

4K UHD

E70

70M HD Extender

Operations Guide



AS[®]

Safety Instructions

Symbols used in user manuals and equipment indicate the possible harm to users or others and the risk of property damage. In order for you to use the equipment safely and correctly, the signs and their meanings are as follows. Please make sure to correctly understand these signs before reading the user manual.



The product contains some metal components, please pay attention to environmental protection.



This product is Class A, which may cause radio interference in living environment. In this case, users may need to take practical measures against interference.



Remind the user that the uninsulated dangerous voltage in the equipment may cause electric shock.



Warning: To avoid electric shock, please don't open the cover and put the useless parts in the case. Please contact qualified service personnel.

General information indication



Lists the contents that may lead to unsuccessful operation or setup and some related information that needs attention.

Warning

To ensure the reliable use of the equipment and personal safety, please observe the following items during installation, use and maintenance:

Precautions during installation

- Do not use this product in the following places: places with dust, lampblack, conductive dust, corrosive gas and combustible gas; Exposed to high temperature, condensation, wind and rain; There are occasions of vibration and impact. Electric shock, fire and misoperation can also lead to product damage and deterioration;
- During screw hole processing and wiring, do not make metal scraps and wire ends fall into the vent hole of the controller, which may cause fire, failure and misoperation;
- At the end of the product installation, it is necessary to ensure that there are no foreign objects on the ventilation surface, including dust-proof paper and other packaging items, otherwise it may lead to poor heat dissipation during operation, resulting in fire, failure and misoperation;
- Avoid wiring, plugging and unplugging cable plugs in the live state, otherwise it will easily lead to electric shock or circuit damage;
- And the installation and wiring must be firm and reliable, and poor contact may lead to misoperation;
- For applications with serious interference, shielded cables should be used for input or output cables of high-frequency signals to improve the anti-interference performance of the system.

Matters needing attention when wiring

- All external power supply must be cut off before installation, wiring and other operations can be carried out, otherwise electric shock or equipment damage may be caused;
- This product is grounded through the grounding wire of the power cord. To avoid electric shock, the grounding wire must be connected to the earth. Before connecting the input or output of this product, please be sure to properly ground this product.
- After the installation and wiring, remove the foreign matter immediately. Please cover the terminal cover plate of the product before electrifying to avoid electric shock.

Matters needing attention in maintenance

- Do not touch the terminal when it is energized, otherwise it may cause electric shock and misoperation;
- Please clean and tighten the terminals after turning off the power supply, which may cause electric shock when powered on;
- Please connect or remove the communication signal cable, cable connection or removal of expansion module or control unit after turning off the power supply, otherwise it may cause equipment damage and misoperation;
- Do not disassemble the equipment to avoid damaging the internal electrical components;
- Be sure to read this manual carefully and fully confirm the safety before changing, commissioning, starting and stopping the program.

Matters needing attention when scrapping products

- Electrolytic capacitors on circuit boards may explode when burned;
- Please collect and treat them separately, and do not put them into domestic garbage.
- Please treat it as industrial waste or according to local environmental protection regulations.

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1. Technical parameter



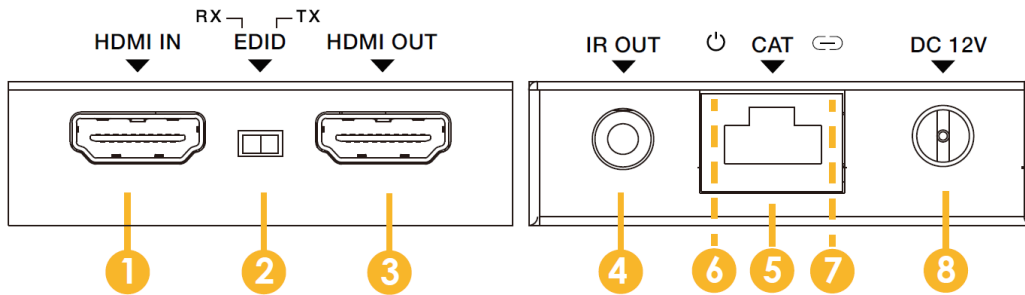
Specifications for the E70 are listed in the following table.

Parameter specification	
HDMI version	HDMI 1.4
HDCP version	HDCP 1.4
Video bandwidth	10.2Gbps
Video resolution	Up to 4K@30Hz
Audio format	Up to 7.1CH Audio
TMDS input	3.3 volts
DDC input	5.0 volts/P-P
Electrostatic protection	±8kV(air discharge), ±4kV(contact discharge)
Shell	Metal
Color	Black
Size	79.5mm[L] x 69mm[W] x 16.5mm[H]
Weight	Tx : 132g , Rx : 130g
Power supply	DC 5V/1A
Power consumption	Tx : 1.86W , Rx : 0.87W
Operating temperature	0°C~40°C
Storage temperature	-20°C~60°C
Relative humidity	20~90% RH(No condensation)

2. Physical Description

2.1 Panel introduction

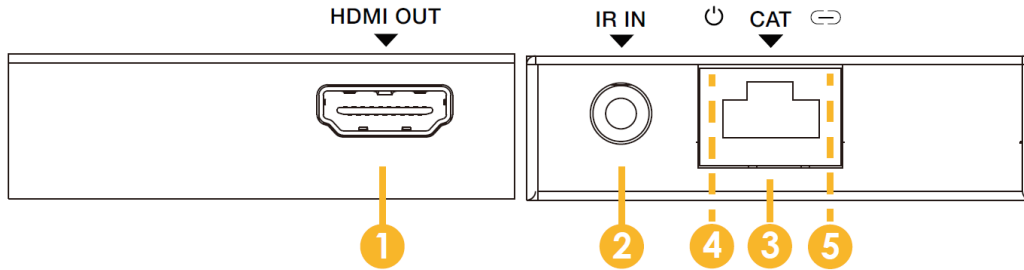
◆ TX View



Connectors, Controls & Indicators

序号	名称	功能描述
1	HDMI IN	HDMI signal input, which is connected with HDMI source device, such as DVD or set-top box
2	EDID dip switch	Used to select EDID: When the switch is turned to the right, the extender will copy the EDID signal of the display device at the output end of the HDMI ring to the signal source; When the switch is turned to the left, the extender copies the EDID information of the display device at the receiving end to the signal source.
3	HDMI OUT	HDMI loop output port. Connect HDMI display device, such as HDTV.
4	IR OUT	Connect the IR line, and the IR signal come from the IR IN of the Rx
5	CAT	The CAT output is connected to the CAT input of the Rx through a CAT5E/6 cable.
6	Power indicator lamp	After the Tx is connected to the power supply, the lamp is on
7	Connecting indicator lamp	When the Tx is connected to HDMI signal, the lamp is on
8	DC 5V	DC 5V Power supply

◆ RX View

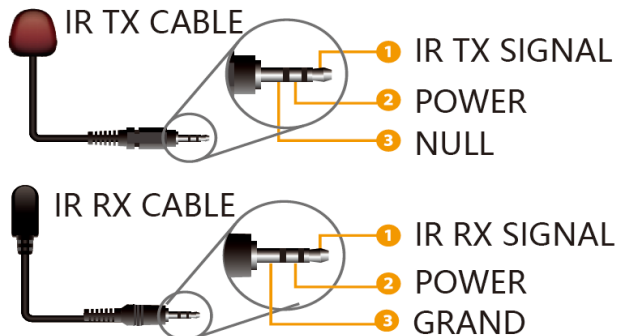


Connectors, Controls & Indicators

序号	名称	功能描述
1	HDMI OUT	HDMI signal output, which is connected with HDMI display, such as HDTV
2	IR IN	Connect the IR line, and the IR signal will be sent to the IR OUT of the Tx
3	CAT	The CAT input is connected to the CAT output of the Tx through a CAT5E/6 cable.
4	Power indicator lamp	After the Tx is connected to the power supply, the lamp is on
5	Connecting indicator lamp	When the Tx is connected to HDMI signal, the lamp is on
6	DC 5V	DC 5V Power supply

2.2 IR Cable introduction

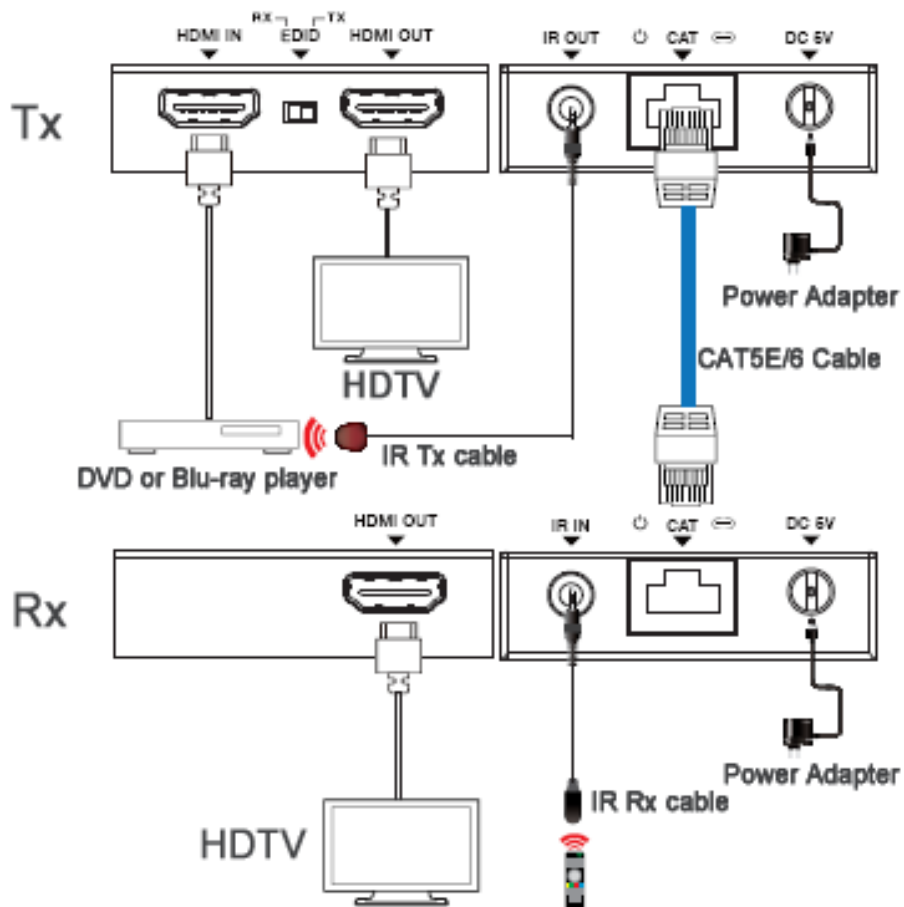
IR TX and IR RX:



3. Functional performance

- Comply with HDMI 1.4 and HDCP 1.4.
- Support high video resolution up to 4K@ 30Hz.
- Maximum transmission distance extended by a single CAT5E/6 network cable:
 - CAT6: 70M, 1080P; 40M 4K@30Hz;
 - CAT5E: 60M, 1080P; 35M 4K@30Hz;
- Supports copying EDID from RX or loop-output.
- Signals are cascaded through the HDMI loop-out.
- Support unidirectional IR control signal.
- Reasonable design and easy installation.

4. Schematic diagram



安全指示

用户手册和设备上所使用的符号，指出可能对用户或他人造成的伤害以及财产受损的风险，为了您能够安全、正确使用设备，标识及其含义如下，请确保在阅读用户手册之前正确理解这些标识。



产品中含有一些金属元器件，请注意环保。



此为A级产品，在生活环境中，该产品可能会造成无线电干扰。在这种情况下，可能需要用户对干扰采取切实可行的措施。



提醒使用者设备内出现的未绝缘的危险电压可能会导致人遭受电击



警告：为了避免电击，请不要打开机盖，也不要将无用的部分放在机箱内。请与有资格的服务人员联系。

一般信息指示



列示了可能导致操作或设置不成功的内容及一些需要注意的相关信息。

警告

为确保设备可靠使用及人员人身安全，请在安装、使用和维护时，请遵守以下事项：

安装时的注意事项：

- 请勿在下列场所使用本产品：有灰尘、油烟、导电性尘埃、腐蚀性气体、可燃性气体的场所；
- 暴露于高温、结露、风雨的场合；有振动、冲击的场合。电击、火灾、误操作也会导致产品损坏和恶化；
- 在进行螺丝孔加工和接线时，不要使金属屑和电线头掉入控制器的通风孔内，这有可能引起火灾、故障、误操作；
- 产品在安装工作结束，需要保证通风面上没有异物，包括防尘纸等包装物品，否则可能导致运行时散热不畅，引起火灾、故障、误操作；
- 避免带电状态进行接线、插拔电缆插头，否则容易导致电击，或导致电路损坏；
- 安装和接线必须牢固可靠，接触不良可能导致误操作；
- 对于在干扰严重的应用场合，高频信号的输入或输出电缆应选用屏蔽电缆，以提高系统的抗干扰性能。

布线时的注意事项：

- 必须将外部电源全部切断后，才能进行安装、接线等操作，否则可能引起触电或设备损坏；
- 本产品通过电源线的接地导线接地，为避免电击，必须将接地导线与大地相连，在对本产品的输入端或输出端进行连接之前，请务必将本产品正确接地；
- 在安装布线完毕，立即清除异物，通电前请盖好产品的端子盖板，避免引起触电。

保养时的注意事项：

- 请勿在通电时触摸端子，否则可能引起电击、误操作；
- 请在关闭电源后进行清扫和端子的旋紧工作，通电时这些操作可能引起触电；
- 请在关闭电源后进行通讯信号电缆的连接或拆除、扩展模块或控制单元的电缆连接或拆除等操作，否则可能引起设备损坏、误操作；
- 请勿拆卸设备，避免损坏内部电气元件；
- 务必熟读本手册，充分确认安全后，再进行程序的变更、试运行、启动和停止操作。

产品报废时的注意事项：

- 电路板上的电解电容器焚烧时可能发生爆炸；
- 请分类收集和处理，不能投入生活垃圾中；
- 请按工业废弃物进行处理，或者按当地的环境保护规定处理。

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1. 技术参数



发射器



接收器

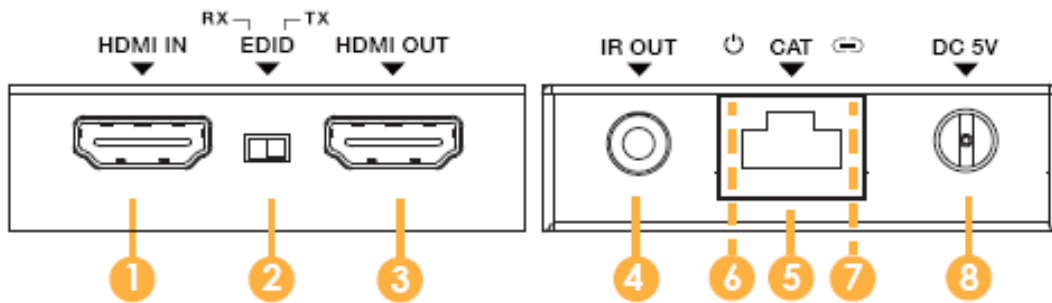
下表列出了E70的规格：

参数规格	
HDMI兼容	HDMI 1.4
HDCP兼容	HDCP 1.4
视频带宽	10.2Gbps
视频分辨率	高达4K@30Hz
音频格式	高达7.1CH高清音频
TMDS输入信号	3.3 volts
DDC输入信号	5.0 volts/P-P
静电保护	±8kV(空气放电), ±4kV(接触放电)
外壳	金属外壳
颜色	黑色
尺寸	79.5mm[长] x 69mm[宽] x 16.5mm[高]
重量	发射器：132g，接收器：130g
供电电源	DC 5V/1A
电源功耗	发射器：1.86瓦，接收器：0.87瓦
操作温度	0°C~40°C
储存温度	-20°C~60°C
相对湿度	20~90% RH(无凝结)

2. 物理描述

2.1 面板介绍

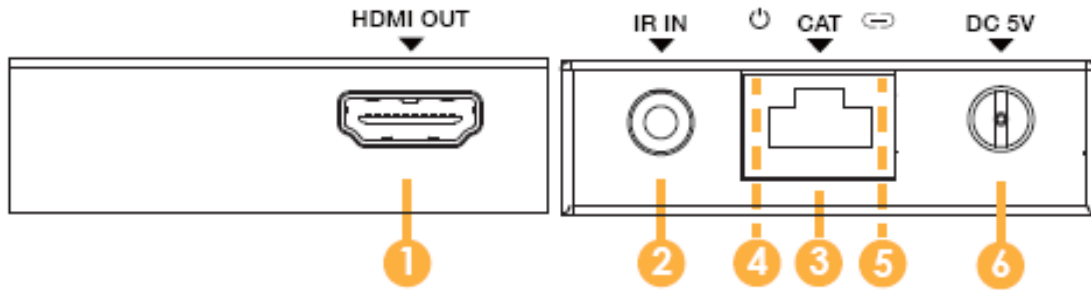
◆ 发射器面板



连接器、控制器和指示器

序号	名称	功能描述
1	HDMI IN	HDMI信号输入口，通过HDMI线连接HDMI源设备，如DVD播放器或机顶盒
2	EDID拨码开关	用于选择EDID： 开关向右拨，延长器将拷贝HDMI环出端显示设备的EDID信号到信号源； 开关向左拨，延长器则拷贝接收端显示设备的EDID信息到信号源。
3	HDMI OUT	HDMI信号环路输出口。通过HDMI线连接HDMI显示设备，如高清电视。
4	IR OUT	连接IR发射线，此IR发射信号来自于接收器的IR IN口
5	CAT	CAT输出口，通过CAT5E/6网线连接到接收器的CAT输入口。
6	电源指示灯	发射器连通电源后，电源指示灯亮。
7	连接指示灯	当发射器连接到HDMI信号源时，连接指示灯亮。
8	DC 5V	DC 5V电源接口

◆ 接收器面板



连接器、控制器和指示器

序号	名称	功能描述
1	HDMI OUT	HDMI信号输出口，通过HDMI线连接HDMI显示设备，如高清电视
2	IR IN	连接IR发射线，IR信号将发送至发射器的IR OUT端口
3	CAT	CAT输入口，通过CAT5E/6网线连接到发射器的CAT输出口。
4	电源指示灯	接收器连通电源后，电源指示灯亮。
5	连接指示灯	当发射器连接到HDMI信号源时，连接指示灯亮。
6	DC 5V	DC 5V电源接口

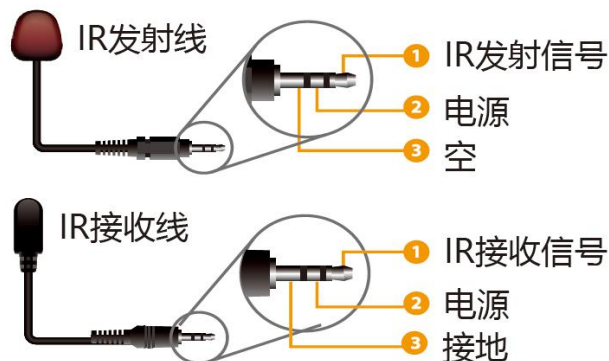
2.2 IR线介绍

IR接收头和IR发射头如下：



IR接收头

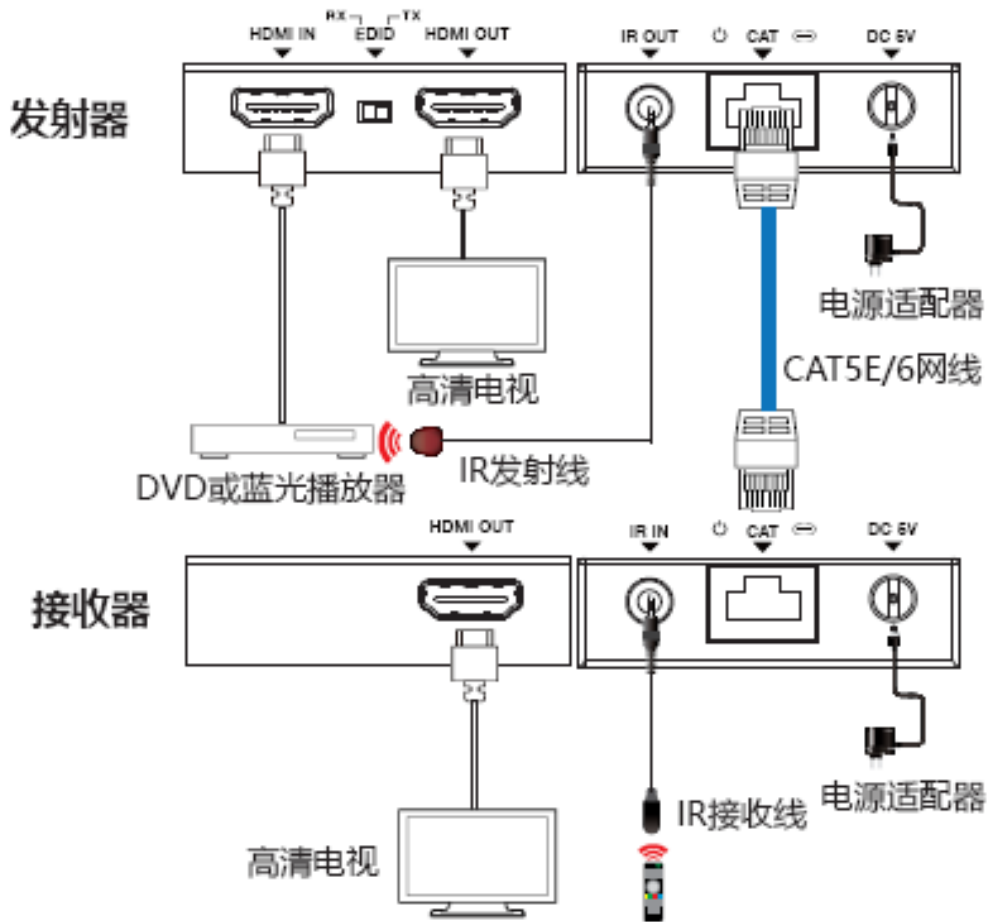
IR发射头



3. 功能特性

- 符合HDMI 1.4和HDCP 1.4规范
- 视频分辨率高达4K x 2K@30Hz
- 通过单根CAT5E/6网线，信号的最长传输距离如下所示：
CAT6：延长70米，分辨率1080P；延长40米，分辨率4K@30Hz
CAT5E：延长60米，分辨率1080P；延长35米，分辨率4K@30Hz
- 支持从接收端或环出端拷贝EDID
- 信号通过HDMI信号环出端口进行级联
- 带单向IR信号控制
- 设计合理，便于安装

4. 系统连接图





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Specifications subject to
change without notice.