



DCE II Owner's Manual

DVI over CATx Extension Module



PureLink™
535 East Crescent Ave
Ramsey, NJ 07446
Tel: 201.488.3232
Fax: 201.621.6118

Website : www.purelinkav.com
E-mail : info@purelinkav.com

For Technical Support, contact us at
: support@purelinkav.com

Package Contents

Please make sure all of the following items are included in the package:

- 1 x DCE II Transmitter Module
- 1 x DCE II Receiver Module
- 1 x User Manual

Description

The PureLink DCE II is a transmitter and receiver set for long distance extension of DVI video signal over single CAT 5/6/7- type cable. It is designed on PureLink's proprietary CATx extension technology which allows signal extension up to 165 ft (50m) at 1920 x 1200 @60Hz or 1080p. A compact and low profile enclosure makes the DCE II ideal for extending DVI video to limited space environment such as behind a flat-panel display.

Features

- **Zero loss & Zero noise delivery** of digital high definition video and audio signal using UTP connection, DCE II delivers HD signals over CAT5/6/7-type cables without loss or digital interference maintaining the clarity and colors. Noise cancellation and error correction logic enhances DVI video signal over long distance.
- **Compact and Robust enclosure design** allows for discreet installation behind a flat-panel display.
- Uncompressed high definition video up 1920 x 1200@60Hz and 1080p@60Hz.
- Video Bandwidth – 1.65 Gbps.
- No external power required. – If transmitter receives 5V from the source device, you do not need external power.
- Built-in micro USB port on the transmitter for external power just in case DVI source does not provide enough power. (PSU is not included)
- LED signal indicator
- 1920 x 1200@60Hz & 1080p EDID pre-built in to the transmitter
- DCE II does not support HDCP

Product application note



Figure 1 – Schematic Connection Diagram of DCE II Tx/Rx

Product Specification Transmitter

Model	DCE II Tx
Input type	DVI-D, 1 port Micro USB, 1 port
Output type	CATx, 1 port
Supporting Display Resolutions	VGA ~ WUXGA (up to 1920 x 1200 @ 60Hz), 480i ~ 1080p@60Hz
Max. Distance	1920x1200 @ 60Hz or 1080p@60Hz: 165ft (50m)
Conformations	DVI version 1.0
Power Rating	DC 5V , 1A
Power Consumption	320mA
Dimension (WxDxH)	1.6'' x 2.2'' x 0.9'' (40.2 x 55.5 x 22.5 mm)
Weight	0.08 lbs (35 g)

Factory default EDID table

1024 x 768 @ 60Hz
1280 x 720 @ 60Hz
1280 x 800 @ 60Hz
1280 x 960 @ 60Hz
1280 x 1024 @ 60Hz
1440 x 900 @ 60Hz

1600 x 900 @ 60Hz
1600 x 1200 @ 60Hz
1680 x 1050 @ 60Hz
1920 x 1080 @ 60Hz
1920 x 1200 @ 60Hz

Receiver

Model	DCE II Rx
Input type	CATx, 1 port
Output type	DVI-D, 1 port Micro USB, 1 port
Supporting Display Resolutions	VGA ~ WUXGA (up to 1920 x 1200 @ 60Hz), 480i ~ 1080p@60Hz
Max. Distance	1920x1200 @ 60Hz or 1080p@60Hz: 165ft (50m)
Conformations	DVI version 1.0
Power Rating	DC 5V , 1A
Power Consumption	320mA
Dimension (WxDxH)	1.6'' x 2.2'' x 0.9'' (40.2 x 55.5 x 22.5 mm)
Weight	0.08 lbs (35 g)

Operation and Reliability Specification

1. Operating Environment

Temperature : 32F ~ 131F (0°C~ 55°C)
Humidity : 10% ~ 80%
Altitude : 3,000m Max.

2. Transit Environment

Temperature : -13F ~ 140F (-25°C~ 60°C)
Humidity : 5% ~ 95%
Altitude : 15,000m Max.

3. Storage Environment

Temperature : -4F ~ 185F (-20°C~ 85°C)
Humidity : 5% ~ 95%
Altitude : 3,000m Max.

4. Reliability

MTBF: 90% at over 50,000 hours aging test

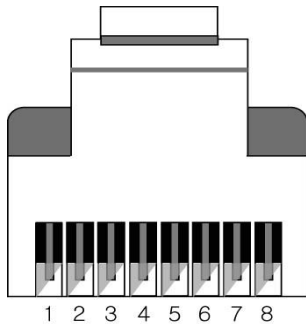
- In compliance with LCD Monitor reliability test standard

Installation and Connection Instructions

1. Turn off both the video source and the display before connecting any cables.
2. Connect CATx cable between the DCE II transmitter and the DCE II receiver.
3. Connect DVI cable between the source and the DCE II transmitter and the DCE II receiver and the display.
4. Connect the power supply unit to DCE II transmitter (only if video source does not output enough power to the transmitter).
5. Turn on Display.
6. Turn on Video Source.

How to terminate CATx cable

DCE II was designed to conform to TIA/EIA-568-B standard. Please ensure that each PIN layout of DCE II transmitter and DCE II receiver are corresponding with the picture below before connecting the cable. Please note that CAT5e or above level cable enables to deliver better video quality and longer distance.



Pin	Wire color	Digital RGB
1	Orange/ White	TMDS DATA2 +
2	Orange	TMDS DATA2 -
3	Green/ White	TMDS CLOCK +
4	Blue	TMDS DATA1 +
5	Blue/ White	TMDS DATA1 -
6	Green	TMDS CLOCK -
7	Brown/ White	TMDS DATA0 +
8	Brown	TMDS DATA0 -

CATx cable

Link cable recommend use high quality CAT5e, CAT6, CAT6a, CAT7 UTP / STP or FTP cable.

Transmission Distance

The maximum transmission distance up to 165ft (50 meters) at 1920x1200@60Hz or 1080p@60Hz.

If connection through the wall socket, the cable length must less 5 meters between DVI extender and wall jack, as below drawing:



Chapter 3. Additional Information

3.1 Manufacturer's Warranty (3-Years)

PureLink warrants this DCEII Tx/Rx extender to be free from defects in workmanship and materials, under normal use and service, for a period of three (3) years from the date of purchase from PureLink or its authorized resellers.

If the product does not operate as warranted during the applicable warranty period, PureLink shall, at its option and expense, execute one of the following as necessary:

1. Repair the defective product or part
2. Deliver to customer and equivalent product or part to replace the defective item
3. Refund to customer the purchase price paid for the defective product

All products that are replaced become the property of PureLink. Replacement products may be new or reconditioned. Repaired or replacement products or parts come with a 90-day warranty or the remainder of the warranty period. PureLink shall not be responsible for any software, firmware, information, or memory data loss of contained in, stored on, or integrated with any products returned to PureLink for repair under warranty.

3.2 Customer Service

Any customer service inquiries can be submitted electronically through the Q&A form on our website (www.purelinkav.com).

For immediate assistance please contact us at (201) 488-3232 to reach our customer care or tech support team.

FCC/CE Statement

This device complies with part 15 of FCC Rules and EN 55022/55024/61000-3 for CE certification. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must not accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 and 2 of FCC Rules and EN 55022/55024/61000-3 for CE certification. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction guide, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult a service representative for help.

Properly shielded and grounded cables and connectors must be used in order to comply with FCC/CE emission limits. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

