Dual Link DVI reclocking extender over CAT5 … CAT7 Twisted pair cable

Lightware TP-DL series transceivers are Dual-Link DVI over Twisted pair extenders which transmit Dual-Link DVI-D signals over two CAT5, CAT6A or CAT7 cables. Accessible distances depend on the used cable quality and signal resolution.

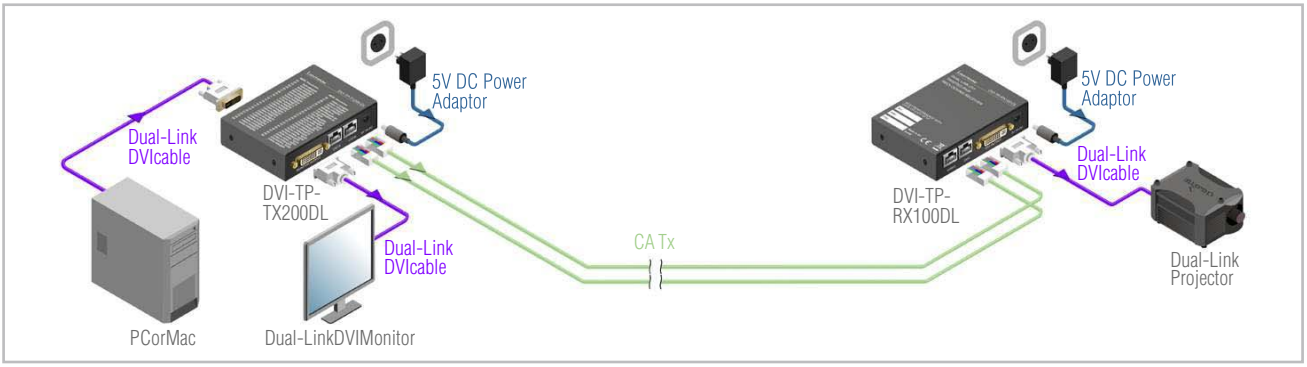
The DVI-TP-TX200DL transmitter includes an EDID Manager and built-in DVI distribution amplifier for local monitor Output. Only two CAT cables are needed for Dual-Link DVI signal transmission, there is no need for third CAT cable to transmit EDID. If a lower resolution Single-Link signal is transmitted, only one CAT cable is needed between the transmitter and the receiver.

TP-DL series transceivers support the highest resolutions up to 3840 x 2400 including all HDTV resolutions: 720p, 1080p, 2K.

DVI-TP-TX200DL stores and emulates 100 EDID, 50 of which are factory preset and 50 are user programmable.

DVI-TP-RX100DL is a high performance Dual-Link Twisted pair reclocking receiver with Automatic and precise Manual cable EQ (equalization) adjustment. It incorporates Lightware's TMDS Reclocking function, which eliminates pixel errors and noise from the video signal.
All transceivers can be rack mounted or used standalone.

TypicalApplication



Options

1Urackshelf

DVI-TP-TX200DL and DVI-TP-RX100DL

Applications

- High resolution video signal transmission
- Rental and Staging
- Fixed installations
- Digital Signage
- Conference rooms, classrooms
- Custom resolution and refresh rate EDID emulation
- Ground Loop isolation

Features

- TMDS Reclocking
  Intra-pair skew compensation
  Jitter compensation
- 50 m long Dual-Link DVI signal transmission at 2560 x 1600 resolution (using two CAT cables)
- 50 m long Single-Link DVI signal transmission at 1920 x 1080p resolution (using one CAT7 cable)
- Advanced EDID Management
- 50 programmable EDID memory addresses
- Local monitor Output
- Locking DC connector for secure connection
- Source detection and Monitor detection LED

Supplied accessories

- +5V DC wall plug adapter

Connectors

Input / Output DVI:	29 pole DVI-I connector
Input / Output Twisted pair:	CAT6 RJ45 connector
Power:	locking DC connector

Specifications

Data rate per TMDS channel:	1.65 Gbps
Transmission distance (with CAT7 SFTP cable):	1920 x 1080p 50 meters (one CATx cable) 2560 x 1600 50 meters (two CATx cables)
Resolution:	3840 x 2400 max
HDCP passthrough:	No
EDID memory:	100 EDID
Programmable EDID memory:	50 EDID
EDID support:	256 Byte Extended EDID
Power:	External power adaptor, DC 5 V
Power consumption (-TX200DL):	4 W
Power consumption (-RX200DL):	7 W
Enclosure:	1 mm metal
Dimensions (-TX200DL):	100,4 W x 67,6 D x 26 H mm
Dimensions (-RX200DL):	100,4 W x 67,6 D x 26 H mm
Net weight (-TX200DL):	230 gramms
Net weight (-RX200DL):	230 gramms
Warranty:	3 years

LED indicators

DVI-TP-TX200DL:	
EDID VALID/INVALID:	indicates valid emulated EDID
MONITOR:	indicates if a Hot Plug signal is provided by the local monitor
SRC +5 V:	indicates if +5 V is sent by the DVI source
DVI-TP-RX100DL:	
AUTO/MANUAL EQ:	indicates which equalization mode is selected
SIGNAL PRESENT:	indicates if an active DVI clock signal is present at CAT-A connector
MONITOR HOTPLUG:	indicates if a Hot Plug signal is provided by the DVI display

DVI-TP-RX100DL's built-in cable equalization circuit has two modes.
For shorter cables, Auto EQ mode can provide the necessary equalization level. For longer cables, manual equalization may be necessary.
The 25-turn potentiometer allows for manual setting between 0 and +40 dB.

Maximum Twisted pair distances

Resolution	VFreq(Hz)	Pixel Clock Freq	CAT5eUTP	CAT5eFTP	CAT6UTP	CAT6FTP	CAT6S/FTP	CAT7S/FTP
640 x 480	60	25,2 MHz	60 m	60 m	65 m	70 m	70 m	80 m
800 x 600	60	40,0 MHz	60 m	60 m	65 m	65 m	65 m	75 m
1024 x 768	60	65,0 MHz	55 m	55 m	60 m	60 m	60 m	75 m
1280 x 720p	60	74,2 MHz	55 m	55 m	60 m	60 m	60 m	70 m
1280 x 1024	60	108,0 MHz	50 m	50 m	55 m	60 m	60 m	65 m
1400 x 1050	60	121,8 MHz	45 m	45 m	45 m	55 m	55 m	60 m
1600 x 1200	60	162,0 MHz	30 m	35 m	35 m	45 m	45 m	50 m
1920 x 1080p	60	148,5 MHz	30 m	35 m	35 m	45 m	45 m	50 m
1920 x 1200p	60	153,0 MHz	30 m	35 m	35 m	45 m	45 m	50 m
2048 x 1536p	60	208,0 MHz	50 m	50 m	55 m	60 m	60 m	65 m
2560 x 1600p	60	268,0 MHz	30 m	35 m	35 m	45 m	45 m	50 m
3840 x 2400p	30	304,0 MHz	30 m	35 m	35 m	45 m	45 m	50 m
4096 x 2400p	24	271,3 MHz	30 m	35 m	35 m	45 m	45 m	50 m