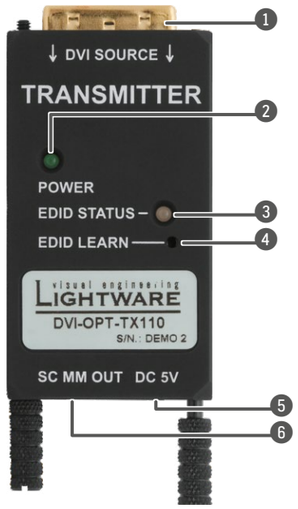
LIGHTWARE
INNOVATIVE. RELIABLE. MADE IN EUROPE.



Quick Start Guide

DVI-OPT-RX110
DVI-OPT-TX110

Top View - Transmitter



Legend - Transmitter

1	**DVI input**	Connect to a DVI source for transmitting a DVI signal or connect to a sink device for learning the EDID; see the Learning an EDID section.
2	**Power LED**	The LED lights green if the power supply is sufficient (DVI or external adaptor supply).
3	**EDID LED**	Three-colored LED displays the EDID status. See the legend for indications.
4	**Learn button**	Press the button for 2 seconds to activate **Learn** mode. Press for 10 seconds to restore the factory default EDID.
5	**Power connector**	Barrel plug receptacle for external power adaptor.
6	**Fiber connector**	SC type receptacle for multimode fiber output.

After powering on, the TX110 unit shows its three digit firmware version with red, green and orange blinks (FW 1.1.6 is: 1x red, 1x green, 6x orange).

Learning an EDID (Transmitter)

1. Plug in the power adaptor to an electrical outlet, or plug in the enclosed USB power cable to an USB connector, and then connect the DC cable to the transmitter.
2. The power and the EDID state LEDs light up.
3. Press and hold down the LEARN button for two seconds. The EDID state LED goes dark, and then lights up orange to indicate that learn mode is activated.
4. Connect the transmitter to a display device; the learn mode is active for 10 seconds.
5. The transmitter reads the EDID from the display device. Do not disconnect the device while it lights orange (approximately 10 seconds).
6. Check if the learning succeeded:
   a. If the learning process was successful, the EDID state LED blinks green slowly for 8 seconds. The stored EDID is changed.
   b. If the learning process failed, the EDID state LED blinks red slowly for 8 seconds. The previously stored EDID remains in memory.
   c. The EDID state LED changes to continuous green or red depending on the validity of the stored EDID.
7. Disconnect the transmitter (if still connected) and the power supply. The stored EDID remains in memory until it is overwritten. The unit is ready to be used for DVI signal extension.

Important Safety Instructions

Please read and keep the information in the attached safety instructions supplied with the product before start using the device.

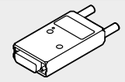
The extenders are Class 3R laser products.

INVISIBLE LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT
Radiated wavelengths:
778 nm, 800 nm, 825 nm, 850 nm
Output power <= 1mW
Classified by EN 60825-1:2008

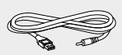
Introduction

DVI-OPT-TX110 and DVI-OPT-RX110 pair is a DVI to fiber transmitter / receiver set for up to 2500 m distance transmission. Using Single Fiber Technology, the DVI-D signal is transmitted over only one multimode 50/125 fiber core. Sources and display devices are galvanically isolated against ground loops and hum effects, and no delay occurs in the signal, the video image is transported without any frame latency.

Box Contents


Extender unit


5V DC power adaptor with interchangeable plugs


USB cable with 1.35/3.5 mm plug



Safety and warranty info, Quick Start Guide

Top View - Receiver

Legend - Receiver

1	**DVI output**	Connect to a DVI display.
2	**Power LED**	Lights green if the unit is powered on.
3	**Hotplug LED**	Indicates that the display device is connected correctly.
4	**Laser LED**	Green light indicates that the laser is properly detected on the optical input.
5	**Power connector**	Barrel plug receptacle for external power adaptor.
6	**Fiber connector**	SC type receptacle for multimode fiber input.

Using the LEARN button (Transmitter)

- When the button is pressed, the EDID state LED turns off to indicate the button press.
- If the button is released sooner than 2 seconds, the press will be ignored.
- If the button is pressed for more than 2 seconds, the EDID learn mode gets activated for a period of 10 seconds.
- If the button is pressed for more than 10 seconds and the unit is not connected to a display device, the factory default EDID will be restored.

EDID status LED legend (Transmitter)

LED light	Meaning
GREEN continuous	EDID valid
RED continuous	EDID invalid
ORANGE continuous	EDID learn mode active
GREEN blinking	EDID learn success
RED blinking	EDID learn failed
ORANGE fast blinking	Reloading factory EDID
ORANGE slow blinking	Laser module failure

Connecting Steps

OPT	Connect a multimode SC fiber cable to the SC MM IN connector on the RX110 unit.
DVI	Connect the receiver to the DVI sink (e.g. monitor).
Power	Power on the DVI sink (monitor).
OPT	Connect the other end of the multimode SC fiber cable to the SC MM OUT connector on the transmitter (TX110) unit.
DVI	Connect the transmitter to a DVI source (e.g. computer).
Power	Power on the DVI source (computer). It reads the EDID from the transmitter, and outputs the video signal according to the set resolution.

Check the LEDs on the transmitter:

a. If both the power LED and the EDID status LEDs are green, the transmitter is ready to use.
b. If the power LED does not light up, the DVI source does not send enough power through the DVI connector, so the external power adaptor or the special USB power cable needs to be connected to the transmitter.
c. If the EDID state LED lights red, an EDID has to be learned.

TAKE CARE OF ME

I AM THE ONE AND ONLY USER DOCUMENT FOR THIS PRODUCT

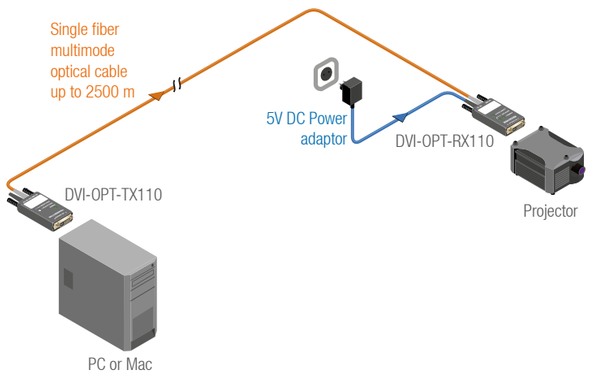
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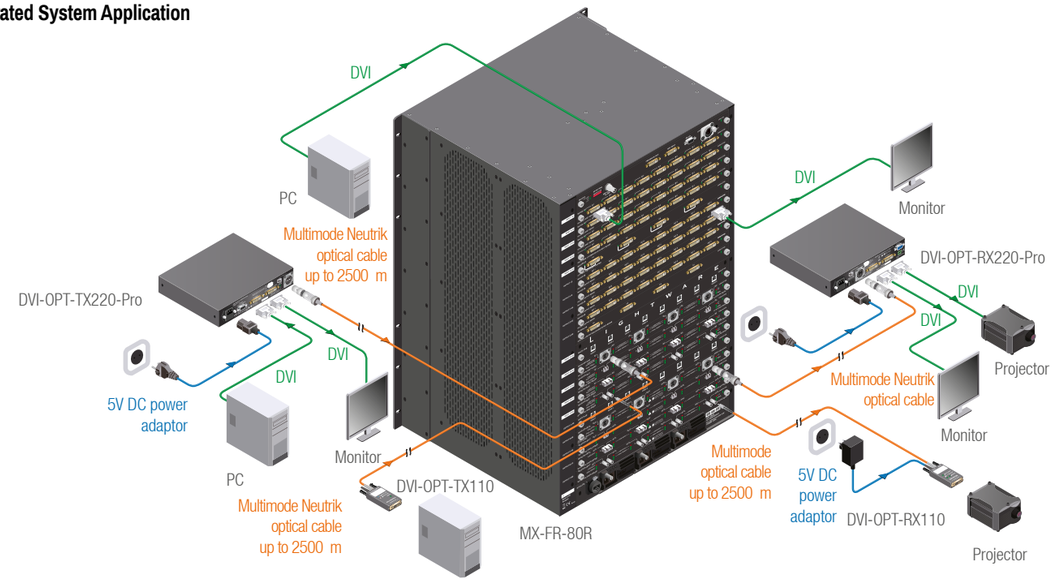
Further information on the device is available at www.lightware.com.

Doc. ver.: 2.5
19210090

Typical Standalone Application



Integrated System Application



Restoring the Factory Default EDID (Transmitter)

1. Power up the transmitter by
   a. using one of the external power supply
   b. connecting it to a DVI source.
2. Press and keep the LEARN button pressed. The EDID state LED goes dark for two seconds, and then turns continuous orange to indicate that learn mode is activated. (Do not connect the unit to a display device.)
3. Keep the button pressed until the LED starts to blink orange (after approximately 10 seconds). Five blinks indicate the EDID restore process.
4. After the restore process is finished, the LED blinks green slowly for 8 seconds. The stored EDID is changed back to factory default (1920x1200@59.55Hz).
5. The unit is ready to be used for DVI signal extension.

Troubleshooting

- Some DVI sources may not supply enough power to the transmitter. Use one of the external power supply methods in this case.
- If the image is noisy make sure that the fiber cable plugs are clean.

Specifications

General

Compliance	CE, UKCA
EMC (Emission)	EN 55032:2015+A1:2020
EMC (Immunity)	EN 55035:2017+A11:2020
Electrical safety	EN 62368-1:2020
Laser safety	EN 60825-1:2014+A11:2021
RoHS	EN 63000:2018
Warranty	3 years
Operating temperature	0° to +40°C (+32° to +104°F)
Operating humidity	10% to 80%, non-condensing
Cooling	passive

Power

Power supply option	power adaptor / USB / DVI port
Power consumption (TX / RX)	1.4 W / 0.8 W
Heat dissipation (TX / RX)	5 BTU/h / 3 BTU/h

Power adaptor

Supported power source	100-240 V AC; 50/60 Hz
Supplied power	5V DC, 1A
AC power plug	Interchangable (EU, UK, JP/US, AUS/NZ)
DC power plug	Locking DC connector (1.35 / 3.5 mm pin)

Enclosure

Enclosure material	solid steel
Dimensions in mm	39 W x 87.5 D x 15.4 H
Dimensions in inch	1.6 W x 3.5 D x 0.6 H
Weight (TX / RX)	200 g / 205 g

Video input (DVI-OPT-TX110)

Connector type	29-pole DVI-I (digital only)
A/V standard	DVI 1.0
Video delay	0 frame
Supported resolutions at 8 bits/color	up to 1920 x 1200 or 2048 x 1080 pixel
Reclocking	Pixel Accurate Reclocking
EDID emulation	Yes, with LEARN button
EDID memory	1 pc user programmable EDID
Factory EDID	1920x1200@59.55Hz

Video output (DVI-OPT-RX110)

The specifications of the output port are the same as in case of the input port.

Fiber Optical Ports

Connector type	SC simplex
Applicable cable	multimode, 50/125
Laser class specification	Class 3R
Laser wavelengths	4 channel: 778; 800; 825; 850 nm
DVI-OPT-TX100 output OMA*	-6.25 dBm (max.)
DVI-OPT-RX100 OMA* sensitivity	-14.25 dBm (max.)
Maximum transmission distance	2500m (using OM4 type optical cable)

*Optical Modulation Amplitude

Maximum Extension Distances

	OM1 (62,5/125)	OM2 (50/125)	OM3 (50/125)	OM4 (50/125)
1080p@60Hz 24 bpp	250 m	600 m	1200 m	2500 m