

User Manual



VLKVM150

**18Gbps HDBaseT Extender kit (150m)
with USB 2.0**



All Rights Reserved

Version: VLKVM150_2025V1.0

Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



SAFETY PRECAUTIONS

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment.
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

Elektro- und Elektronikgeräte

Informationen für private Haushalte

Das Elektro- und Elektronikgerätegesetz (ElektroG) enthält eine Vielzahl von Anforderungen an den Umgang mit Elektro- und Elektronikgeräten. Die wichtigsten sind hier zusammengestellt.

1. Getrennte Erfassung von Altgeräten

Elektro- und Elektronikgeräte, die zu Abfall geworden sind, werden als Altgeräte bezeichnet. Besitzer von Altgeräten haben diese einer vom unsortierten Siedlungsabfall getrennten Erfassung zuzuführen. Altgeräte gehören insbesondere nicht in den Hausmüll, sondern in spezielle Sammel- und Rückgabesysteme.

2. Batterien und Akkus sowie Lampen

Besitzer von Altgeräten haben Altbatterien und Altakkumulatoren, die nicht vom Altgerät umschlossen sind, sowie Lampen, die zerstörungsfrei aus dem Altgerät entnommen werden können, im Regelfall vor der Abgabe an einer Erfassungsstelle vom Altgerät zu trennen. Dies gilt nicht, soweit Altgeräte einer Vorbereitung zur Wiederverwendung unter Beteiligung eines öffentlich-rechtlichen Entsorgungsträgers zugeführt werden.

3. Möglichkeiten der Rückgabe von Altgeräten

Besitzer von Altgeräten aus privaten Haushalten können diese bei den Sammelstellen der öffentlich-rechtlichen Entsorgungsträger oder bei den von Herstellern oder Vertreibern im Sinne des ElektroG eingerichteten Rücknahmestellen unentgeltlich abgeben. Rücknahmepflichtig sind Geschäfte mit einer Verkaufsfläche von mindestens 400 m² für Elektro- und Elektronikgeräte sowie diejenigen Lebensmittelgeschäfte mit einer Gesamtverkaufsfläche von mindestens 800 m², die mehrmals pro Jahr oder dauerhaft Elektro- und Elektronikgeräte anbieten und auf dem Markt bereitstellen. Dies gilt auch bei Vertrieb unter Verwendung von Fernkommunikationsmitteln, wenn die Lager- und Versandflächen für Elektro- und Elektronikgeräte mindestens 400 m² betragen oder die gesamten Lager- und Versandflächen mindestens 800 m² betragen. Vertreiber haben die Rücknahme grundsätzlich durch geeignete Rückgabemöglichkeiten in zumutbarer Entfernung zum jeweiligen Endnutzer zu gewährleisten. Die Möglichkeit der unentgeltlichen Rückgabe eines Altgerätes besteht

bei rücknahmepflichtigen Vertreibern unter anderem dann, wenn ein neues gleichartiges Gerät, das im Wesentlichen die gleichen Funktionen erfüllt, an einen Endnutzer abgegeben wird. Wenn ein neues Gerät an einen privaten Haushalt ausgeliefert wird, kann das gleichartige Altgerät auch dort zur unentgeltlichen Abholung übergeben werden; dies gilt bei einem Vertrieb unter Verwendung von Fernkommunikationsmitteln für Geräte der Kategorien 1, 2 oder 4 gemäß § 2 Abs. 1 ElektroG, nämlich „Wärmeüberträger“, „Bildschirmgeräte“ oder „Großgeräte“ (letztere mit mindestens einer äußeren Abmessung über 50 Zentimeter). Zu einer entsprechenden Rückgabe-Absicht werden Endnutzer beim Abschluss eines Kaufvertrages befragt. Außerdem besteht die Möglichkeit der unentgeltlichen Rückgabe bei Sammelstellen der Vertreter unabhängig vom Kauf eines neuen Gerätes für solche Altgeräte, die in keiner äußeren Abmessung größer als 25 Zentimeter sind, und zwar beschränkt auf drei Altgeräte pro Geräteart.

4. Datenschutz-Hinweis

Altgeräte enthalten häufig sensible personenbezogene Daten. Dies gilt insbesondere für Geräte der Informations- und Telekommunikationstechnik wie Computer und Smartphones. Bitte beachten Sie in Ihrem eigenen Interesse, dass für die Löschung der Daten auf den zu entsorgenden Altgeräten jeder Endnutzer selbst verantwortlich ist.

5. Bedeutung des Symbols „durchgestrichene Mülltonne“

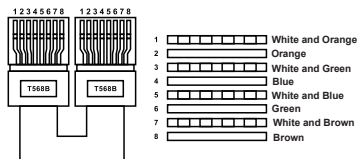
Das auf Elektro- und Elektronikgeräten regelmäßig abgebildete Symbol einer durchgestrichenen Mülltonne weist darauf hin, dass das jeweilige Gerät am Ende seiner Lebensdauer getrennt vom unsortierten Siedlungsabfall zu erfassen ist.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Caution

The network cable connection method required for this product is direct connection. Please do not cross connect.



Direct Interconnection Method

Table of Contents

1. Introduction.....	1
2. Features.....	1
3. Package Contents.....	2
4. Specifications.....	2
5. Operation Controls and Functions.....	4
5.1 Transmitter Panel.....	4
5.2 Receiver Panel.....	5
5.3 IR Pin Definition.....	6
6. Application Example.....	7
7. Customer Service.....	8

1. Introduction

This 18Gbps HDBaseT Extender can extend HDMI signal, bi-directional IR control signal and USB KVM signal to a distance up to 492ft/150m (Long Reach Mode) via a single CAT6 cable. This product converts HDMI signal to standard HDBaseT signal and transmits it through LAN cable. It can easily control signal source device or display device from the remote end through bi-directional IR signal pass-through function. Video resolution is up to 4K2K @60Hz YUV 4:4:4. It also supports POC function.

The extender can be widely used in other fields such as video conference system, multimedia signal broadcasting, HDMI signal extension, etc.

2. Features

- ☆ HDCP 2.2 compliant
- ☆ Support 18Gbps video bandwidth
- ☆ Support video resolution up to 4K2K@60Hz YUV 4:4:4
- ☆ With Mode DIP switch to select HDBaseT Mode & Long Reach Mode

HDBaseT Mode:

USB supports USB 2.0 transmission (support connecting with USB camera, USB flash drive and other devices); the audio & video signal transmission distance can be extended up to 328ft/100m for 4K60

Long Reach Mode:

USB only supports HID (Human Interface Device) device; the audio & video signal transmission distance can be extended up to 492ft/150m for 1080P or 394ft/120m for 4K60

- ☆ Bi-directional IR signal and USB KVM signal pass-through are supported
- ☆ Support bi-directional POC (Power over Cable) function
- ☆ Advanced EDID management
- ☆ Compact design for easy and flexible installation

3. Package Contents

- ① 1× 18Gbps HDBaseT Extender (Transmitter)
- ② 1× 18Gbps HDBaseT Extender (Receiver)
- ③ 1× 24V/1A Locking Power Supply
- ④ 1× IR Blaster Cable (1.5m)
- ⑤ 1× IR Wideband Receiver cable (1.5m)
- ⑥ 8× Machine Screws (KM3*4)
- ⑦ 4× Mounting Ear
- ⑧ 1× User Manual

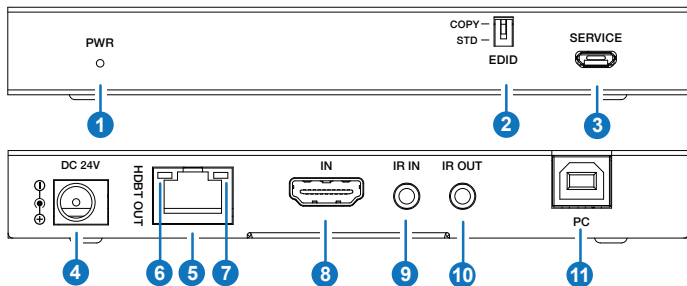
4. Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2
Video Bandwidth	18Gbps
Video Resolution	Up to 4K2K@60Hz YUV 4:4:4
USB Compliance	USB 2.0
IR Level	5Vp-p
IR Frequency	Wideband 20K-60KHz
Transmission Distance	HDBaseT Mode: 4K60 -- 328ft/100m Long Reach Mode: 1080P-- 492ft/150m; 4K60 -- 394ft/120m
Color Space	RGB / YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Color Depth	8/10/12-bit
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Audio Formats	LPCM 7.1CH, Dolby True HD and DTS-HD Master
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge), ±4kV (Contact discharge)

Connection	
Transmitter	Input: 1× HDMI IN [Type A, 19-pin female] 1× IR IN [3.5mm Stereo Mini-jack] 1× SERVICE [Micro-USB jack] 1× USB [USB-B, 4-pin female] Output: 1× HDBT OUT [RJ45] 1× IR OUT [3.5mm Stereo Mini-jack]
Receiver	Input: 1× HDBT IN [RJ45 with light] 1× IR IN [3.5mm Stereo Mini-jack] 1× SERVICE [Micro-USB jack] Output: 1× HDMI OUT [Type A, 19-pin female] 1× IR OUT [3.5mm Stereo Mini-jack] 2× USB 2.0 [USB-A, 4-pin female]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	Transmitter / Receiver: 140mm [W] x 65mm [D] x 18mm [H]
Weight	Transmitter: 245g, Receiver: 249g
Power Supply	DC 24V/1A; Support bi-directional POC function
Power Consumption	13.2W (Max)
Operating Temperature	32 - 104°F / 0 - 40°C
Storage Temperature	-4 - 140°F / -20 - 60°C
Operating Humidity	20%~80% (relative humidity, non-condensing)
Storage Humidity	10%~90% (relative humidity, non-condensing)

5. Operation Controls and Functions

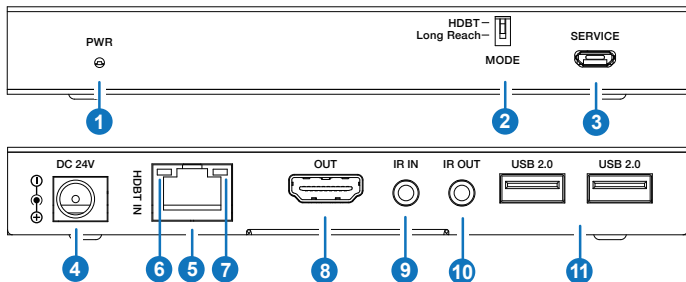
5.1 Transmitter Panel



No.	Name	Function Description
1	PWR LED	The red LED is on when the Transmitter is powered on.
2	EDID DIP switch	Used for audio EDID setting (dial to COPY by default). COPY: Copy the EDID of the HDMI OUT port of Receiver. STD: Default 1080P 2CH
3	SERVICE	Firmware update port.
4	DC 24V	DC 24V/1A power input port. <i>Note that the extender supports POC function, it means that either Transmitter or Receiver is connected to 24V/1A power supply, the other doesn't need power supply.</i>
5	HDBT OUT	HDBT output port, connecting to the HDBT IN port of the Receiver with CAT6 cable.
6	Link Signal Indicator (Green)	- On: Transmitter and Receiver are in good connection status. - Flashing: Transmitter and Receiver are in poor connection status. - Off: Transmitter and Receiver are not connected.
7	Data Signal Indicator (Yellow)	- Off: HDMI signal with HDCP. - Flashing: HDMI signal without HDCP. - On: No HDMI signal.
8	HDMI IN	HDMI signal input port, connecting to HDMI source device such as DVD play or Set Top Box.

No.	Name	Function Description
9	IR IN	IR signal input port for receiving the signal of IR remote.
10	IR OUT	IR signal output port for control of source device. This IR output signal is from the IR IN port of receiver.
11	PC	USB-B port, connecting to PC.

5.2 Receiver Panel

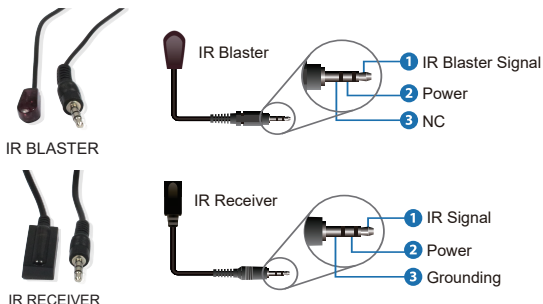


No.	Name	Function Description
1	Power LED	The power LED is on when the Receiver is powered on.
2	MODE DIP switch	Used for Mode switching (dial to HDBT by default). HDBT: Switching to the HDBaseT Mode. Long Reach: Switching to the Long Reach Mode.
3	SERVICE	Firmware update port.
4	DC 24V	DC 24V/1A power input port. <i>Note that the extender supports POC function, it means that either Transmitter or Receiver is connected to 24V/1A power supply, the other doesn't need power supply.</i>
5	HDBT IN	HDBT input port, connecting to the HDBT OUT port of the Transmitter with CAT6 cable.

No.	Name	Function Description
6	Link Signal Indicator (Green)	- On: Transmitter and Receiver are in good connection status. - Flashing: Transmitter and Receiver are in poor connection status. - Off: Transmitter and Receiver are not connected.
7	Data Signal Indicator (Yellow)	- On: HDMI signal with HDCP. - Flashing: HDMI signal without HDCP. - Off: No HDMI signal.
8	HDMI OUT	HDMI signal output port, connecting to HDMI display device such as TV or monitor.
9	IR IN	Connect to the IR receiver cable. The IR signal will be emit to the IR OUT port of the Transmitter.
10	IR OUT	Connect to the IR blaster cable. The IR signal is from IR IN port of the Transmitter.
11	USB 2.0 ports	Two USB-A ports, connecting to USB 2.0 devices. (The maximum output current of a single USB 2.0 port is 500mA, exceeding which it will not work.)

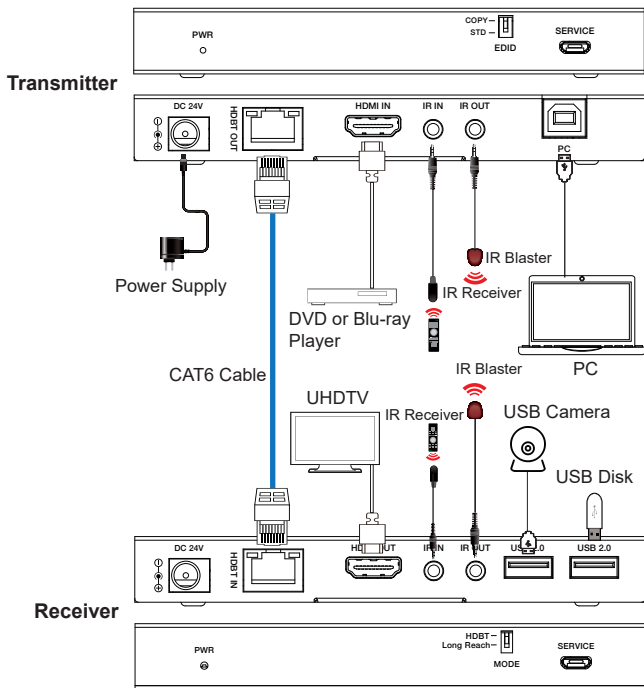
5.3 IR Pin Definition

IR Receiver and Blaster pin's definition is as below:



Note: When the angle between the IR receiver and the remote control is $\pm 45^\circ$, the transmission distance is 0-5 meters; when the angle between the IR receiver and the remote control is $\pm 90^\circ$, the transmission distance is 0-8 meters.

6. Application Example



HDMITM
HIGH-DEFINITION MULTIMEDIA INTERFACE

The terms HDMI and HDMI High-Definition Multimedia interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

7. Customer Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. These terms and conditions may be changed without prior notice.

1) Warranty

The limited warranty period of the product is fixed three years.

2) Scope

These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

3) Warranty Exclusion:

- Warranty expiration.
- Factory applied serial number has been altered or removed from the Product.
- Damage, deterioration or malfunction caused by:
 - ✓ Normal wear and tear.
 - ✓ Use of supplies or parts not meeting our specifications.
 - ✓ No certificate or invoice as the proof of warranty.
 - ✓ The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
 - ✓ Damage caused by force majeure.
 - ✓ Servicing not authorized by distributor.
 - ✓ Any other causes which does not relate to a product defect.
- Shipping fees, installation or labor charges for installation or setup of the product.

4) Documentation:

Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defect has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of distributor.

Remarks: Please contact your local distributor for further assistance or solutions.