdfs/tp\\_comparison\\_chart.pdf](http://www.lightware.eu/pdfs/tp_comparison_chart.pdf)

### Maximum extension distances

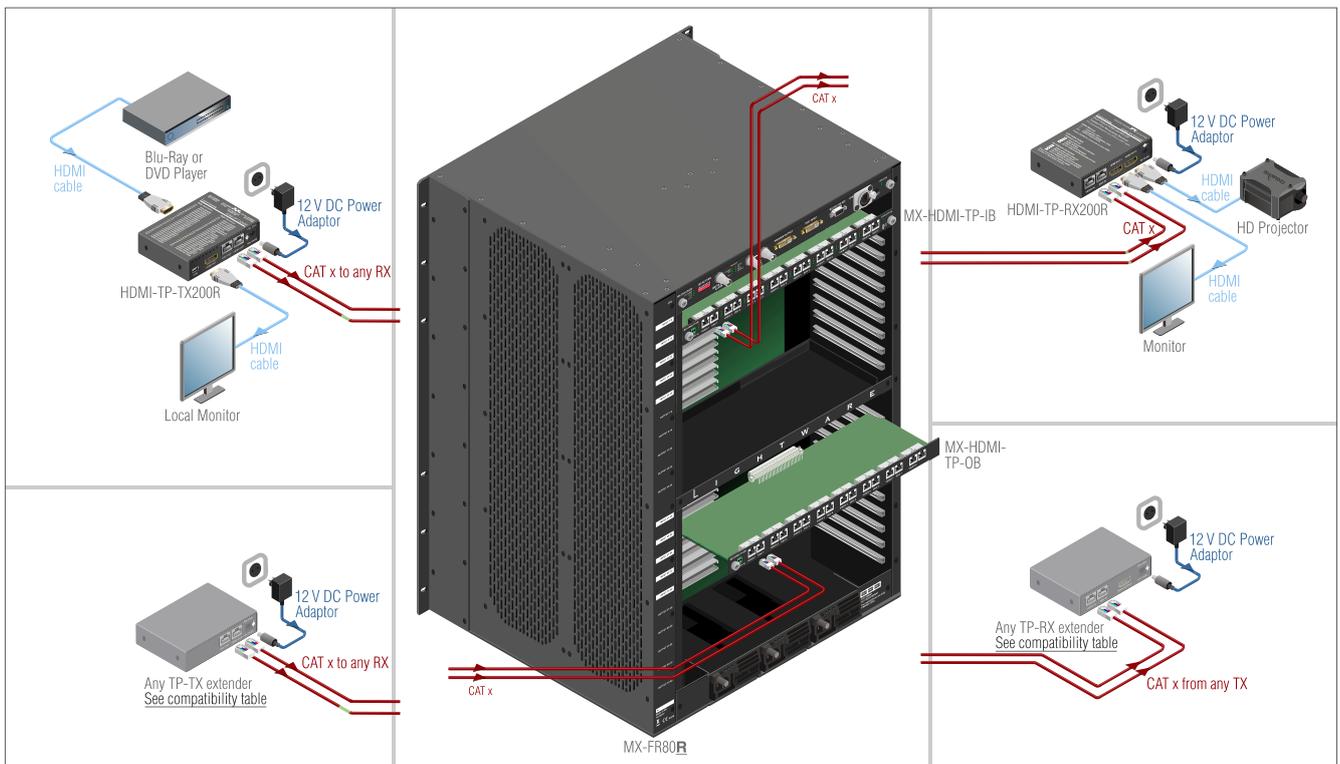
Resolution	TMDS Freq	CAT5e UTP	CAT5e FTP	CAT6 UTP	CAT6 FTP	CAT6 S/FTP	CAT7 S/FTP
640x480	25,2 MHz	65 m	65 m	75 m	75 m	80 m	80 m
800x600	40,0 MHz	65 m	65 m	70 m	70 m	75 m	75 m
1024x768	65,0 MHz	60 m	60 m	65 m	65 m	75 m	75 m
1280x720p	74,4 MHz	60 m	60 m	65 m	65 m	75 m	75 m
1920x1080i	74,4 MHz	60 m	60 m	65 m	65 m	75 m	75 m
1280x1024	108,2 MHz	50 m	50 m	65 m	65 m	70 m	70 m
1400x1050	122,1 MHz	40 m	40 m	60 m	65 m	70 m	70 m
1920x1080p	149,1 MHz	30 m	30 m	55 m	60 m	65 m	65 m
1920x1200	153,4 MHz	20 m	20 m	50 m	60 m	65 m	65 m
1600x1200	162,4 MHz	NR	NR	45 m	55 m	65 m	65 m
1920x1080p 30 bit	186,3 MHz	NR	NR	NR	50 m	40 m	60 m
1920x1080p 36 bit	223,6 MHz	NR	NR	NR	20 m	10 m	20 m

NR: Not recommended

## RemotePowerOptions



## Integratedsystemoperation



## Applications

- Home theatre systems
- Multiroom video and audio control
- Professional AV systems, conference rooms
- Digital signage

## Features

- Extends HDMI 1.3a, HDCP 1.1 and DVI 1.0 signals
- Supports Dolby TrueHD and DTS-HD Master Audio 7.1 formats
- 1920x1200 or 2048x1080 maximal resolutions
- Cross compatibility with any Lightware Twisted Pair device
- Jumper selectable local or remote power source
- Precise manual, or automatic adaptive cable equalization adjustment
- Pixel Accurate Reclocking in both transmitter and receiver
- Advanced EDID Management in both transmitter and receiver
- Several status LEDs
- Local monitor buffered loop Output at transmitter
- Two identical HDMI outputs at receiver
- RS-232 pass through
- Metal housing for professional use and rack mounting

## Connectors

Power:	locking DC connector (2.1 / 5.5 mm)
TX input, RX output:	HDMI connector
TX output, RX input:	Dual RJ45 connectors

## Specifications

Data rate:	2.25 Gbps per color
Resolution:	640 x 480 to 1920 x 1200 or 2048 x 1080 deep color
HDCP pass through:	yes
EDID memory (TX):	yes, 49 factory preset, 50 user presets
EDID emulation (TX):	yes, from memory or transparent
EDID memory (RX):	yes, 1 factory preset, 8 user presets
EDID emulation (RX):	yes, from memory or transparent
TP cable equalization (RX):	0-40 dB manual or automatic
Front panel control (TX):	yes, EDID learn button, EDID selector switch
Front panel control (RX):	yes, EDID learn button, EDID selector switch EQ setting
LED indicators (TX):	HDCP active, HDMI active, Signal present, source 5 V, EDID state, hotplugs
LED indicators (RX):	HDCP active, HDMI active, Signal present, EQ mode, EDID state, hotplugs
RS-232 pass through:	yes
Power supply:	External power adaptor (100 to 240 V AC, 50/60 Hz), (12 V DC, 1 A)
Power consumption (TX):	5 Watts
Power consumption (RX):	5 Watts
Dimensions:	98 W x 67 D x 25 H mm
Net weight (TX):	230 gramms / product
Net weight (RX):	230 gramms / product
Compliance:	CE, UL, FCC
Warranty:	3 years

## Supplied accessory



### Universal DC adaptor

Wall power adaptor with interchangeable plug for international use.

Universal input: 100-240 V AC, 50-60 Hz

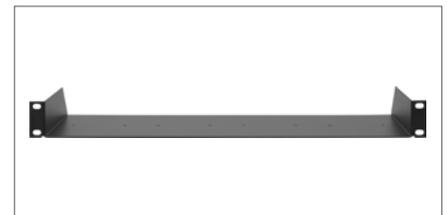
Output: 12 V DC, 1 A

## Optional accessories



### Under desk mounting kit

The UD-kit makes easy to mount a single device on any flat surface (e.g. furniture).



### Rack shelf

The 1U high rack shelf provides mounting holes for fastening two half-rack or four quarter-rack sized units.