Manuals+ — User Manuals Simplified.

KRAMER PT-571HDCP DVI Line Transmitter User Manual

KRAMER PT-571HDCP DVI Line Transmitter

Contents

PT-571HDCP, PT-572HDCP+ Quick Start Guide

This guide 1helps you install and use your products for the first time. For more detailed information, go to **http://www.krameretectronics.com/support/product_downloads.asp** to download the latest manual or scan the QR code on the left.

Step 1: Check what's in the box
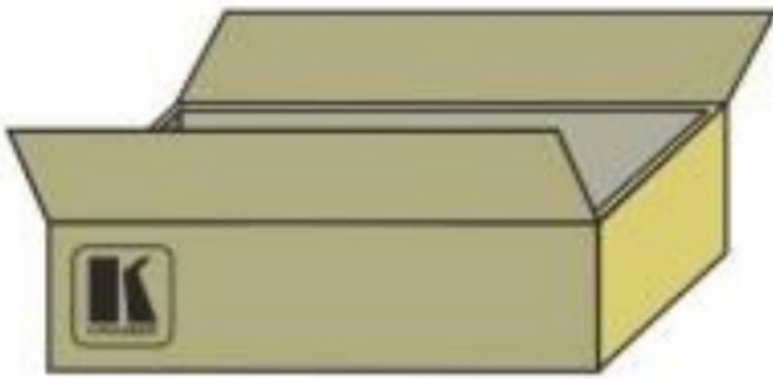
☑ **PT-5,71HDCP, PT-572HDCP+**
DVI Line Transmitter and Receiver

☑ 2 Power supplies 12V DC

☑ 8 Rubber feet

☑ 1 Quick Start guide

☑ Mounting brackets

Save the original box and packaging materials in case you need to return your devices for service.

Step 2: Install the PT-571 HDCP, PT-572HDCP+

Attach the rubber feet and place on a table or mount the **PT-571 HDCP, PT-572HDCP+** in a rack (using an optional **RK-4PT** rack adapter).

Step 3: Connect the inputs and outputs

Always switch off the power on each device before connecting it to your PT-571 HDCP, PT-572HDCP+.
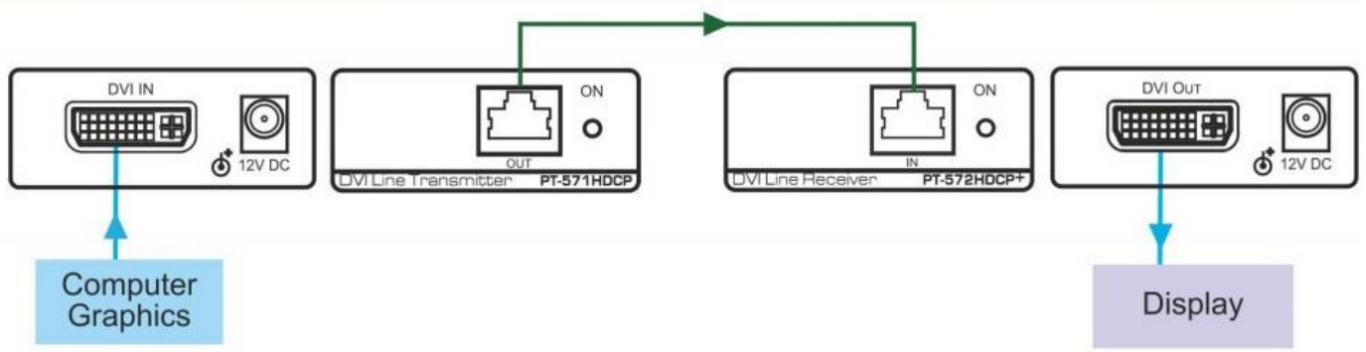
Always use Kramer high-performance cables for connecting AV equipment to your Kramer products.

Step 4: Connect the power

Connect the 12V DC power adapters to the **PT-571 HDCP, PT-572HDCP+** and plug the adapter into the mains electricity.

Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Our 1,000-plus different models now appear in 11 groups that are clearly defined by function: GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Routers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters, and GROUP 11: Sierra Products.

Congratulations on purchasing your Kramer **PT-571HDCP** and **PT-572HDCP+** transmitter/receiver pair, which is ideal for the following typical applications:

- Boardrooms, conference rooms and training rooms
- Presentation systems
- Signal distribution and home theater
- Range extender for medical equipment

 You must use Shielded Twisted Pair (STP) cabling with the PT-571HDCP and PT-572HDCP+.

 Use only a straight pin-to-pin cable with RJ-45 connectors that meet the EIA /TIA 568B standard. Failure to do so may result in damage to the device (s).

Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual
  Go to **http://www.kramerelectronics.com/support/product_downloads.asp** to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables (we recommend Kramer high-performance, high-resolution cables) to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Do not secure the cables in tight bundles or roll the slack into tight coils
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality
- Position your Kramer **PT-571HDCP** and **PT-572HDCP+** transmitter/receiver pair away from moisture, excessive sunlight and dust.

This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.

Safety Instructions

Caution: There are no operator serviceable parts inside the unit
Warning: Use only the Kramer Electronics input power wall adapter that is provided with the unit
Warning: Disconnect the power and unplug the unit from the wall before installing

Recycling Kramer Products

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer's recycling arrangements in your particular country go to our recycling pages at **http://www.kramerelectronics.com/support/recycling/**.

Accessory to Medical Equipment (IEC 60601-1-2)

In the modern medical environment remote access is essential, for example, to transfer clinical data between doctors and to train to medical students. The **PT-571HDCP/PT-572HDCP+** pair is certified according to the IEC 60601-1-2, Clause 2.1.3, Medical Electrical Equipment, Part 1: General Requirements for EMC standard which is required when accessory devices are used at locations where medical personnel and patients are present.

The **PT-571HDCP/PT-572HDCP+** pair constitutes an optional component that can be considered necessary and suitable as part of medical equipment or for use as part of a medical system to provide real time simultaneous video feeds to those present at the local medical environment and at remote locations. In this environment, the **PT-571HDCP/PT-572HDCP+** can be added to the system ONLY if the connecting equipment has been evaluated and meets the IEC 60601-1-2 EMC standards. Note, that when attaching accessory devices to a digital or analog interface, they must comply with the IEC standard for which they are used: EMC Standard (IEC 60601-1-2), Information Technology equipment (IEC 60950-1 (2ed)).

Overview

The PT-571HDCP is a DGKat™ twisted pair transmitter for DVI signals. The **PT-571HDCP** converts a DVI signal

to a single twisted pair signal and the **PT-572HDCP+** converts the twisted pair signal back to a DVI signal.

The DVI Line Transmitter/Receiver system features:

- Maximum data rate/bandwidth up to 4.95Gbps (1.65Gbps per graphic channel), WUXGA, 1920x1080p
- HDTV compatibility and HDCP compliance
- Medical equipment compliance
- EDID PassThru that passes EDID signals between the source and display
- 3D pass-through
- Up to 90m (295ft) at SXGA, or up to 30m (98ft) at UXGA on shielded **BC–DGKat524** cable. Up to 90m (295ft) at SXGA, or up to 70m (230ft) at UXGA on shielded **BC–DGKat623** cable. Up to 100m (330ft) at SXGA, or up to 80m (265ft) at UXGA on shielded **BC–DGKat7a23** cable
  Note that the transmission range depends on the signal resolution, graphics card and display used. The distance using non-Kramer CAT 5, CAT 6 and CAT 7a cables may not reach these ranges
- DGKat™ Signal Integration – Kramer's unique technology for converting TMDS as well as control and communication to signals that run over twisted pair cables
- Power Connect™ that feeds 12V DC over the CAT 5 cable from transmitter to receiver (see Section 3.2)
- Ultra-Compact Pico TOOLS™ – 4 units can be rack mounted side–by–side in a 1U rack space with the optional **RK–4PT** rack adapter.
- Use only shielded cable where both ends of the shield are soldered to ground to eliminate ESD interface.

 Use only shielded cable where both ends of the shield are soldered to ground to eliminate ESD interface.

Using Twisted Pair Cable

Kramer engineers have developed special twisted pair cables to best match our digital twisted pair products; the Kramer: **BC-DGKat524** (CAT 5 24 AWG), the Kramer: **BC-DGKat623** (CAT 6 23 AWG cable), and the Kramer: **BC-DGKat7a23** (CAT 7a 23 AWG cable). These specially built cables significantly outperform regular CAT 5/CAT 6/CAT 7a cables.

About the Power Connect™ Feature

The Power Connect™ feature here means that only one unit in a system, the transmitter or receiver, needs to be connected to a power source when the devices are within 90m (270ft) of each other. The Power Connect™ feature applies as long as the cable can carry power and the distance does not exceed 90m on standard CAT 5 cable. For longer distances, heavy gauge cable should be used (CAT 5 cable is still suitable for the video/audio transmission, but not for feeding the power at these distances).

Defining the PT-571HDCP DVI Line Transmitter

The Kramer Pico TOOLS **PT-571HDCP** DVI Line Transmitter receives a DVI signal, encodes it, and transmits it over a CAT 5 cable to the **PT-572HDCP+.** The **PT-571HDCP** has:

- A DVI input connector
- An RJ-45 CAT 5 output connector
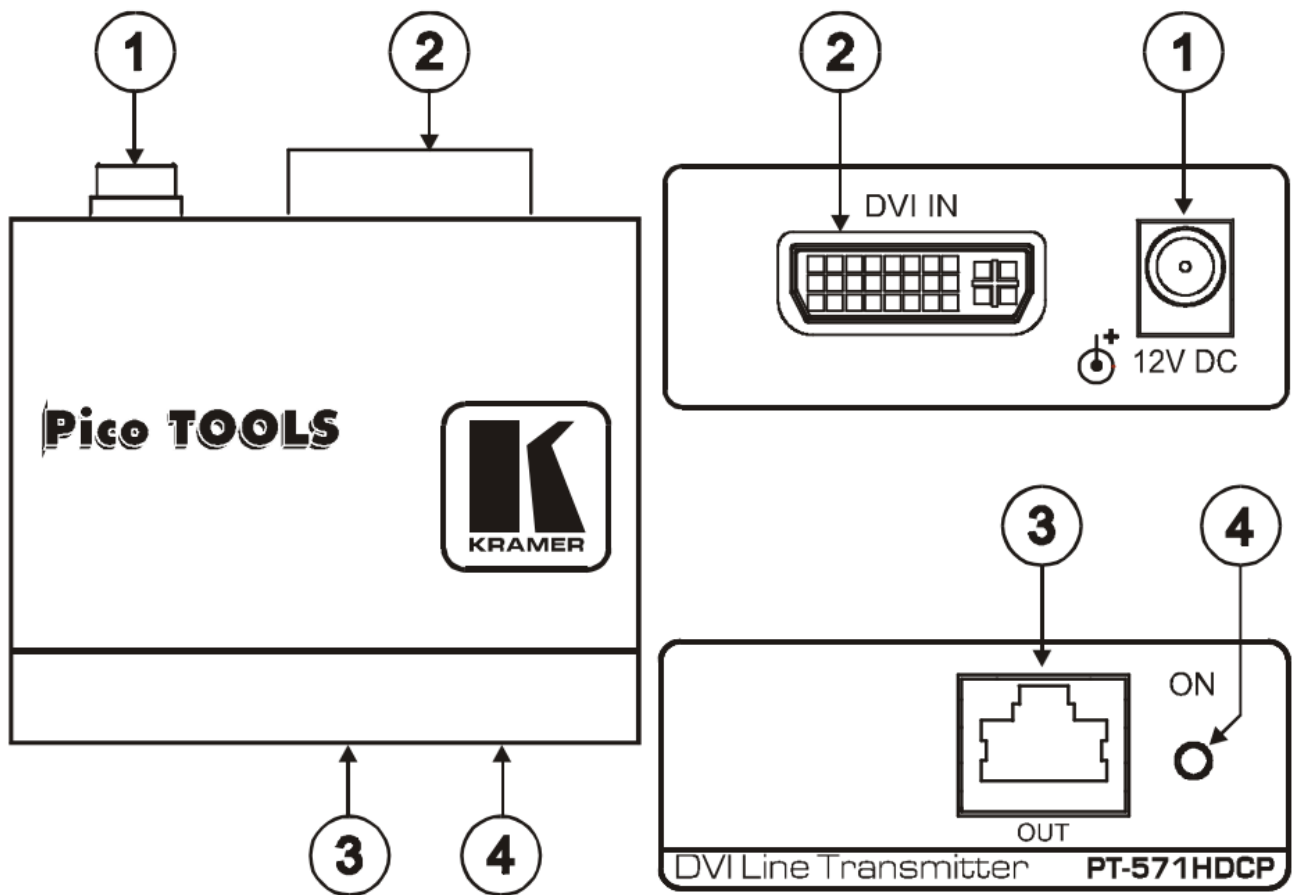- One power status LED

Figure 1: PT-571HDCP DVI Line Transmitter

#	Feature	Function
1	*12V DC*	+12V DC connector for powering the unit
2	*DVI IN* Connector	Connect to the DVI source
3	*OUT* RJ-45 Connector	Connect to the IN RJ-45 connector on the **PT-572HDCP+**
4	*ON* LED	Lights only when the machine is powered (whether directly from the power adapter or via the **PT-572HDCP+**) and an input is connected If no input is connected the unit invokes the power save mode automatically turning off the power

Defining the PT-572HDCP+ DVI Line Receiver

The Kramer Pico TOOLS PT-572HDCP+ DVI Line Receiver receives an encoded signal over a CAT 5 cable transmitted from the PT-571HDCP, decodes it, and converts it to a DVI output.

The **PT-572HDCP+** has:

- A DVI output connector
- An RJ-45 CAT 5 input connector
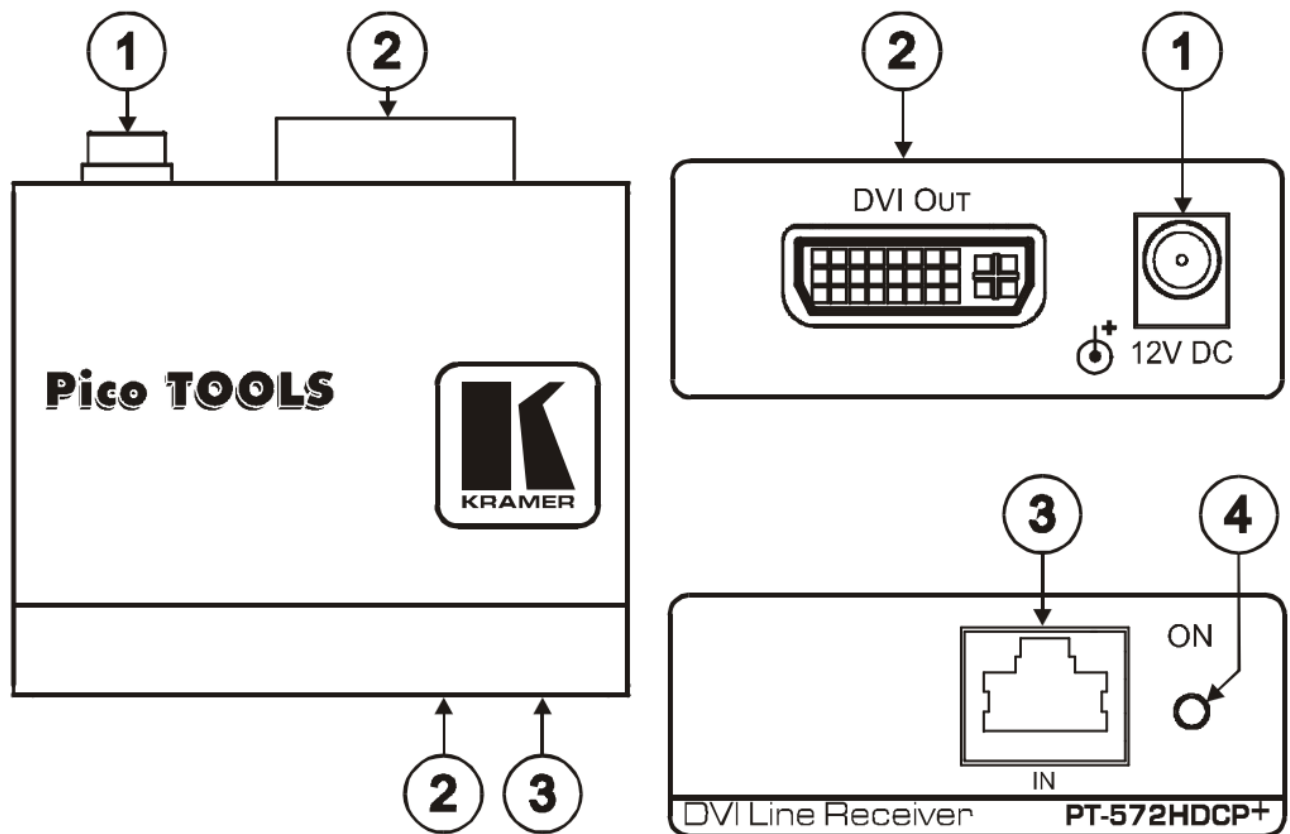- One power status LED

Figure 2: PT-572HDCP+ DVI Line Receiver

#	Feature	Function
1	*12V DC*	+12V DC connector for powering the unit
2	*DVI OUT* Connector	Connect to the DVI acceptor
3	*IN* RJ-45 Connector	Connect to the OUT RJ-45 connector on the **PT-571HDCP**
4	*ON* LED	Lights red when receiving power only, orange when output and power are attached, and yellow when both an active input and output are attached

Connecting the Transmitter Receiver Pair

Always switch off the power to each device before connecting it to your Transmitter and Receiver pair. After connecting your Transmitter and Receiver pair, connect the power and then switch on the power to each device.

You can use the **PT-571HDCP** DVI Line Transmitter with the **PT-572HDCP+** DVI Line Receiver to configure a DVI transmitter/receiver system.

To connect the **PT-571HDCP** to the **PT-572HDCP+,** as illustrated in the example in Figure 3, do the following:

1. Connect the CAT 5 OUT RJ-45 connector on the **PT-571HDCP** to the CAT 5 IN RJ-45 connector on the PT-572HDCP+ via a CAT 5 cable (see Section 6.1).
2. On the **PT-571HDCP,** connect a DVI source (for example, a computer graphics source) to the DVI IN connector.
3. On the **PT-572HDCP+,** connect the DVI OUT connector to a DVI acceptor (for example, a display).

4. Connect the 12V DC power adapter to the power socket on the **PT-571HDCP** and/or the **PT-572HDCP+** and connect the adapter to the mains electricity (not shown in Figure 3).
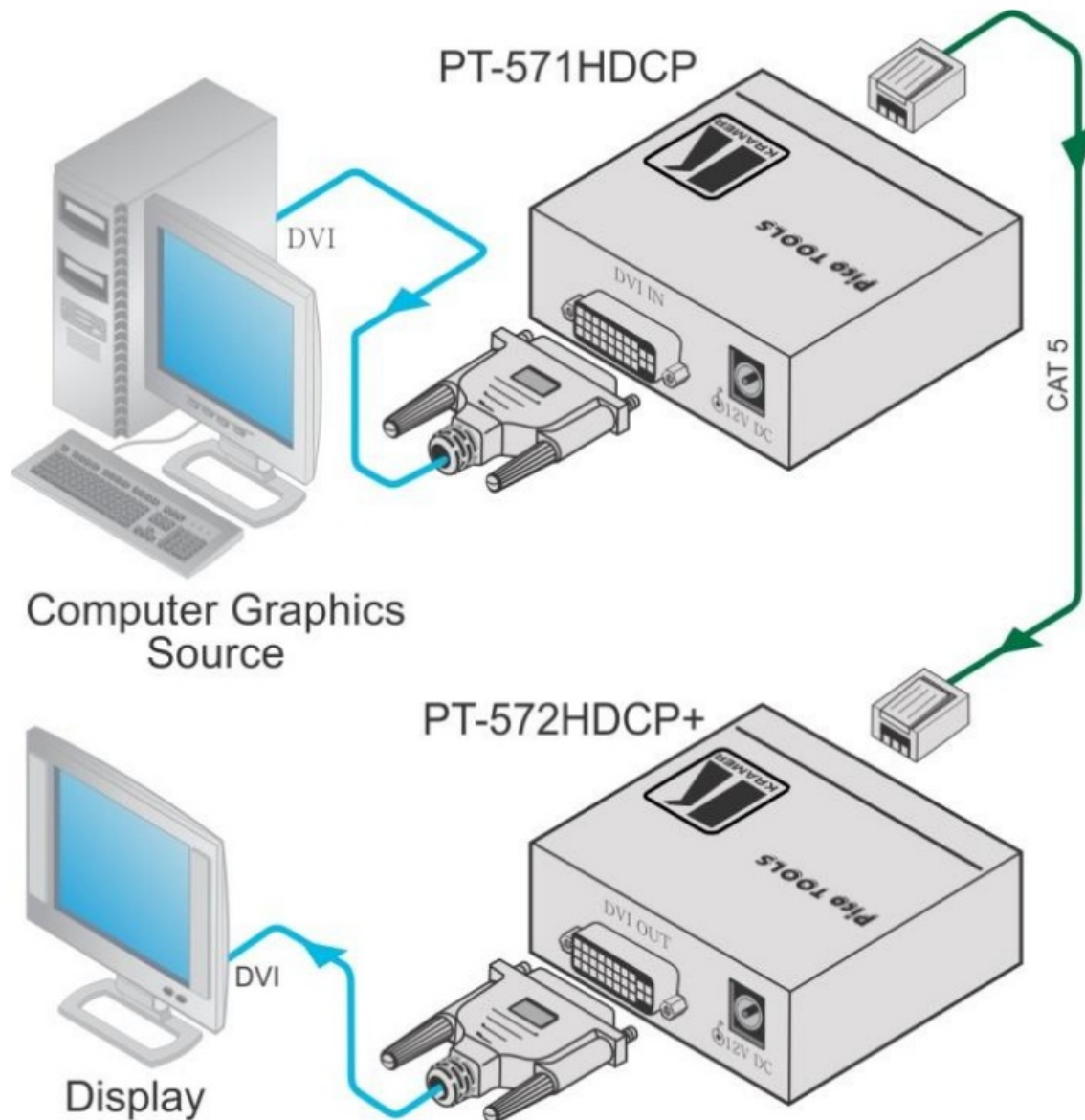

Figure 3: Connecting the PT-571HDCP/PT-572HDCP+ Transmitter/Receiver Pair

Wiring the CAT 5 LINE IN / LINE OUT RJ-45 Connectors
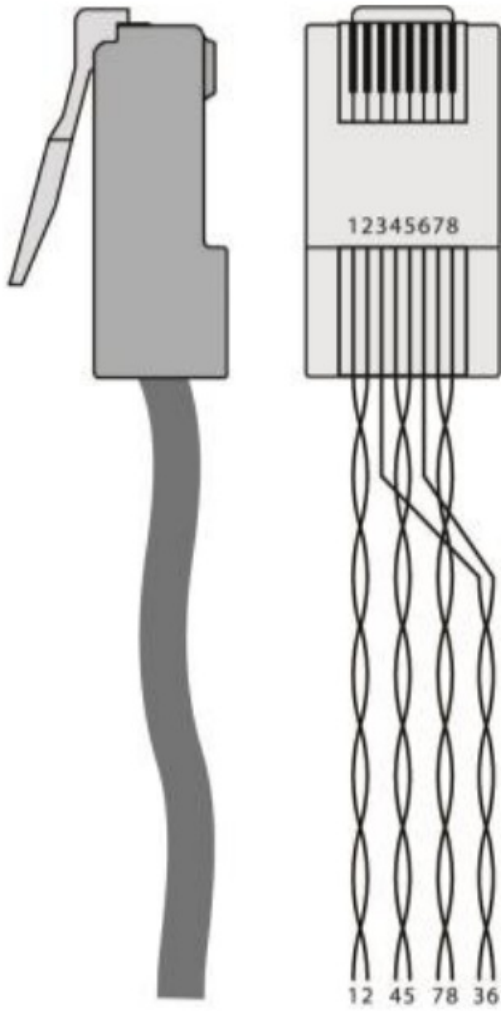
This section defines the CAT 5 pinout, using a straight pin-to-pin cable with RJ-45 connectors.

 Note, that the cable Ground shielding must be connected / soldered to the connector shield.

EIA /TIA 568B	
PIN	**Wire Color**
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown
Pair 1	4 and 5
Pair 2	1 and 2
Pair 3	3 and 6
Pair 4	7 and 8

Figure 4: CAT 5 PINOUT

Technical Specifications

	PT-571HDCP	PT-572HDCP+
INPUTS:	1 DVI, 1.2Vpp on a DVI Molex 24pin female connector; DDC signal 5Vpp (TTL)	1 RJ-45 connector
OUTPUTS:	1 RJ-45 connector	1 DVI, 1.2Vpp on a DVI Molex 24-pin female connector; DDC signal 5Vpp (TTL)
MAX. DATA RATE:	4.95Gbps (1.65Gbps per graphic channel)	
OPERATING TEMPERATURE:	0° to +40°C (32° to 104°F)	
STORAGE TEMPERATURE:	-40° to +70°C (-49° to 158°F)	
HUMIDITY:	10% to 90%, RHL non-condensing	
POWER SOURCE:	12V DC, 310mA (transmitter and receiver together)	
DIMENSIONS:	6.2cm x 5.2cm x 2.4cm (2.4″ x 2.1″ x 1″) W, D, H	
WEIGHT:	0.14kg (0.3lbs)	
INCLUDED ACCESSORIES:	Power supply, mounting brackets	
OPTIONAL ACCESSORIES:	19" RK-4PT rack adapter, Kramer DVI cables and BC-DGKat524 (CAT 5 24 AWG), BC-DGKat623 (CAT 6 23 AWG) and BC-DGKat7a23 (CAT 7a 23 AWG) cables	

Specifications are subject to change without notice

Go to our Web site at **http://www.kramerelectronics.com** to access the list of resolutions

LIMITED WARRANTY

The warranty obligations of Kramer Electronics for this product are limited to the terms set forth below:
What is Covered
This limited warranty covers defects in materials and workmanship in this product.
What is Not Covered
This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration. modification, improper or unreasonable use or maintenance. misuse, abuse. accident, neglect. exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product. Without limiting any other exclusion herein, Kramer Electronics does not warrant that the product covered hereby, including. without limitation. the technology and/or integrated circuit (s) included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology with which the product may be used.
How Long Does this Coverage Last
Seven years as of this printing; please check our Web site for the most current and accurate warranty information.
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Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.
What Kramer Electronics will do
Kramer Electronics will, at its sole option, provide one of the following three remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1. Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labor to complete the repair and restore this product to its proper operating condition. Kramer Electronics will also pay the shipping costs necessary to return this product once the repair is complete.
2. Replace this product with a direct replacement or with a similar product deemed by Kramer Electronics to perform substantially the same function as the original product.
3. Issue a refund of the original purchase price less depreciation to be determined based on the age of the product at the time remedy is sought under this limited warranty.

What Kramer Electronics will not do Under

This Limited Warranty If this product is returned to Kramer Electronics or the authorized dealer from which it was purchased or any other party authorized to repair Kramer Electronics products, this product must be insured during shipment, with the insurance and shipping charges prepaid by you. If this product is returned uninsured, you assume all risks of loss or damage during shipment. Kramer Electronics will not be responsible for any costs related to the removal or re-installation of this product from or into any installation. Kramer Electronics will not be responsible for any costs related to any setting up this product, any adjustment of user controls or any programming required for a specific installation of this product.

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To obtain a remedy under this limited warranty, you must contact either the authorized Kramer Electronics reseller from whom you purchased this product or the Kramer Electronics office nearest you. For a list of authorized Kramer Electronics resellers and/or Kramer Electronics authorized service providers, please visit our web site at **www.kramerelectronics.com** or contact the Kramer Electronics office nearest you.
In order to pursue any remedy under this limited warranty, you must possess an original, dated receipt as proof of purchase from an authorized Kramer Electronics reseller. If this product is returned under this limited warranty, a return authorization number, obtained from Kramer Electronics, will be required. You may also be directed to an authorized reseller or a person authorized by Kramer Electronics to repair the product. If it is decided that this product should be returned directly to Kramer Electronics, this product should be properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization number will be refused.

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Other Conditions

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Customer Support

For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found. We welcome your questions, comments, and feedback.

Web site: **www.kramerelectronics.com**
E-mail: **info@kramerel.com**

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● **SAFETY WARNING**
Disconnect the unit from the power supply before opening and servicing

Documents / Resources

KRAMER PT-571HDCP DVI Line Transmitter [pdf] User Manual
PT-571HDCP DVI Line Transmitter, PT-571HDCP, DVI Line Transmitter, Line Transmitter, Transmitter

KRAMER PT-571HDCP DVI Line Transmitter [pdf] User Manual
PT-571HDCP, PT-571HDCP DVI Line Transmitter, DVI Line Transmitter, Line Transmitter, Transmitter, PT-572HDCP

References

- 🌐 **Kramer | Audio Visual Solutions - Kramer**
- 🌐 **Kramer | Audio Visual Solutions - Kramer**
- 🌐 **Kramer Pro AV manufacturer - Product Categories**
- **User Manual**