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TP-873xr/TP-874xr Quick Start Guide

This guide helps you install and use your TP-873xr/TP-874xr for the first time.

Go to www.kramerav.com/downloads/TP-873xr to download the latest user manual and check if firmware upgrades are available.

Step 1: Check what's in the box

- ✓ TP 873xr HDMI 4K Line Transmitter or
- ✓ TP 874xr HDMI 4K Line Receiver
- ✓ 1 Power adapter and cord per device
- ✓ 4 Rubber feet
- ✓ 1 Quick start guide
- ✓ 1 Bracket set

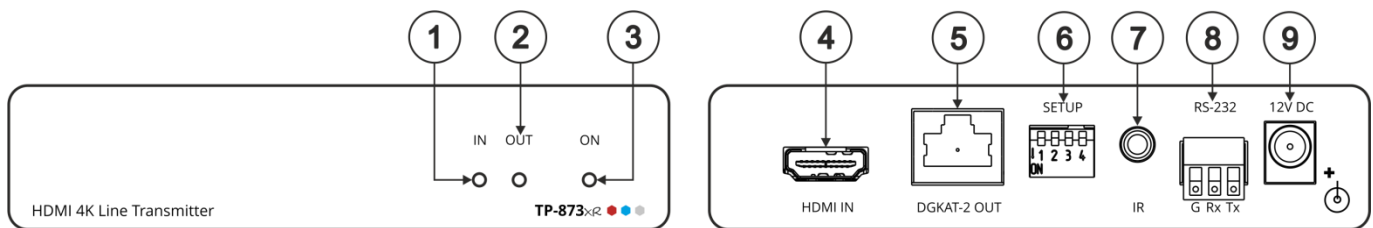
IMPORTANT NOTICE!



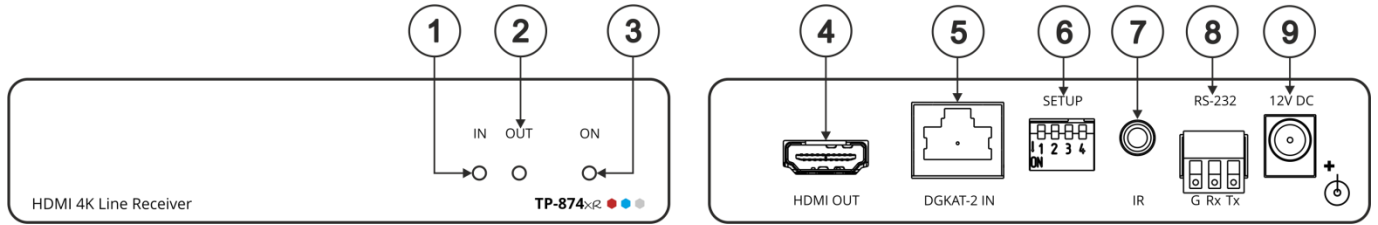
We highly recommend using only Kramer UNIKAT cables with these products. If using 3rd party shielded CAT-6A cables, both ends of the shield must be soldered to the connectors for the products to function properly. Do not use any jumpers, unshielded wall plates or mid-span cable connections. These extenders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

Step 2: Get to know your TP 873xr and TP 874xr

TP 873xr



#	Feature	Function
1	IN LED	Lights green when an active source device input signal is detected.
2	OUT LED	Lights green when an active, far-end sink (acceptor) output signal is detected via the DGKAT link.
3	ON LED	Lights green when the device receives power.
4	HDMI IN Connector	Connect to an HDMI source.
5	DGKAT-2 OUT RJ-45 Connector	Connect to the DGKAT 2 IN RJ-45 connector on the TP 874xr
6	SETUP DIP-switches	Set the operation DIP-switches (see Step 4: Connect the inputs and outputs).
7	IR 3.5mm Mini Jack Connector	Connect to an external infrared emitter / sensor for IR signal bidirectional extension to control a remote device. For example, connect to an external infrared sensor to control the HDMI OUT acceptor that is connected to TP 874xr
8	RS-232 (G, Rx, Tx) 3-pin Terminal Block Connector	Connect to a laptop to perform firmware upgrade or to an RS-232 port for serial signal bidirectional extension to the receiver. For example, connect to an SL-240C controller device to serially control the HDMI OUT acceptor that is connected to TP 874xr.
9	12V DC Power Connector	12V DC connector for powering the unit when it is not powered by TP 874xr via the DGKAT link.

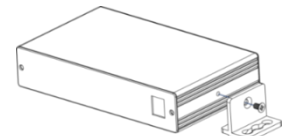


#	Feature	Function
1	IN LED	Lights green when an active source device input signal is detected.
2	OUT LED	Lights green when an active, far-end sink (acceptor) output signal is detected via the HDBT link.
3	ON LED	Lights green when the device receives power.
4	HDMI OUT Connector	Connect to an HDMI acceptor.
5	DGKAT-2 IN RJ-45 Connector	Connect to the DGKAT 2 OUT RJ-45 connector on the TP 873xr
6	SETUP DIP-switches	Set the operation DIP-switches (see Step 4: Connect the inputs and outputs).
7	IR 3.5mm Mini Jack Connector	Connect to an external infrared emitter / sensor for IR signal bidirectional extension. For example, connect to an external infrared sensor to control the HDMI IN source that is connected to TP 873xr.
8	RS-232 (G, Rx, Tx) 3-pin Terminal Block Connector	Connect to a laptop to perform firmware upgrade or to an RS-232 port for serial signal bidirectional extension to the transmitter. For example, connect to an RS-232 device to be controlled, for example, a display.
9	12V DC Power Connector	12V DC connector for powering the unit when it is not powered by TP 873xr via the DGKAT link.

Step 3: Mount TP-873xr/TP-874xr

Install TP-873xr/TP-874xr using one of the following methods:

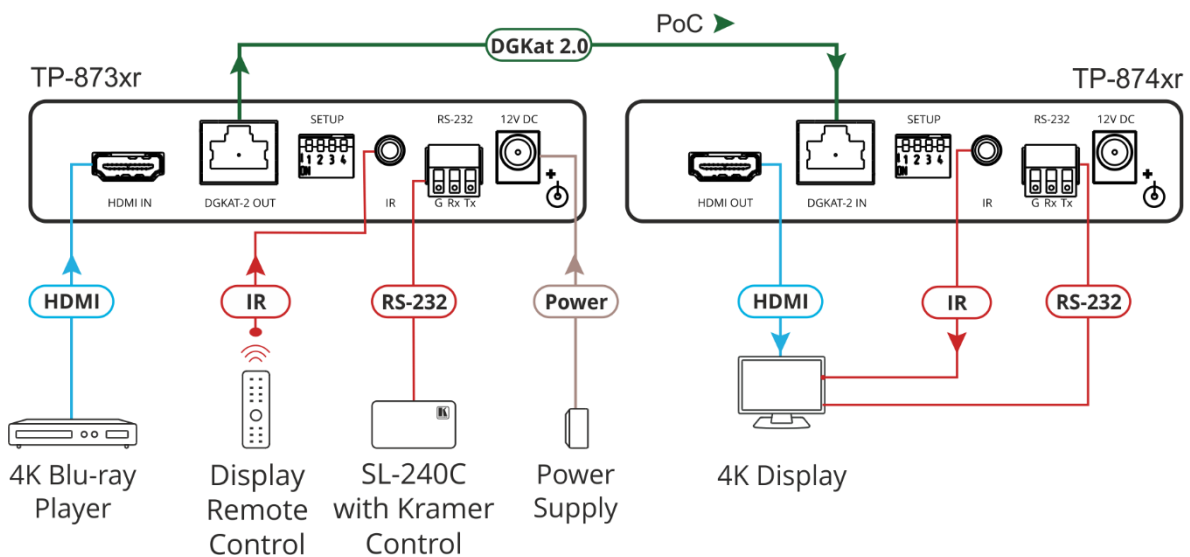
- Attach the rubber feet and place the unit on a flat surface.
- Fasten a bracket (included) on each side of the unit and attach it to a flat surface (see www.kramerav.com/downloads/TP-873xr).
- Mount the unit in a rack using the recommended rack adapter (see www.kramerav.com/product/TP-873xr).



- Ensure that the environment (e.g., maximum ambient temperature & air flow) is compatible for the device.
- Avoid uneven mechanical loading.
- Appropriate consideration of equipment nameplate ratings should be used for avoiding overloading of the circuits.
- Reliable earthing of rack-mounted equipment should be maintained.

Step 4: Connect the inputs and outputs

Always switch OFF the power on each device before connecting it to your TP-873xr/TP-874xr.



To achieve specified extension distances, use the recommended Kramer cables available at www.kramerav.com/product/TP-873xr. Using third-party cables may cause damage!

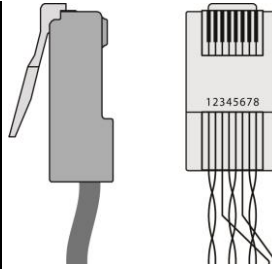
Wiring the RJ 45 Connectors

This section defines the TP pinout, using a straight pin-to-pin cable with RJ 45 connectors.



For DGKAT cables, 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



DIP-Switch Settings

All DIP-switches are set to OFF (up) by default.

#	Feature	DIP-switch Settings
1	Compression Options	OFF (up) – Standard compression level. ON (down) – High compression level for additional range extension.
2	IR Frequency Mode	OFF (up) – Frequency is 38kHz. ON (down) – Wide-range modulated IR frequency pass-through.
3	RS-232 Mode	OFF (up) – Serial extension. ON (down) – Serial device service mode.
4	FW Upgrade	OFF (up) – Normal operation mode. ON (down) – FW upgrade mode (DIP-switch 3 needs to be ON).

Step 5: Connect the power

Connect the 12V power adapter to either TP 873xr or TP 874xr and plug it into the mains electricity. This device provides power to its counterpart via DGKat 2.0. Each device can provide or accept power over cable (PoC) via DGKat 2.0.

Safety Instructions (See www.kramerav.com for updated safety information)



Caution:

- For products with relay terminals and GPIO ports, please refer to the permitted rating for an external connection, located next to the terminal or in the User Manual.
- There are no operator serviceable parts inside the unit.

Warning:

- Use only the power cord that is supplied with the unit.
- Disconnect the power and unplug the unit from the wall before installing.

Step 6: Operate TP-873xr/TP-874xr

Upgrade TP-873xr/TP-874xr firmware, by RS-232 serial commands transmitted by a PC, or laptop.

RS-232 Control	
Baud Rate:	57,600
Data Bits:	8
Stop Bits:	1
Parity:	None
Command Format:	ASCII

Technical Specifications

TP 873xr

Input	HDMI	On a female HDMI connector
Output	DGKAT 2.0	On a female RJ-45 connector
Port	RS-232	On a 3-pin terminal block connector for serial link extension
	IR	On a 3.5mm mini-jack connector for IR link extension

TP 874xr

Input	DGKAT 2.0	On a female RJ-45 connector
Output	HDMI	On a female HDMI connector
Port	RS-232	On a 3-pin terminal block connector for serial link extension
	IR	On a 3.5mm mini-jack connector for IR link extension

General

Video	Max Bandwidth	Up to 18Gbps (6Gbps per graphic channel)	
	Max Resolution	Standard compression level	4096x2160@60Hz (4:4:4) 24bpp
		High compression level	3840x2160@60Hz (4:4:4) 24bpp
	Compliance	HDMI 2.0, HDCP 2.2, HDR 10	
Extension Range	We recommend that you use Kramer shielded cables to achieve optimum extension ranges.		
	Standard Compression Level	Up to 35m (110ft) at 4K@60Hz (4:4:4) Up to 70m (230ft) at 4K@60Hz (4:2:0) or full HD (1080p @60Hz 36bpp)	
	High Compression Level	Up to 50m (160ft) at 4K@60Hz (4:4:4) Up to 70m (230ft) at 4K@60Hz (4:2:0) or full HD (1080p @60Hz 36bpp)	
Extended RS-232	Baud Rate	300 to 57600 baud	
Extended IR	Frequency	20kHz to 100kHz	
	Direction	Bidirectional (IR sensor or emitter)	
Controls	Front Panel	IN, OUT and ON LED indicators	
	Rear Panel	DIP-switches	
Power	Source	12V DC, 2A	
	Consumption	TP 873xr (connected to power, providing power to TP 874xr): 12V, 0.87A TP 874xr (connected to power, providing power to TP 873xr): 12V, 0.87A	
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	
	Environmental	RoHs, WEEE	
Enclosure	Size	Tool	
	Type	Aluminum	
	Cooling	Convection ventilation	
General	Net Dimensions (W, D, H), each	12cm x 7.2cm x 2.4cm (4.7" x 2.8" x 0.94")	
	Shipping Dimensions (W, D, H)	15.7cm x 12cm x 8.7cm (6.2" x 4.7" x 3.4")	
	Net Weight (each)	0.25kg (0.6lbs) approx.	
	Shipping Weight	0.68kg (1.5lbs) approx.	
Accessories	Included	1 Power adapter, 1 power cord and 1 bracket set per device	

Specifications are subject to change without notice at www.kramerav.com