

HSV352

4K*2K HDMI 光纤延长器

使用手册



一、产品简介

4Kx2K HDMI光纤延长器通过单纤、双纤SFP光纤模块进行长距离点对点传输高清视频信号,分辨率最高可达4Kx2K, 4096x2160@60Hz RGB、YCbCr444/422/420; 默认常用的4Kx2K, 3840x2160@60Hz RGB、YCbCr444/422/420; 能够适应多种复杂的应用环境。该设备拥有卓越的无损无延时的传输能力,使信号传输更加流畅和稳定,是一种可靠、高性能、高效的HDMI信号延长方式。

二、主要特性

- ◆ 通过1.25G SFP光纤模块进行点对点长距离地传输;HDMI视频和音频信号,可达20公里;(与光纤模块的公里数有关)
- ◆ 超高清无损无延时视频信号分辨率最高可达到4Kx2K, 4096x2160@60Hz RGB、YCbCr444/422/420;
- ◆ 支持双向串口透传
- ◆ 支持红外回控
- ◆ 兼容HDMI规范2.0;HDMI规范1.4;
- ◆ EDID透传能够自动识别和配置各种显示模式;
- ◆ 高带宽传输效率使画面更流畅,清晰,稳定;
- ◆ 内置ESD静电保护电路,全方位保护运行安全;
- ◆ 安装简单方便,即插即用,无需设置;

三、设备清单

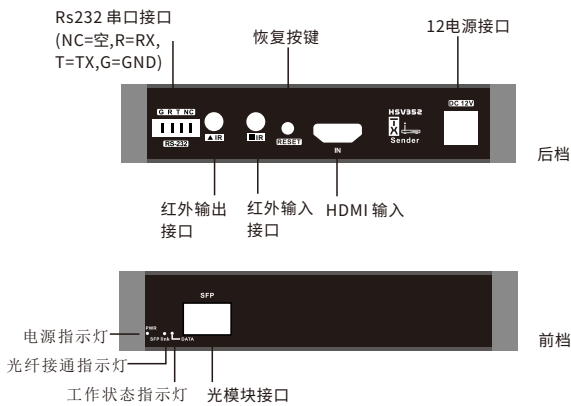
HDMI光纤发射端主机(TX)	1	台
HDMI光纤接收端主机(RX)	1	台
红外线	两	对
电源适配器	2	个
使用说明书	1	份

四、技术参数

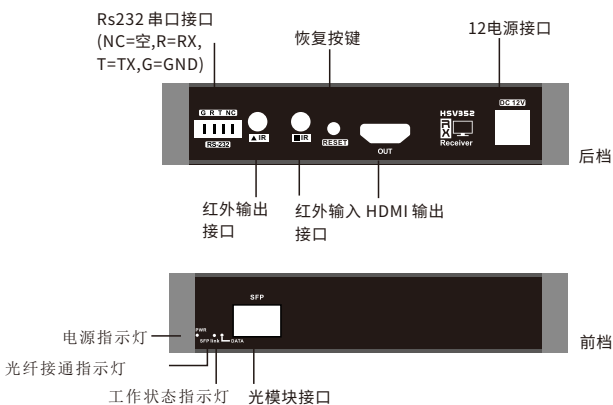
参数名称	详细说明	
视频	支持协议	兼容HDMI规范2.0;HDMI规范1.4
	压缩率带宽	最小1.0GHz,最高达1.5GHz;默认1.0GHz
	HDMI接口带宽	18Gbps
	支持分辨率	4Kx2K, 4096x2160@60Hz RGB、YCbCr444/422/420; 4Kx2K, 3840x2160@60Hz RGB、YCbCr444/422/420 (常用分辨率); 4Kx2K, 3840x2160@50Hz RGB、YCbCr444/422/420; 4Kx2K, 3840x2160@30Hz RGB、YCbCr444/422/420 及向下 1920*1080 @ 60Hz 1920*1080@24Hz; 720p@60Hz / 720p@50Hz /; 480P 720x480; 支持P帧和I帧, EDID采用透传技术.
	接口	HDMI A type 母头
	阻抗	100Ω
	建议HDMI线最大输入/输出距离	选适用于HDMI 2.0规范的线,长度小于5米,在4Kx2K, 3840x2160@60Hz RGB、YCbCr444时;可以不作特殊线材要求;
SFP光纤	光纤接口	LC接口(双纤或单纤)
	光纤类型	单模、多模
	波长	1310nm / 1550nm
	接口带宽	1.25Gbps
	典型传输距离	4Kx2K, 3840x2160@60Hz RGB、YCbCr444 时; 40km(与光模块的光功率大小有关)
	其他	电源
	最大功耗	5W
	温度	工作温度:-5°C ~ +75°C
	湿度	工作湿度:5% ~ 90%
	外形	尺寸125mm * 84mm * 25mm
	质保	1年免费保修,终生维护

五、接口说明

发送端



接收端



六 安装步骤

- 1、将HDMI信号源接入HDMI延长器发射端
- 2、将HDMI延长器接收端连接到显示设备(如高清电视机、拼接屏等)
- 3、采用LC接口光纤线连接发射端与接收端的光纤接口;
- 4、将发射端和接收端接上电源,当电源指示灯正常亮起; DATA状态指示灯进入常亮,系统运行正常。

七 应用示意图



八 故障排除

- SFP LINK 灯状态:** 插入SFP光纤模块,且光纤线接入正确,指示灯亮起;
(双纤线连接是否反线位,单纤线是否为多模线或断线,确认陶瓷芯是否脏/碎)
- DATA灯状态:** 信号连通正常为常亮;
- 闪烁一次: NO Link; (检查TX与RX光纤连接状态)
 - 闪烁两次: Reserved; (预留)
 - 闪烁三次: 正向视频正常,反向数据异常; (排查接线方式及RX端与显示设备之间HDMI线连接的情况)
 - 闪烁四次: 正向视频异常,反向数据正常; (排查纤线长度、接线方式及TX端与信源设备之间以及RX端与显示设备之间的HDMI线连接的良好情况,确认信源及显示设备正常开机)

HSV352 4K*2K HDMI Extender over Fiber

Manual



1 Product Overview

1.1 Brief Introduction

4Kx2K HDMI fiber extender transmits single-fiber, dual-fiber SFP fiber modules for long-distance point-to-point transmission of high-definition video signals with a resolution of up to 4Kx2K, 4096x2160 @ 60Hz RGB, YCbCr444 / 422/420; 4Kx2K commonly used by default, 3840x2160 @ 60Hz RGB, YCbCr444 / 422/420; Can adapt to a variety of complex application environments. This device has excellent lossless and delay-free transmission capabilities, making signal transmission smoother and more stable. It is a reliable, high-performance, and efficient way to extend HDMI signals.

1.2 Features

- ◆ Point-to-point long-distance transmission through 1.25G SFP fiber module; HDMI video and audio signals, up to 20 kilometers; (related to the kilometers of fiber module)
- ◆ The resolution of ultra high-definition lossless video is up to 4Kx2K, 4096x2160 @ 60Hz. RGB, YCbCr444 / 422/420
- ◆ Support two-way serial port transparent transmission
- ◆ Compatible with HDMI Specification 2.0; HDMI Specification 1.4;
- ◆ Ability to automatically identify and configure various display modes;
- ◆ High bandwidth transmission efficiency makes the picture smoother, clearer and more stable;
- ◆ Built-in ESD electrostatic protection circuit to protect operation safety in all aspects;
- ◆ Simple and convenient installation, plug and play, no setup required;

1.3 Equipment list

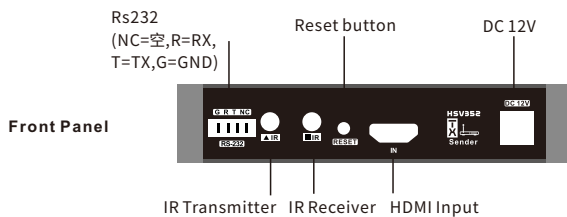
HDMI Optical Transmitter Host (TX)	1
HDMI Optical Receiver Host (RX)	1
Power adapter	2
Instruction manual	1
IR cable	2

1.4 Specification

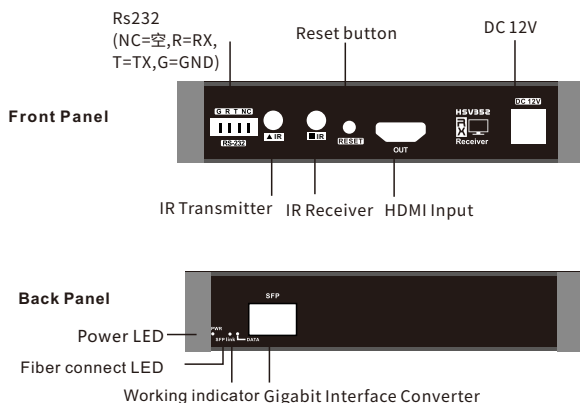
Item	Description
Power	DC 5~12V
HDMI format	HDMI2.0
Compatible with	HDMI Specification 2.0; HDMI Specification 1.4
Fiber Interface	LC (single-fiber, dual-fiber)
Resolution (EDID pass-through)	4Kx2K , 4096x2160@60Hz RGB, YCbCr444/422/420 4Kx2K , 3840x2160@60Hz RGB, YCbCr444/422/420 4Kx2K , 3840x2160@50Hz RGB, YCbCr444/422/420 4Kx2K , 3840x2160@30Hz RGB, YCbCr444/422/420 above 1920*1080 @ 60Hz ; 1920*1080@24HZ ; 720p@60Hz / 720p@50Hz ;480P 720x480;
Working Mode	Point to Point
Fiber interface	LC interface (dual fiber or single fiber)
Interface bandwidth	1.25Gbps
Transmission distance	4Kx2K, 3840x2160@60Hz RGB, YCbCr444 ; 40km(related to the kilometers of fiber module)
Working Temperature	-5 °C ~ +75 °C
Working Humidity	5% ~ 90% RH(Non-condensing)
consumption	5W(Maximum)

2 Hardware Description

2.1 Transmitter



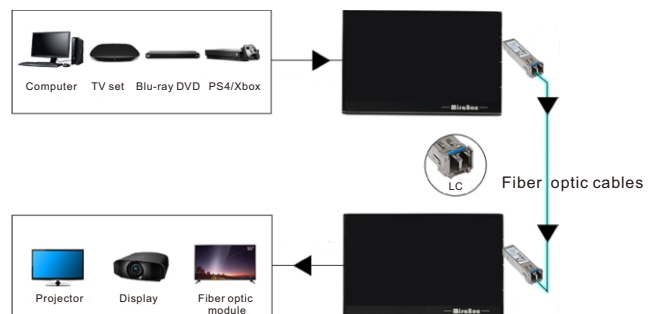
2.2 Receiver



Installation

1. Connect the HDMI signal source to the transmitting end of the HDMI extender
2. Connect the receiver of the HDMI extender to a display device (such as a high-definition television, splicing screen, etc.)
3. Use an optical fiber cable with an LC interface to connect the optical interface between the transmitting end and the receiving end;
4. Connect the transmitting end and the receiving end to the power supply, when the power light indicator lights up normally; The DATA status indicator is always on, and the system is operating normally.

Connection diagram



3 FAQ

- Light status:** The SFP fiber module is inserted, and the fiber cable is connected correctly, and the indicator light is on. (TX can light up, check whether the RX port is connected well, or display device sleep)
- Orange light status:** The signal connection is normally on;
- Blinking once:** NO Link; (check the fiber optic cable connection between TX and RX)
- Flashes twice:** Reserved; (Reserved)
- Flashes three times:** The forward video is normal and the reverse data is abnormal; (Check the fiber optic cable connection method and the condition of the HDMI cable connection between the RX end and the display device)
- Four flashes:** The forward video is abnormal and the reverse data is normal; (Check the length of the fiber optic cable, the connection method, and the good condition of the HDMI cable connection between the TX end and the source device, and the RX end and the display device, and confirm that the source and display device are turned on normally)