

安全注意事项:

请先仔细阅读所有说明, 然后尝试安装或操作本设备, 并遵守下列注意事项:

- * 请遵循标示于本产品上的所有警告与指示
- * 请勿让本机受到雨淋, 或被泼洒或浸泡到任何液体。
- * 请勿将任何物件透到外壳槽孔塞进机器里, 以避免损坏机器内部零件。
- * 请勿尝试自行修理或拆开机器外壳, 以免发生触电。
- * 设备外壳可能配有槽孔散热及通风, 以防止过热, 请勿阻挡散热孔。
- * 安装前请先关闭电源, 带电安装可能会损坏设备。
- * 在工作过程中, 请勿带电拨插连接线缆, 以免损坏。
- * 本产品上已明确标明电源参数, 在使用非我公司标配电源时请先确认电源参数, 以免烧坏设备。

一、产品概述

TK-HB70 单网线延长器是一款采用 HDBaset 技术的延长器, 通过一条 Cat6 线缆可以延伸 HDMI 信号 70 米。并且信号清晰无压缩, 传输速率快无延时, 支持 3D、24 位色深、4K×2K、CEC 及 HDCP。

二、产品特点

- 1) 采用 HDBaset 技术;
- 2) 支持 HDMI 图像信号传输无压缩、无延时显示;
- 3) 支持全高清 1080p@60Hz, 3D, 4K×2K/30HZ 的 HDMI 信号传输;
- 4) 1080p 全高清信号通过 Cat6a 线可延长 70 米;
- 5) 支持双向红外信号回传以及串口 RS-232 信号双向传输;
- 6) 支持 HDCP、CEC、24 位色深;
- 7) 支持未压缩音频 LPCM 和压缩音频 DTS-HD, Dolby True HD;
- 8) 采用 POC 供电技术, 只需要为发射端或接收端其中一端供 12V 电源即可;

三、包装清单



HDMI 转 HDBaset
TX 发射器 × 1



HDBaset 转 HDMI
RX 接收器 × 1



DC12V/3A 电源 × 1



红外发射延长线 × 1



红外接收延长线 × 1

用户说明书 × 1

四、安装要求

1、信号来源设备：

带 HDMI 输出接口的信号源，如 DVD、PS3、机顶盒、PC 等。

2、显示设备：

带 HDMI 输入接口的显示设备，如电视机、投影仪。

3、线缆：

非屏蔽或屏蔽五类/六类网线（Cat5e/Cat6/Cat6A/Cat7），网线接口标准为 568B

五、接口

5.1 发射端（Transmitter）



- ①、HDMI 输入口，接信号源；
- ②、红外发射延长线端口，用于接红外发送延长线；
- ③、DC-12V 直接电源(发送端和接收端只需要一端接电源)
- ④、电源指示灯，接通电源后为绿色常亮；
- ⑤、RS-232 串口（可以双向传输）；
- ⑥、红外接收延长器端口，用于接红外接收延长线；
- ⑦、HDBaset 输出口，通过网线与接收器相连接；

5.2 接收端 (Receiver)



- ①、HDMI 输出，连接液晶电视、投影等带 HDMI 输入口的显示单元；
- ②、红外遥控输出，连接红外发射延长线；
- ③、DC-12V 直接电源(发送端和接收端只需要一端接电源)；
- ④、RS-232 串口（可以双向传输）；
- ⑤、红外遥控输入，连接红外接收延长线；
- ⑥、HDBaset 输入口，通过网线与发射端相连接；

5.3 指示灯操作

- ①电源指示灯—上电常亮；
- ②线路连接正常—RJ45 座子黄灯常亮，绿灯闪；
- ③无 HDMI 信号源输入或 HDMI 没有接显示终端—RJ45 座黄灯闪，绿亮不亮；
- ④网线没有连接—RJ45 座灯全不亮；

六、连接示意图

6.1 制作网线

IEEE-568B 标准线序：1-橙白，2-橙，3-绿白，4-蓝，5-蓝白，6-绿，7-棕白，8-棕。

6.2 连接方式



6.3 双向红外回传说明

- 1) 本产品支持双向红外回传，可在 TX 端通过遥控器控制 DVD，也可以在 RX 端通过遥控器控制电视。
- 2) 如果在 RX 端控制，将红外发射延长线连接 TX 的 IR OUT 接口，将红外接收延长线在连接 RX 的 IR IN 接口。如果在 TX 端控制，将红外接收延长线连接 TX 的 IR IN 接口，将红外发射延长线连接 RX 的 IR OUT 接口。

6.4 RS-232 串口传输

由 RX、TX、GND 组成，串口信号可双向传输，可定义任何一端为 RS-232 信号的发送端或接收端：

七、常见问题

Q:电视机无图像输出？

A:检查主机电源是否连接好，根据指示灯状态检查网线和 HDMI 线连接是否正常。

Q:指示灯正常，显示终端无图像？

A:检查 HDMI 信号接收设备是否切换到相应的 HDMI 信号输入接口。

Q:电源灯亮，RJ45 座黄灯闪、绿灯不亮，无图像？

A:检查信号源到发送端的 HDMI 线和接收端至显示单元的 HDMI 线是否连接正常。

Q:电源灯亮，RJ45 座双灯不亮？

A:请检查网线是否连接正常或更换质量更佳网线。

Q:输出图像闪白点或者噪点？

A:请更换发射器与信号源之间的 HDMI 线，或者用尺寸较短的 HDMI 线测试。

八、技术参数：

项目	参数说明		
HDMI信号	HDMI1.4、兼容HDCP2.2、支持CEC、24位色深、4K×2K		
传输协议	HDBaseT		
支持分辨率	480i/480P/576i/576P/720P/1080i/1080P/3D/4K×2K		
音频	LPCM, DTS-HD, Dolby True HD		
网线	CAT5E、CAT6、CAT6A、CAT7		
传输距离	CAT5e/CAT6	60m	Up to 1080P60Hz 36bpp
		35m	1080p@60Hz 48bpp, 1080p60Hz 3D, 4K×2K 30Hz
	CAT6a/CAT7	70m	Up to 1080P60Hz 36bpp
		40m	1080p@60Hz48bpp, 1080p@60Hz3D, 4K×2K 30Hz
红外回传	支持20-60kHz宽频红外遥控器，支持双向红外传输		
RS-232 传输	支持串口 RS-232 双向传输		
电源	DC12V/3A *1pcs		
产品功耗	<8W		
产品尺寸	101(L)×79.5(W)×26(H) mm *2pcs		
机身材质	金属		
净重	TX:250g RX:250g		
颜色	钛晶灰		

声明

* 所有的产品和品牌名称都可能是相应生产商的商标或是注册商标。TM 和®的标示有可能在本说明书上被省略。本说明书所涉及的产品图片与实物可能有细微区别，效果演示图和示意图仅供参考(图片为合成图、模拟演示图)，有关产品的外观（包括但不限于颜色）请以实物为准。

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Security considerations:

Please read all of the instructions, and then attempt to install or operate the equipment, and to comply with the following notes:

- * Please follow all warnings and instructions marked on this product
- * Do not allow this machine to be caught in the rain or splash or soak into any liquid.
- * Do not put any objects into the housing slots in the machine in order to avoid damage to the internal parts of the machine
- * Do not attempt to repair or open the machine housing, so as to avoid electric shock.
- * The equipment housing may be equipped with heat dissipation and ventilation slots to prevent overheating, do not block the cooling vents.
- * Please turn off the power before installation, electric installation may damage the device.
- * In the course of work, do not charge plug and connecting cables to avoid damage.
- * This product is clearly marked power on the parameter, in the use of our standard power supply please make sure that the power supply parameters, so as not to burn out the device.

1st、Overview

TK-HB70 is HDMI Single Extender by net cable which use HDBaset technology to extend, through a Cat6 cable extends HDMI signals than 70 metres. No compression and signal transmission rate fast, smooth and clear picture quality, support for 3D, 24-bit color, 4Kx2K, CEC and HDCP.

2nd、Features

- 1) Using HDBaset technology
- 2) Supports HDMI uncompressed video
- 3) Support full HD 1080p@60Hz, 3D, 4Kx2K
- 4) 1080p full HD signal through Cat6a cable can be extended 70 meters
- 5) Support bi-directional infrared signal return and RS232 extend
- 6) Support HDCP, CEC and 24-bit color
- 7) Supports uncompressed audio LPCM and compressed audio DTS-HD, Dolby True HD
- 8) Support POC power supply. just supply DC 12V for the transmitter or the receiver

3rd、 Packing list



HDMI to HDBaseT Sender
TX x 1pcs



HDBaseT to HDMI Receiver
RX x 1pcs



DC12V 3A Power supply
X 1pcs



IR blaster extension
cable X 1pcs



IR receiver extension
cable X 1pcs

User' s manual book
X 1pcs

4th、 Installation requirements

1、 HDMI source device:

HDMI output signal sources. such as DVD、 andPS3、 STB、 PC and so on.

2、 Display device:

HDMI input display devices, such as televisions, projectors.

3、 Cable:

UTP/STP cat5e/6/6a/7 cable, follow standard IEEE-568B

5th、 Interfaces

5.1 Transmitter



- ①HDMI signal input interface, connect HDMI signal source device
- ②IR signal output to connect with IR blaster extension cable
- ③DC12V 3A power input interface(only for transmitter or receiver)
- ④Power light (Green light when power supply)
- ⑤RS232 extend interface
- ⑥IR signal input to connect with IR receiver extension cable
- ⑦HDBaseT signal output interface

5.2 Receiver



- ①HDMI signal output interface, connect HDMI display device
- ②IR signal output to connect with IR blaster extension cable
- ③DC12V 3A power input interface(only for transmitter or receiver)
- ④RS232 extend interface
- ⑤IR signal input to connect with IR receiver extension cable
- ⑥HDBaseT signal input interface

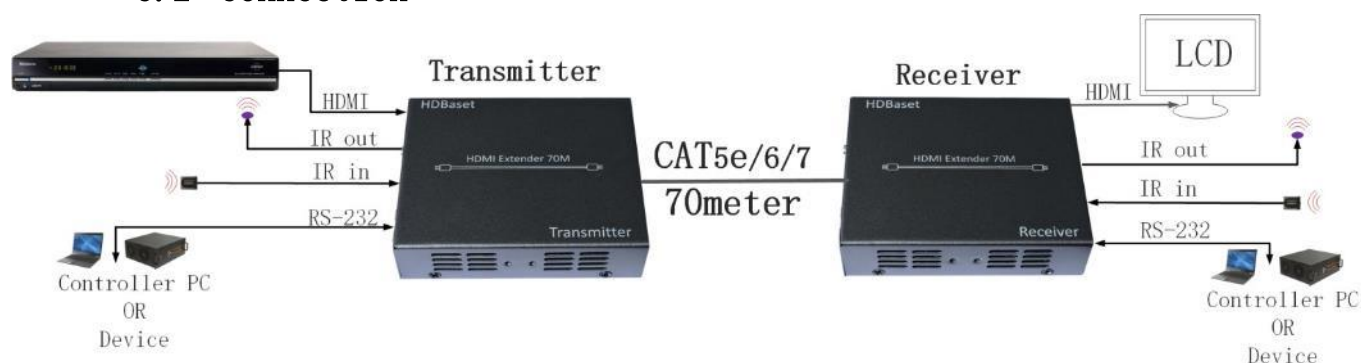
6th、 installation procedures

6.1 Making network cable

Follow the Standard of IEEE-568B linear order:

- 1-the Orange and white, 2- Orange
- 3- green and white, 4- blue
- 5- Blue and white, 6- green
- 7- Brown and white, 8- Brown

6.2 Connection



6.3 IR introduce

1) TK-HB70 support IR infrared return, through the remote control DVD in TX, or Through remote control TV in RX.

2) If control in RX -side , put IR blaster extension cable connect TX' s IR OUT interface, put IR receiver extension cable connect RX' s IR IN interface. If control in TX side, put IR blaster extension cable connect RX' s IR OUT interface, put IR receiver extension cable connect TX' s IR IN interface.

6.4 RS-232 serial transmission

By RX, TX, GND, serial signal can be extended by network cable, can be defined at any side of the RS-232 signal transmitter or receiver.

7th、RFQ

Q: No video output?

A: Check the power supply is connected, according to the led status check network cables and HDMI cable is ok.

Q: LED status ok, but HDMI display no video output?

A: Check HDMI display whether switcher to HDMI channel that HDMI input.

Q: Power light on, RJ45 yellow light flashing, green light is off, no video?

A: Check HDMI cable in transmitter and receiver

Q: Power light on, RJ45 lamps light off?

A: Please check whether the network cable is connected or replace a better quality network cable.

Q: Output vedio with flash or white noise?

A: Please replace the HDMI cable between the transmitter and the signal source, or test it with a short HDMI cable.

8th、 Specification

Item	specification		
HDMI signal	HDMI1.4, HDCP2.2, support for the CEC, 24-bit color, 4Kx2K		
Transfer Protocol	HDBaseT		
Supported resolution	480i/480P/576i/576P/720P/1080i/1080P/3D/4K×2K		
Audio	LPCM, DTS-HD, Dolby True HD		
Network cable	CAT5E、CAT6、CAT6A、CAT7		
Transmission distance	CAT5e/ CAT6	60m	Up to 1080P60Hz 36bpp
		35m	1080p@60Hz 48bpp, 1080p60Hz 3D, 4K×2K 30Hz
	CAT6a/ CAT7	70m	Up to 1080P60Hz 36bpp
		40m	1080p@60Hz48bpp, 1080p@60Hz3D, 4K×2K 30Hz
IR return	Support 20-60kHz broadband infrared remote control, support bi-directional infrared transmission		
Power supply	DC12V/3A *1pcs		
Power consumption	<8W		
Product size	101(L)×79.5(W)×26(H) mm *2pcs		
Body material	Metal		
Net weight	TX:250g RX:250g		
Colour	Titanium grey		

Proclamation

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