

Connector Sized HDCP Capable Optical Extender



Part No: 9153 0001 (TX90), 9153 0002 (RX90)



Highlight Features

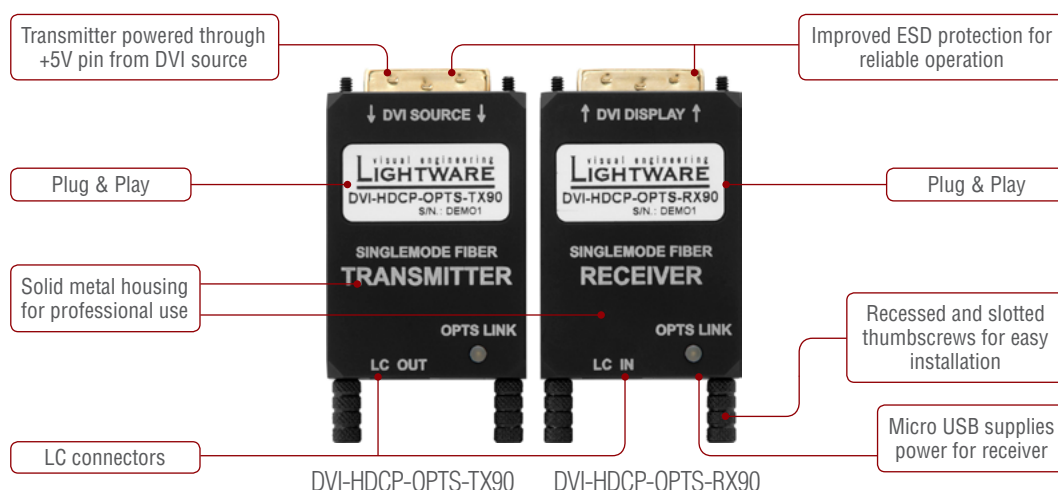
- DVI-D connector sized extenders
- 9/125 Singlemode Fiber 10 km extension
- Singlemode Fiber Technology, zero frame delay
- Pixel Accurate Reclocking
- Support 24, 30 and 36 bit video with embedded audio
- HDCP compatibility

The DVI-HDCP-OPTS-TX90 / RX90 pair is a DVI fiber transmitter / receiver set for up to 10km distance transmission. Using Singlemode Fiber Technology the DVI and HDMI signals with HDCP encryption are transmitted over only one Singlemode 9/125 fiber core. Sources and display devices both have galvanic isolation to avoid ground loops as well as humming effects. No delays occur in the signal, as the video image is transported without any frame latency. The OPTS-RX90/TX90 extender pair supports EDID pass-through allowing the video source to read video display device's capability.

Pixel Accurate Reclocking is Lightware proprietary technology which provides exceptional signal regeneration capability. The circuitry cleans the signal from noise, skew and jitter which are caused by long cable runs and EMC incompatible devices.

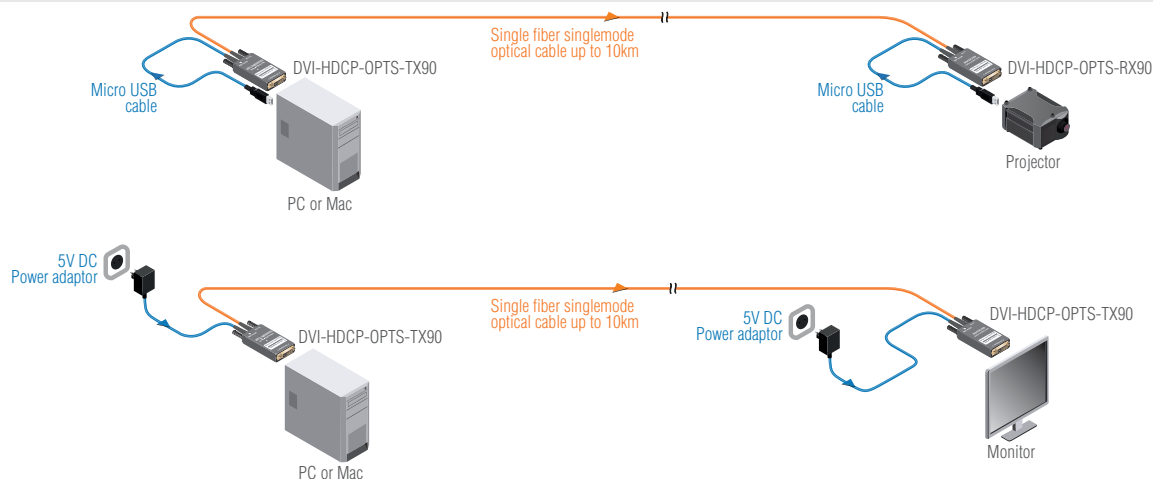
In some applications our OPTS-TX90 transmitters can be powered from DVI source which makes the installation even simpler, but in other cases it might need to be powered with a USB cable. The OPTS-RX90 receivers always need the USB power supply. Recessed thumbscrews allow easy mounting directly to DVI-D sockets by hand, or by using a flat-bladed screwdriver. It is very useful in space saving applications, where the connectors are at close quarters and can only be reached from the rear side. The massive solid metal casing provides excellent cooling and maximal reliability.

Transmitter and receiver benefits



DVI-HDCP-OPTS-TX90 and DVI-HDCP-OPTS-RX90

Standalone Diagram



Applications

- Professional AV systems, conference rooms
- Fixed installations, Rental and Staging
- Digital signage
- Long distance lossless DVI or HDMI signal transmission
- Ground loop isolation

Features

- Extends DVI or HDMI signals with Singlemode Fiber Technology
- 1920 x 1200 or 2048 x 1080 maximal resolutions
- Plug & Play
- Zero frame latency – no delay
- No compression
- EDID transparency
- Pixel Accurate Reclocking
- TX and RX both have Link status LEDs
- Power supply from Micro-B USB cable or DVI source in case
- Power supplied through DVI-D connector for transmitter
- Max fiber cable length of 10.000m (using OS1 9/125 Singlemode fiber)
- DVI-D connector sized form factor
- Solid metal housing for professional use
- Recessed (slotted) thumbscrews
- Improved ESD protection
- LC connectors

Embedded Audio

- Supported: uncompressed: PCM, Multichannel PCM
compressed: DTS, Dolby Digital
- Not supported: Dolby True HD, DTS-HD, DTS-HD Master Audio

Compatible Products

- DVI-HDCP-OPTS series
- 25G (future)

Specifications

Data rate:	6.75 Gbps (2.25 Gbps per color)
Resolution:	Up to 1920 x 1200 or 2048 x 1080 pixels
Video Delay:	0 frames
HDCP pass through:	Yes
EDID emulation:	Transparent EDID
LED indicators:	Link status LEDs
RS-232 pass through:	No
Fiber:	OS1 9/125 LC Singlemode
Laser wavelengths:	1490, 1550 and 1310 nm
Laser class specifications:	Class 1
Transmitter output OMA*:	-8 dBm (worst case)
Receiver OMA* sensitivity:	-19 dBm (worst case)
Optical loss budget:	11 dB (worst case)
Transmission distance (using OS1 type fiber):	10 km
Power:	From source or sink device through Micro-B USB cable
Power consumption (TX):	2,35 W
Power consumption (RX):	1,9 W
Enclosure:	Solid metal
Dimensions:	40 W x 74 D x 15 H mm
Weight:	80 g
Compliance:	CE
Warranty:	3 years

OMA*: Optical Modulation Amplitude

Connectors

TX input , RX output:	24 pole DVI-D plug
Fiber:	LC simplex
DC Power:	Micro-B USB

DVI-HDCP-OPTS-TX90 and DVI-HDCP-OPTS-RX90

Supplied Accessories



Micro-B USB to USB cable

(Part No: 1374 0009)

USB cable with male 5-pin Micro-B USB to USB-A connector.



PSU-5VM Universal Micro-B USB adaptor

(Part No: 1180 0062)

Wall power adaptor with interchangeable plug for international use.

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

Output: 5 V DC, 2 A

Optional Accessory



PSUx20-400-5V, PSUx10-200-5V

(Part No: 9134 0002; 9134 0004)

Rack mountable power supply for Lightware interfaces