

## Fiber Optical DisplayPort extender

### Highlight features

- DisplayPort 1.1a extension over Single Fiber
- **HD** Dual-mode DP: supports DVI and HDMI adaptors
- Up to 2560 x 1600 pixel resolution
- 10.8 Gbps datarate
- HDCP 1.1 compliant extension over one multimode fiber
- Full support of Link Training
- Compatible with Apple Cinema Display and 30" LCD displays



### Lightware proudly presents the world's first Single fiber DisplayPort extender

Lightware DP-OPT-TX100 and DP-OPT-RX100 devices extend Dual-mode DisplayPort 1.1a high resolution video and embedded audio, with optional HDCP encryption, over one multimode fiber up to 2000 m.

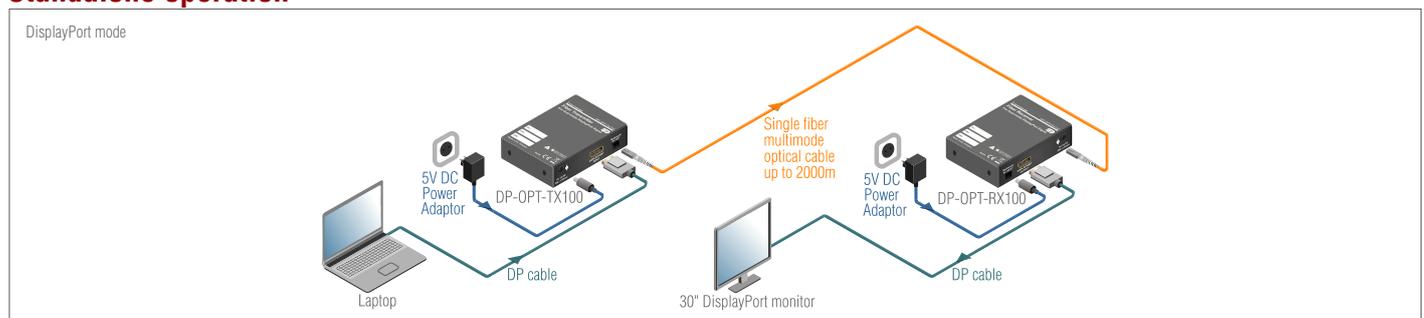
**DisplayPort** is one of the newest video interface standards introduced by VESA. Using DisplayPort, high resolution video and excellent quality audio can be transmitted. The interface's 10.8 Gbps bandwidth is capable of transmitting 2560 x 1600 pixel resolution video with full support of content protection (HDCP, DPCP).

**Dual-mode DisplayPort:** when connecting a DVI or HDMI display through an adaptor cable. Dual-mode DisplayPort graphic cards reconfigure their Outputs to DVI or HDMI accordingly. Lightware DisplayPort extenders support Dual-mode port extension and adaptor cables.

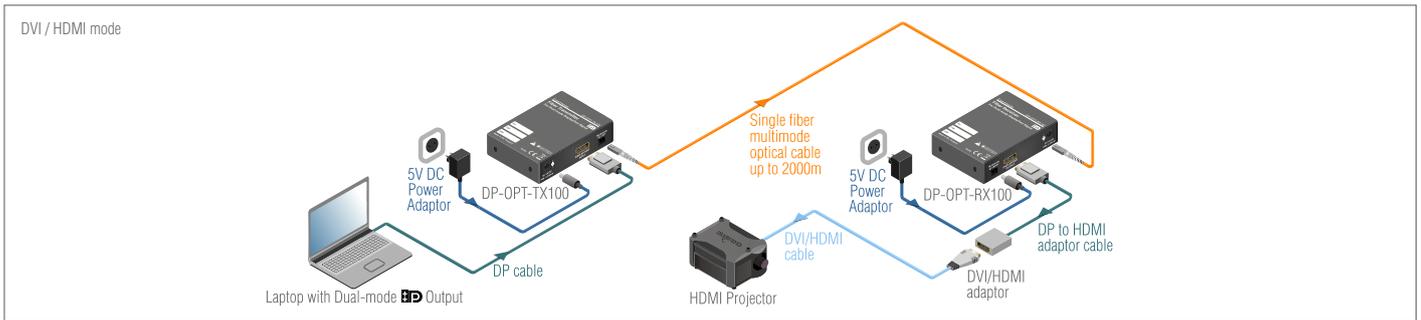
**Single Fiber Technology** makes these units fully DisplayPort 1.1a and HDCP 1.1 compliant without the need of a second fiber cable or copper connections. To simplify cabling, the bi-directional communication necessary for Link Training and HDCP handshaking, is performed on the same fiber core that transmits the video signal.

**Galvanic isolation** between source and display helps to avoid ground loops and hum effects. No delay occurs in the signal during optical conversion as the video image is transported without any frame latency.

### Standalone operation



DisplayPort mode – extending connection between a DisplayPort source and a DisplayPort capable display.



DVI / HDMI mode – extending connection between a Dual-mode DisplayPort source and a DVI/HDMI capable display by using a single adaptor.

## Detailed description of LED indicators (both TX100 and RX100):



(REMOTE) MONITOR DETECT LED – is on when a powered monitor is connected to the RX100 device.

(REMOTE) SOURCE DETECT LED – in DisplayPort mode this LED indicates the source's power status. If a powered source is connected to TX100 this LED is on, otherwise it's blinking. In DVI/HDMI mode (when using the extender with DVI/HDMI monitor) this LED is off.

FIBER LINK LED – blinks when the link is active between the TX100 and RX100 devices, and they're ready to use.

POWER LED – is on when the device is powered by 5 V DC adaptor.

- 1 LANE / 2 LANE / 4 LANE LEDs – in DisplayPort mode these LEDs indicate if 1, 2, or 4 lanes of DisplayPort Main Link's four high speed lanes are used (determined by the video resolution). In DVI/HDMI mode both LEDs are off.
- LINK LED – in DisplayPort mode this LED blinks when link speed is the lower 1.62 Gbps, the LED is on when link speed is the higher 2.7 Gbps.
- MODE LED – this LED is on when a DisplayPort monitor is connected to the RX100 device, the LED blinks when a DVI/HDMI monitor is connected to the RX100 device via a DP to DVI/HDMI adaptor.



## Applications

- Long distance lossless DisplayPort signal transmission
- Apple Cinema Display port extension
- Ground loop isolation

## Features

- Single Fiber Technology
- Extends DisplayPort 1.1a signals over one multimode fiber core
- DisplayPort to DVI/HDMI connection by using a single adaptor
- 2560 x 1600 maximal pixel resolution (twice as 1080p)
- HDCP 1.1a compliant
- Zero frame latency, no delay
- No compression
- SC fiber optical connectors
- Several status LEDs: power, fiber-link, source detect, monitor detect, main link lane number, link speed, DisplayPort or DVI/HDMI mode
- Robust metal housing
- Rack mountable

## Connectors

Power:	DC connector (PIN 2.35 mm)
DisplayPort:	Standard DisplayPort goldplated connector
Fiber:	SC receptacle

## Specifications

Data rate:	1.62 / 2.7 Gbps/lane, maximum: 10.8 Gbps total
Max Resolution:	2560 x 1600 pixels @ 60 Hz
Color depth:	24, 30, 36, 48 bits deep color
Video delay:	0 frames
HDCP pass through:	yes
LED indicators (both TX and RX):	power, fiber-link, source detect, monitor detect, main link lane number, link speed, DisplayPort or DVI/HDMI mode
Fiber:	50/125 SC Multimode (preferred) 62.5/125 SC Multimode
Laser wavelengths:	high speed lanes: 778; 800; 825; 850 nm low speed lanes: 911; 980 nm
Laser class specifications:	Class 3R
Transmitter output OMA*:	-6.25 dBm (worst case)
Receiver OMA* sensitivity:	-14.25 dBm (worst case)
Transmission distance:	2000 m (using OM3e type fiber)
Power supply:	External power adaptor (100 to 240 V AC, 50-60 Hz)(5 V DC, 1 A)
Power consumption (TX100):	3 W (typ.), 5 W (max.)
Power consumption (RX100):	3 W (typ.), 5 W (max.)
Enclosure:	1 mm metal
Dimensions:	100,4 W x 67,6 D x 26 H mm
Net weight (TX):	200 gramms
Net weight (RX):	205 gramms
Compliance:	CE
Warranty:	3 years

## Supplied accessory



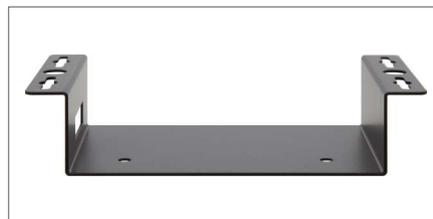
### Universal DC adaptor

Wall power adaptor with interchangeable plug for international use.

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

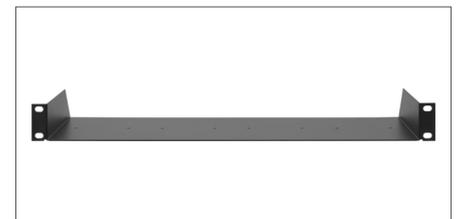
Output: 5 V DC, 1 A

## Optional accessories



### Under desk mounting kit

The UD-kit makes it 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.