KRAMER

USER MANUAL

MODEL:

PT-871/2-KIT, PT-871/2xr-KIT, WP-871xr, PT-872xr
HDMI Line Transmitters and Receivers over Long-Reach DGKat

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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 15 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 & Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Mounting and Rack Adapters; GROUP 11: Sierra Video; GROUP 12: Digital Signage; GROUP 13: Audio; GROUP 14: Collaboration; and GROUP 15: KM & KVM Switches.

Getting Started

Achieving the Best Performance on page 1

Safety Instructions on page 2

Recycling Kramer Products on page 2

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 k.kramerav.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

- 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-871/2-KIT, PT-871/2xr-KIT, WP-871xr, PT-872xr** 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 power supply 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 www.kramerav.com/support/recycling.

Overview

Congratulations on purchasing your Kramer **PT-871/2-KIT, PT-871/2xr-KIT, WP-871xr, PT-872xr HDMI Line Transmitters and Receivers over Long-Reach DGKat. PT-871/2-KIT, PT-871/2xr-KIT, WP-871xr, PT-872xr** are high-performance, long-reach DGKat™ 2.0 transmitters and receivers for 4K@60Hz (4:4:4) HDR HDMI 2.0, HDCP 2.2 signals and 2−way powering over twisted pair. The transmitters convert the HDMI input signal into a DGKat™ 2.0 signal. The receivers convert the transmitted DGKat™ 2.0 signal into an HDMI signal.

- High Performance Extender – Professional DGKat™ 2.0 extender for providing long-reach signals over twisted pair copper infrastructures. These devices employ low-level video compression technology that delivers visually lossless performance for 4K@60Hz (4:4:4) HDR signals with near-zero latency.
- HDMI Signal Extension – HDR, HDMI 2.0 and HDCP 2.2 compliant. Support deep color, x.v.Color™, lip sync, HDMI uncompressed audio channels, Dolby TrueHD, DTS-HD, 2K, 4K, and 3D. EDID signals are passed through from the source to the display.
- EDID Pass-through – pass-through algorithm ensures Plug and Play operation for HDMI source and display systems.
- Multi-channel Audio Extension – Up to 32 channels of digital stereo uncompressed signals for supporting studio-grade surround sound.
- Cost-effective Maintenance – Status LED indicators for power and connectivity facilitate easy local maintenance and troubleshooting.
- Easy and Cost-effective Installation – Installation is fast and cost-effective via a

single twisted pair cable, providing both video signal and power (PoC) connections. **PT-871/2-KIT, PT-871/2xr-KIT,** and **PT-872xr** are designed with Compact Pico TOOLS™ fan-less enclosure for device-back mounting, or side-by-side mounting of 4 units in a 1U rack space with the **RK-4PT-B** rack adapter (for all models) or the **RK-4PT** rack adapter (for **PT-871/2-KIT**). The **WP-871xr** wall plate compactly fits into standard US, EU and UK 1-gang in-wall box size, supporting decorative integration with room deployed user interfaces such as electrical switches.

Typical Applications

PT-871/2-KIT, PT-871/2xr-KIT, WP-871xr, PT-872xr are ideal for the following typical applications:

- Long-distance AV signal extension for large room connectivity.
- AV extension in meeting rooms, boardrooms, hotels and corporate facilities.

Defining PT-871/2-KIT, PT-871/2xr-KIT, WP-871xr, PT-872xr

PT-871/2-KIT includes PT-871 and PT-872. **PT-871/2xr-KIT** includes PT-871xr and PT-872xr.

PT-871

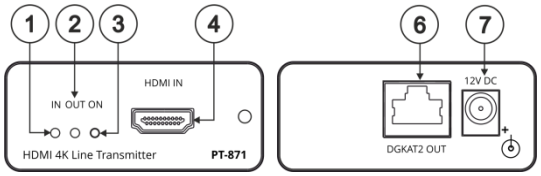


Figure 1: **PT-871** Line Transmitter

PT-872

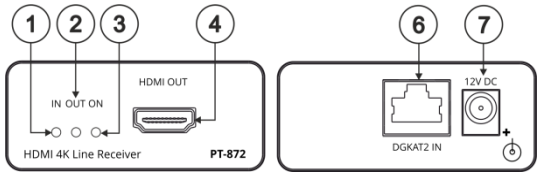


Figure 2: **PT-872** Line Receiver

PT-871xr

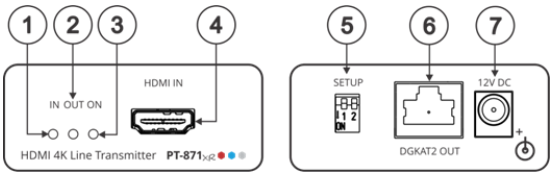


Figure 3: **PT-871xr** Line Transmitter

PT-872xr

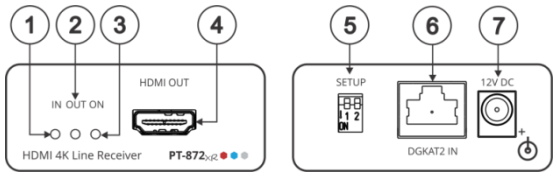


Figure 4: **PT-872xr** Line Receiver

#	Feature		Function	
1	LED Indicators	IN	Lights when an active source is connected to HDMI IN on the transmitter.	
2		OUT	Lights when an active acceptor is connected to HDMI OUT on the receiver.	
3		ON	Lights when power is connected to the device.	
4	HDMI IN Connector (**PT-871, PT-871xr**)		Connect to an HDMI source.	
	HDMI OUT Connector (**PT-872, PT-872xr**)		Connect to an HDMI acceptor.	
5	SETUP DIP-switches (**PT-871xr, PT-872xr**)		Always set DIP-switch 1 identically on both devices.	
			DIP-switch 1: Compression Options	OFF (up) – Standard compression level (default). ON (down) – High compression level for additional range extension.
			DIP-switch 2:	Must be set to OFF (up).

#	Feature		Function
6	DGKAT2 RJ-45 Connector	OUT (**PT-871, PT-871xr**)	Connect to the DGKat-2.0 IN connector on the **PT-872xr** using twisted pair cable.
		IN (**PT-872, PT-872xr**)	Connect to the DGKat-2.0 OUT connector on the **PT-871xr** using twisted pair cable.
7	12V DC Connector		Connect to the power adapter of one of the devices.

WP-871xr

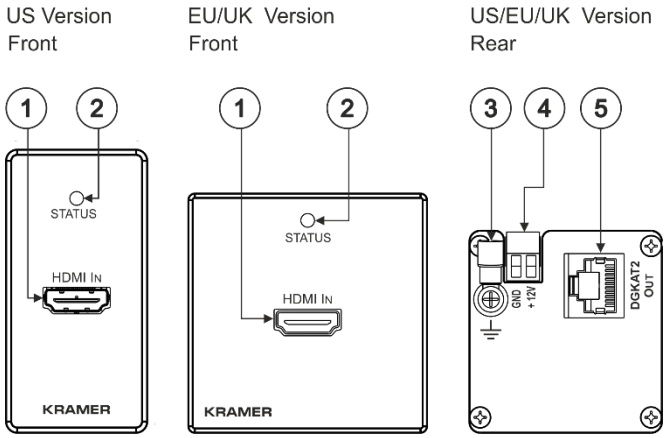


Figure 5: **WP-871xr** Line Transmitter Wall-plate

#	Feature	Function
1	HDMI IN Connector	Connect to an HDMI source.
2	STATUS LED	Lights green when power is connected to the device. Lights blue when powered and both active source and acceptor are detected.
3	Ring Tongue Terminal Grounding Screw	Connect to grounding wire (optional).
4	Power Supply 2-pin Terminal Block Connector	Connect to the power adapter (if required). Connect GND to GND, +12V to +12V.
5	DGKAT2 OUT RJ-45 Connector	Connect to the DGKat-2.0 IN connector on the **PT-872xr** using CAT 6A cable.

WP-871xr – Front Panel Before Assembly

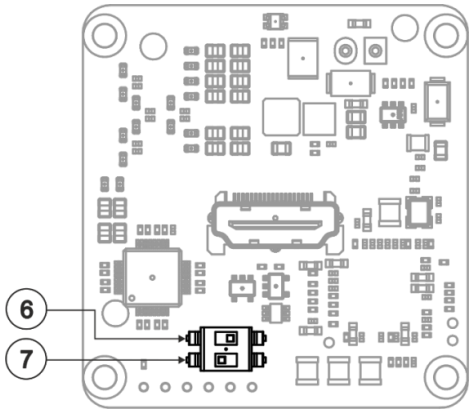


Figure 6: **WP-871xr** Line Transmitter Wall-plate – Front Panel Before Assembly

#	Feature	Function	
	SETUP DIP-switches	Do not change the default DIP-switch settings (located on the front panel, behind the frame)	
6		DIP-switch 1	Must be set to ON (right).
7		DIP-switch 2	Must be set to OFF (up).

Installing the Device

This section provides instructions for installing **PT-871/2-KIT, PT-871/2xr-KIT, WP-871xr, PT-872xr**.

Before installing the device, verify that the environment is within the recommended range:

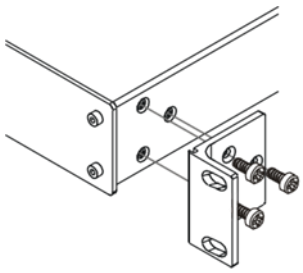
- Operation temperature – 0° to 40°C (32 to 104°F).
- Storage temperature – -40° to +70°C (-40 to +158°F).
- Humidity – 10% to 90%, RHL non-condensing.

When installing on a 19" rack, avoid hazards by taking care that:

- It is located within recommended environmental conditions. Operating ambient temperature of a closed or multi-unit rack assembly may exceed ambient room temperature.
- There is enough air flow around the device.
- The device is placed upright in the correct horizontal position.

To mount PT-871/2-KIT, PT-871/2xr-KIT, and PT-872xr:

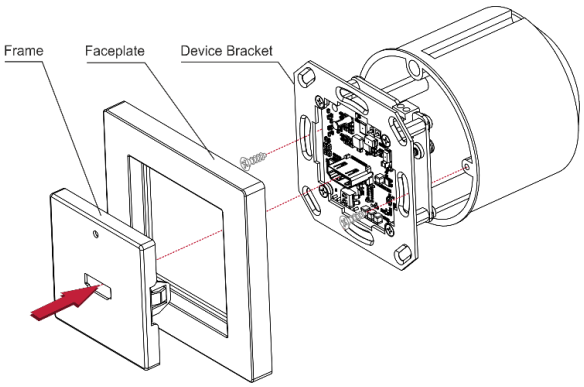
- Mount the unit in a rack using an optional **RK-4PT-B** rack adapter (for all models) or an optional **RK-4PT** rack adapter (for **PT-871/2-KIT**); see the Rack Adapters user manual for installation instructions available from our Web site www.kramerav.com/downloads/RK-4PT#Tab_Resources.
- Fasten a bracket (included) on each side of the unit and attach it to a flat surface.
  For more information go to www.kramerav.com/downloads/PT-871xr.
- Attach the rubber feet and place the unit on a flat surface.



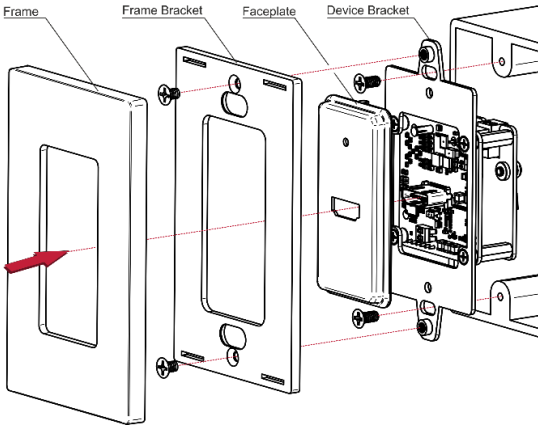
To mount the WP-871xr wall plate :

- Insert the device into the in-wall box (note that first you need to connect the DGKAT 2.0 cable and power) and connect the parts as shown in the illustrations below:

EU/UK Versions



US Version



We recommend that you use any of the following standard 1 Gang in-wall junction boxes (or their equivalent):

- **US-D**: 1 Gang US electrical junction boxes.
- **EU**: 1 Gang in-wall junction box, with a cut-hole diameter of 68mm and depth that can fit in both the device and the connected cables (DIN 49073).
- **UK**: 1 Gang in-wall junction box, 75x75mm (W, H), and depth that can fit in both the device and the connected cables
  (BS 4662).

Connecting to the Device

Always switch off the power to each external device before connecting it to your **PT-871/2-KIT, PT-871/2xr-KIT, WP-871xr, PT-872xr**. After connecting your **PT-871/2-KIT, PT-871/2xr-KIT, WP-871xr, PT-872xr**, connect its power and then switch on the power to each device.

We highly recommend using only Kramer UNIKAT cables with these products. If using 3rd party shielded CAT-6A cables, both ends of the shield must be soldered to the connectors for the products to function properly. Do not use any jumpers, unshielded wall plates or mid-span cable connections. These extenders are not compatible with HDBaseT technologies. Prior to signal extension, ensure that the extension line cable is lying straight and not coiled.

Connecting PT-871/2-KIT, PT-871/2xr-KIT, PT-872xr

For illustrative purposes, the figure below shows **PT-871/2xr-KIT**, but the same connections apply to **PT-871/2-KIT**.

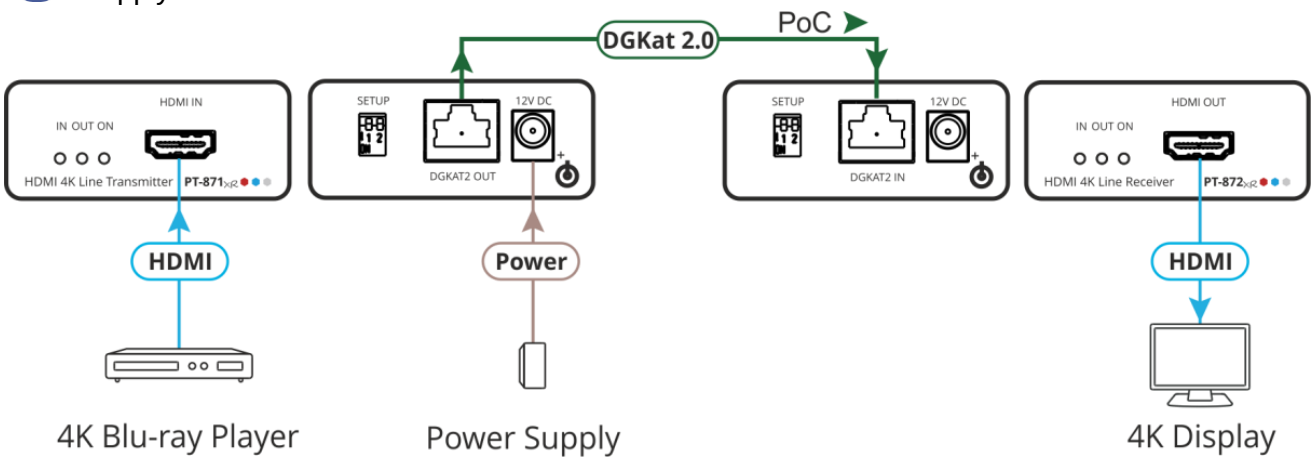


Figure 7: Connecting to **PT-871/2xr-KIT**

To connect PT-871/2-KIT, PT-871/2xr-KIT, and PT-872xr as illustrated in Figure 7:

1. Connect the HDMI video source to the HDMI IN Connector (4) on the transmitter.
2. Connect the DGKat2 OUT RJ-45 Connector (5) on the transmitter to the DGKat2 IN RJ-45 Connector (5) on the receiver using a DGKat 2.0 cable.
3. Connect the HDMI video acceptor to the HDMI OUT Connector (5) on the receiver.
4. Connect the power adapter to either the transmitter or receiver.
   Each device provides power to its counterpart via DGKat 2.0. Each device can provide or accept power over cable (PoC) via DGKat 2.0.
   We recommend that you use only the power cord that is supplied with this device.

Connecting WP-871xr and PT-872xr

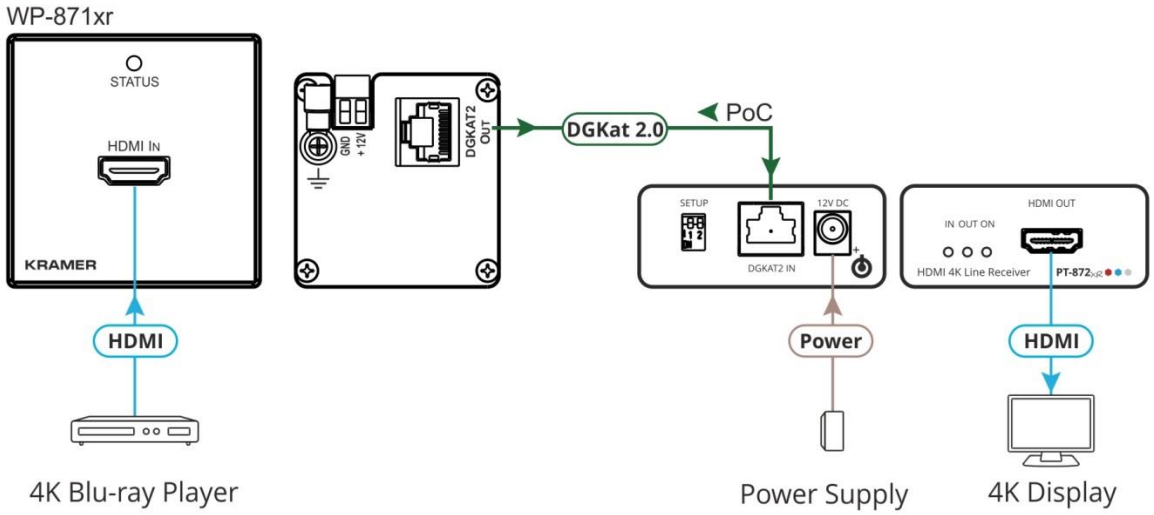


Figure 8: Connecting to **WP-871xr** and **PT-872xr**

To connect WP-871xr and PT-872xr as illustrated in Figure 7:

1. Connect the HDMI video source to the HDMI IN Connector (1) on **WP-871xr**.
2. Connect the DGKat2 OUT RJ-45 Connector (5) on **WP-871xr** to the DGKAT2 IN RJ-45 Connector (6) on the **PT-872xr** receiver using a DGKat 2.0 cable.
3. Connect the HDMI video acceptor to the HDMI OUT Connector (4) on the **PT-872xr** receiver.

Make sure **PT-872xr** DIP-switch 1 is set to ON (down = high-compression).

4. Connect the power adapter to the **PT-872xr** receiver.
   We recommend that you use only the power cord that is supplied with the **PT-872xr** receiver.

Alternatively, you can connect the **WP-871xr** power adapter and **PT-872xr** is powered by PoC.

Setting the DIP-Switches

PT-871/2xr-KIT and PT-872xr

PT-871/2xr-KIT, and **PT-872xr** include a Compression Options DIP-switch (DIP-switch 1) that enables selecting the compression level.

By default, the Compression Options DIP-switch (DIP-switch 1) is set to OFF (up = low compression).

Always set the DIP-switches identically for a connected transmitter and receiver.

The following table describes the **PT-871/2xr-KIT** and **PT-872xr** DIP-switches.

DIP-Switch	Functions
DIP-switch 1: Compression Options	OFF (up/left) – Standard compression level. ON (down/right) – High compression level for additional range extension.
DIP-switch 2	Must be set to OFF (up).

WP-871xr

Do not change the **WP-871xr** DIP-switch default settings (located on the front panel, behind the frame).

When using **PT-872xr** as the receiver for **WP-871xr**, set the **PT-872xr** Compression Options DIP-switch to ON (down = high-compression) to match the **WP-871xr** which supports only high compression.

Technical Specifications

PT-871/2-KIT

PT-871		
Inputs	1 HDMI	On a female HDMI connector
Outputs	1 DGKAT 2.0	On a female RJ-45 connector
PT-872		
Inputs	1 DGKAT 2.0	On a female RJ-45 connector
Outputs	1 HDMI	On a female HDMI connector
General		
Video	Max. Data Rate	18Gbps (6Gbps per graphic channel)
	Max. Resolution	3840x2160@60Hz (4:4:4) 24bpp
	Compliance	HDR10, HDMI 2.0, HDCP 2.2
Extension Line	We recommend that you use Kramer shielded cables to achieve optimum extension ranges.	
	Max. Range	40m (130ft) at 4K60 (4:4:4 or 4:2:0) or full HD (1080p @60Hz 36bpp)
	Signal Compression	Low-level compression is applied to line-transmitted signals of above 1080p resolution
	Compliance	DGKat 2.0
User Interface	Indicators	IN, OUT and ON LEDs
Power	Source	12V DC, 2A
	Consumption	600mA
Environmental Conditions	Operating Temperature	0° to +40°C (32° to 104°F)
	Storage Temperature	-40° to +70°C (-40° to 158°F)
	Humidity	10% to 90%, RHL non-condensing
Regulatory Compliance	Safety	CE, UL
	Environmental	RoHs, WEEE
Enclosure	Size	Pico TOOLS™
	Type	Aluminum
	Cooling	Convection ventilation
General	Product Dimensions	6.22cm x 5.18cm x 2.44cm (2.45" x 2.04" x 0.96") W, D, H
	Product Weight	0.1kg (0.2lbs) approx.
	Shipping Dimensions	15.70cm x 12.00cm x 8.70cm (6.18" x 4.72" x 3.43") W, D, H
	Shipping Weight	0.4kg (0.8lbs) approx.
Accessories	Included	1 Power adapter (Note: When purchasing PT-871/2-KIT, only one power adapter is supplied for both units.)
Specifications are subject to change without notice at www.kramerav.com		

PT-871/2xr-KIT and PT-872xr

PT-871xr		
Inputs	1 HDMI	On a female HDMI connector
Outputs	1 DGKAT 2.0	On a female RJ-45 connector
PT-872xr		
Inputs	1 DGKAT 2.0	On a female RJ-45 connector
Outputs	1 HDMI	On a female HDMI connector
General		
Video	Max. Data Rate	Up to 18Gbps (6Gbps per graphic channel)
	Max. Resolution	3840x2160@60Hz (4:4:4) 24bpp at high compression level 4096x2160@60Hz (4:4:4) 24bpp at standard compression level
	Compliance	HDMI 2.0, HDCP 2.2, HDR 10
Extension Line	We recommend that you use Kramer shielded cables to achieve optimum extension ranges.	
	Max Range at High Compression Level	60m (200ft) at 4K@60Hz (4:4:4) 70m (230ft) at 4K@60Hz (4:2:0) or full HD (1080p @60Hz 36bpp)
	Max Range at Standard Compression Level	Up to 40m (130ft) at 4K@60Hz (4:4:4) Up to 70m (230ft) at 4K@60Hz (4:2:0) or full HD (1080p @60Hz 36bpp)
	Signal Compression:	Standard low-level compression is applied to line-transmitted signals above 1080p resolution, by default. The user can, optionally, apply high-level compression to all line-transmitted signals
	Compliance:	DGKat 2.0
User Interface	Indicators	IN, OUT and ON LEDs
	Controls	DIP-switches
Power	Source	12V DC, 2A
	Consumption	600mA
Environmental Conditions	Operating Temperature	0° to +40°C (32° to 104°F)
	Storage Temperature	-40° to +70°C (-40° to 158°F)
	Humidity	10% to 90%, RHL non-condensing
Regulatory Compliance	Safety	CE, UL
	Environmental	RoHs, WEEE
Enclosure	Size	Pico TOOLS™
	Type	Aluminum
	Cooling	Convection Ventilation
General	Product Dimensions	6.22cm x 5.18cm x 2.44cm (2.45" x 2.04" x 0.96") W, D, H
	Product Weight	0.2kg (0.5lbs) approx.
	Shipping Dimensions	15.70cm x 12.00cm x 8.70cm (6.18" x 4.72" x 3.43") W, D, H
	Shipping Weight	0.6kg (1.4lbs) approx.
Accessories	Included	1 Power adapter (Note: When purchasing PT-871/2xr-KIT, only one power adapter is supplied for both units.)
Specifications are subject to change without notice at www.kramerav.com		

WP-871xr

Inputs	1 HDMI	On a female HDMI connector
Outputs	1 DGKAT 2.0	On a female RJ-45 connector
Video	Max. Data Rate	Up to 18Gbps (6Gbps per graphic channel)
	Max. Resolution	3840x2160@60Hz (4:4:4) 24bpp
	Compliance	HDMI 2.0, HDCP 2.2, HDR 10
Extension Line	We recommend that you use Kramer shielded cables to achieve optimum extension ranges.	
	Max. Range	60m (200ft) at 4K@60Hz (4:4:4) 70m (230ft) at 4K@60Hz (4:2:0) or full HD (1080p @60Hz 36bpp)
	Signal Compression:	High-level compression is applied to line-transmitted signals above 1080p resolution, by default
	Compliance:	DGKat 2.0
User Interface	Indicators	Power/connection
Power	Source	12V DC, 2A
	Consumption	600mA
Environmental Conditions	Operating Temperature	0° to +40°C (32° to 104°F)
	Storage Temperature	-40° to +70°C (-40° to 158°F)
	Humidity	10% to 90%, RHL non-condensing
Regulatory Compliance	Safety	CE, UL
	Environmental	RoHs, WEEE
Enclosure	Size	1 gang
	Type	Aluminum
	Cooling	Convection Ventilation
General	Product Dimensions	EU: 8.00cm x 3.10cm x 8.00cm (3.15" x 1.22" x 3.15") W, D, H UK: 8.60cm x 3.10cm x 8.60cm (3.39" x 1.22" x 3.39") W, D, H US: 6.98cm x 3.10cm x 11.43cm (2.75" x 1.22" x 4.50") W, D, H
	Product Weight	0.1kg (0.1lbs) approx.
	Shipping Dimensions	EU: 23.20cm x 13.60cm x 10.00cm (9.13" x 5.35" x 3.94") W, D, H
	Shipping Weight	0.6kg (1.3lbs) approx.
Accessories	Included	1 Power adapter, 1 power cord For the US version: 2 US Frame sets and faceplates (in black and in white) For the European version: 1 EU white frame, 1 UK white frame, 1 EU/UK white faceplate
Specifications are subject to change without notice at www.kramerav.com		

The warranty obligations of Kramer Electronics Inc. ("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 this Coverage Lasts

The standard limited warranty for Kramer products is seven (7) years from the date of original purchase, with the following exceptions:

1. All Kramer VIA hardware products are covered by a standard three (3) year warranty for the VIA hardware and a standard three (3) year warranty for firmware and software updates.
2. All Kramer fiber optic cables, adapter-size fiber optic extenders, active cables, cable retractors, all Kramer speakers and Kramer touch panels are covered by a standard one (1) year warranty.
3. All Kramer Cobra products, all Kramer Calibre products, all Kramer Minicom digital signage products, all HighSecLabs products, all streaming, and all wireless products are covered by a standard three (3) year warranty.
4. All Sierra Video MultiViewers are covered by a standard five (5) year warranty.
5. Sierra switchers & control panels are covered by a standard seven (7) year warranty (excluding power supplies and fans that are covered for three (3) years).
6. K-Touch software is covered by a standard one (1) year warranty for software updates.
7. All Kramer passive cables are covered by a ten (10) year warranty.

Who is Covered

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.

How to Obtain a Remedy Under This Limited Warranty

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, visit our web site at www.kramerav.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 (RMA number). 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.

Limitation of Liability

THE MAXIMUM LIABILITY OF KRAMER ELECTRONICS UNDER THIS LIMITED WARRANTY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID FOR THE PRODUCT. TO THE MAXIMUM EXTENT PERMITTED BY LAW, KRAMER ELECTRONICS IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

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Other Conditions

This limited warranty gives you specific legal rights, and you may have other rights which vary from country to country or state to state.

This limited warranty is void if (i) the label bearing the serial number of this product has been removed or defaced, (ii) the product is not distributed by Kramer Electronics or (iii) this product is not purchased from an authorized Kramer Electronics reseller. If you are unsure whether a reseller is an authorized Kramer Electronics reseller, visit our web site at www.kramerav.com or contact a Kramer Electronics office from the list at the end of this document.

Your rights under this limited warranty are not diminished if you do not complete and return the product registration form or complete and submit the online product registration form. Kramer Electronics thanks you for purchasing a Kramer Electronics product. We hope it will give you years of satisfaction.

KRAMER

P/N: 2900-300716 Rev: 1

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

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.

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