

HSV5631 4K超高清 KVM&USB over IP延长器 使用手册

1 产品概述

1.1 产品简介

HSV5631采用千兆IP网络技术,将4K超高清视频信号进行处理和分发,同时从接收端将鼠标键盘控制信号发送到发射端,实现KVM延长功能。本产品还可以支持全功能的USB2.0延长,因此接收端不仅可以连接鼠标键盘,还可以连接U盘,USB摄像头,USB耳机等USB设备。本产品可以支持点对点的KVM和USB延长,通过多级交换机的级联式网络延长,本产品可以将KVM和USB信号传输距离延长到20公里。

本系列产品特点还在于支持无损4K超高清4:4:4格式的传输,总体延时小于50ms,支持全格式HDMI音频,全方位满足高端客户的视听需求。是业界领先的解决方案。

本产品还可以通过板载拨码开关进行自由分组配对(最多可分32组),从而满足客户各种复杂组网需求。

1.2 特性

- 分辨率支持最大4K@30Hz 4:4:4,超高清完全无损
- 超低延时 <50ms
- 支持鼠标键盘信号延长
- 支持全功能USB信号延长
- 支持HDMI音频 2CH/5.1CH/7.1CH/DTS/Dolby格式
- 支持PoE供电(802.3AF),方便施工,提高系统健壮性

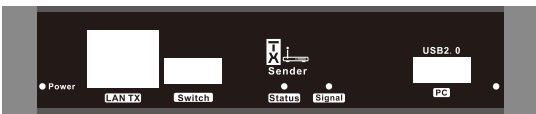
1.3 技术规格

参数	说明
电源	PoE(802.3AF) 或者 5V2A或12V1A直流电源
HDMI信号	HDMI1.4,支持HDCP
HDMI音频格式	2声道/5.1声道/7.1声道/DTS/Dolby
网络接口	千兆以太网接口
支持分辨率	4K@30Hz 1080p@60Hz / 1080p@50Hz / 1080p@30Hz 720p@50Hz / 720p@60Hz / 480p@60Hz
USB接口	发射端 全功能USB2.0 * 1 接收端 全功能USB2.0 * 4
USB接口支持外设	USB2.0外设
工作模式	点对点/级联
传输距离	点对点:CAT5E/6 100米 级联模式:最长可达20公里
工作温度	0°C - 40°C
工作湿度	20% - 90% RH(Non-condensing)

2 硬件描述

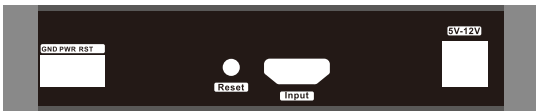
2.1 发射端设备

2.1.1 前面板



标识	类型	说明
POWER	指示灯	上电长亮
LAN TX	输入输出接口	千兆网口,支持PoE供电
Switch	拨码开关	用于发射端与接收端配对
Status	指示灯	系统运行正常时慢闪,系统运行异常时快闪
Signal	指示灯	HDMI信号灯,长亮表示视频信号正常传输
USB PC	输入输出接口	USB连接PC/HOST
-	指示灯	USB接口右侧指示灯,慢闪表示发射和接收的USB连接正常

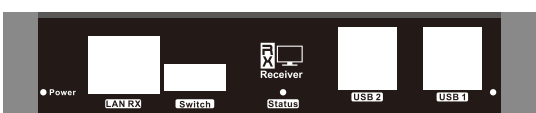
2.1.2 后面板



标识	类型	说明
GND PWR RST	输入接口	连接PC主板的开关机以及复位排针
Reset	输入按键	短按系统复位
Input	输入接口	HDMI信号输入
5V-12V	输入接口	5V 2A或12V 1A 电源输入

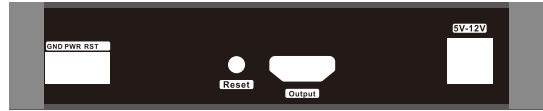
2.2 接收端设备

2.2.1 前面板



标识	类型	说明
POWER	指示灯	上电长亮
LAN RX	输入输出接口	千兆网口,支持PoE供电
Switch	拨码开关	用于发射端与接收端配对
Status	指示灯	系统运行正常时慢闪,系统运行异常时快闪
USB2	输入输出接口	双USB接口,连接USB外设
USB1	输入输出接口	双USB接口,连接USB外设
-	指示灯	USB1接口右侧指示灯,慢闪表示发射和接收的 USB连接正常

2.2.2 后面板



标识	类型	说明
GND PWR RST	输出接口	复位操作
Reset	输入按键	短按系统复位
Output	输出接口	HDMI视频输出
5V-12V	输入接口	5V 2A或12V 1A 电源输入

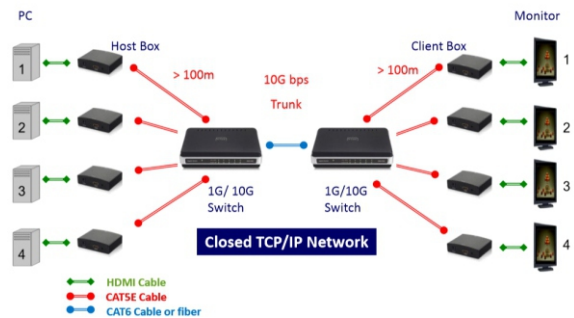
3 常见组网图

3.1 点对点延长



3.2 多路点对多点延长

通过板载拨码开关, TX与RX可自由配对。



4 注意事项

- 1 系统应用中需要使用千兆交换机。
- 2 HDMI接口请勿热插拔,以避免损毁HDMI接口器件。
- 3 工作过程中请勿插拔网线。

5 FAQ

Q: LAN接口黄色灯不亮

- A:
- 检查网线是否连接正确
 - 检查网线是否导通
 - 查看网线类型是否为CAT5E/6
 - 更换短网线进行测试
 - 检查发射端以及接收端status指示灯是否为慢闪,若为快闪状态,重新上电检查发射端与接收端拨码开关码值是否一致

Q: LAN接口绿色指示灯不亮

- A:
- 检查HDMI延长器发射端与HDMI延长器接收端是否接反
 - 检查HDMI信号源设备是否有HDMI信号输出
 - 检查HDMI信号源设备的HDMI输出分辨率是否为设备支持的分辨率
 - 检查发射端的HDMI线材是否正常工作
 - 检查发射端signal指示灯是否长亮

Q: 接收端HDMI无图像输出

- A:
- 检查接收端HDMI线材是否正常工作
 - 检查接收端HDMI输出和显示端输入是否连接正确
 - 检查接收端显示器是否支持4K视频信号,是否和接收端输出分辨率匹配

Q: USB无法工作

- A:
- 检查发射端USB线材是否正常工作
 - 检查接收端USB设备是否正常工作
 - 检查USB接口旁边指示灯是否慢闪

HSV5631 4K UHD KVM&USB over IP Extender Manual

1 Product Overview

1.1 Brief Introduction

HSV5631 extend and distribute HDMI signal via Gigabit IP network, and transmit keyboard/mouse signal from receiver side to sender side to realize reverse control. In addition, HSV5631 supports full USB2.0 port extending. Users can use all kinds of USB device such as U-disk, U-key, USB camera, USB earphone/microphone. This product can support point-to-point KVM and USB extension. Through cascaded network extension of multi-level switches, this product can extend the transmission distance of KVM and USB signals to 20 kilometers.

Highlights of this series products are support of 4K@30Hz 4:4:4 video, 5.1ch/7.1ch/DTS/Dolby audio, ultra-low latency <50ms and seamless keyboard/mouse reverse control, which meet high-end customer's requirement.

1.2 Features

- 1 Resolution up to 4K@30Hz 4:4:4, video no-loss
- 2 Ultra-low latency <50ms
- 3 Support keyboard/mouse extending
- 4 Support full USB2.0 extending
- 5 Support HDMI audio 2CH/5.1CH/7.1CH/DTS/Dolby format

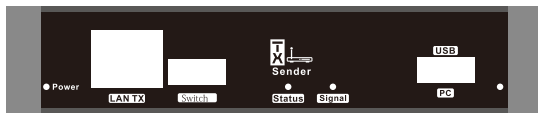
1.3 Specifications

Item	Description
Power	PoE(802.3AF) or 5V2A DC/12V1A DC
HDMI format	HDMI1.4, HDCP
HDMI audio format	HDMI audio format
Ethernet Interface	Rj45 Gigabit Ethernet
USB port	Sender: 1*USB2.0 to PC/Host Receiver: 4*USB2.0 to USB device
Resolution supported	4K@30Hz 1080p@60Hz / 1080p@50Hz / 1080p@30Hz 720p@50Hz / 720p@60Hz / 480p@60Hz
USB protocol supported	USB2.0 full function
Working Mode	Video: Point to Point / Cascade USB: Point to Point
Transmission distance	Point to Point: CAT5e 100m/CAT6 100m Cascade: maxim 20km
Working Temperature	0°C-40°C
Working Humidity	20% ~ 90% RH(Non-condensing)

2 Hardware Description

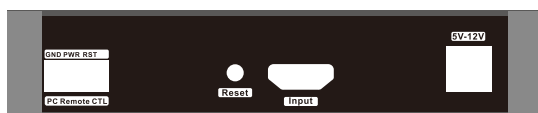
2.1 Sender

2.1.1 Front Panel



ID	Type	Description
POWER	LED	Light on: Power on
LAN TX	Input / Output	GE LAN port, support PoE(802.3AF)
Switch	DIP switch	For transmitting and receiving pairing
Status	LED	Flash slow: system working correct Flash fast: system working abnormal
Signal	LED	Light on: video transmission correct
USBPC	Input / Output	USB connect to PC/HOST
-	LED	LED on the right of USB port Flash: USB connection between sender and receiver working correct.

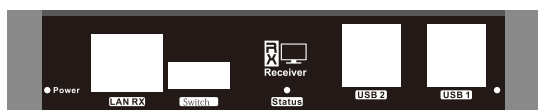
2.1.2 Back Panel



ID	Type	Description
RemotePCCLT	Input	Connect the power switch of the PC motherboard and the reset pin
Reset	Button	Short press to restart device
Input	Input	HDMI Input
5V-12V	Input	5V 2A or 12V 1A DC power input

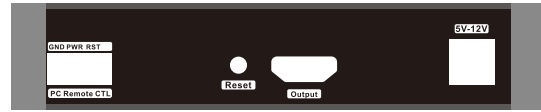
2.2 Receiver

2.2.1 Front Panel



ID	Type	Description
POWER	LED	Light on: Power on
LANRX	Input / Output	GE LAN port, support PoE(802.3AF)
Switch	DIP switch	For transmitting and receiving pairing
Status	LED	Flash slow: system working correct Flash fast: system working abnormal
USB2	Input / Output	Dual USB port, connect to USB2.0 devices
USB1	Input / Output	Dual USB port, connect to USB2.0 devices
-	LED	LED on the right of USB port Flash: USB connection between sender and receiver working correct.

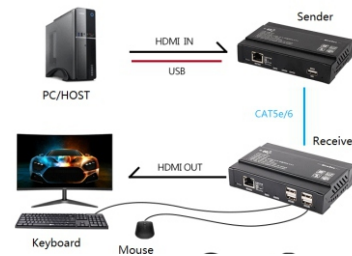
2.2.2 Back Panel



ID	Type	Description
RemotePCCTL	Output	Reset operation
Reset	Button	Short press to restart device
Output	Output	HDMI output
5V-12V	Input	5V 2A or 12V 1A DC power input

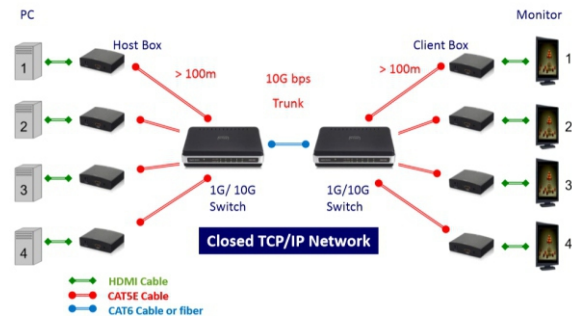
3 Connection Diagram

3.1 Point to Point



3.2 Multi-way point-to-multipoint extension

TX and RX can be freely paired by dial switch



4 Attention

- 1) Please use Gigabit switch in this system. Fast Ethernet switch could not be used.
- 2) Please do not plug or unplug HDMI cable when the device is power on, to avoid HDMI port components damage.
- 3) Please do not plug or unplug Ethernet cable when the device is power on, to avoid RJ-45 port components damage.
- 4) USB connection work in point to point mode
- 5) USB connection switch manually by user to choose receiver

5 FAQ

Q : Yellow light led of LAN port is not light?

A : ① Check if the network cable is connected correctly

② Check if the network cable is conductive

③ Check if the network cable type is CAT5E / 6

④ Replace the short network cable for testing

⑤ Check whether the status indicators on the transmitting and receiving ends are flashing slowly. If the status indicators are flashing fast, power on again and check whether the dialing code on the transmitting end and the receiving end are consistent.

Q : Green light led of LAN port is not light

A : ① Check whether the transmitting end of the HDMI extender and the receiving end of the HDMI extender are connected reversely.

② Check if the HDMI signal source device has HDMI signal output

③ Check if the HDMI output resolution of the HDMI source device is the resolution supported by the device

④ Check if the HDMI cable on the transmitting end works normally

⑤ Check whether the signal indicator on the transmitter is on.

Q : No display on screen connect to receiver?

A : ① Check whether the HDMI cable at the receiving end works normally

② Check whether the HDMI output on the receiving end and the input on the display end are connected correctly

③ Check whether the display of the receiving end supports 4K video signals and whether it matches the output resolution of the receiving end

Q : USB device not work

A : ① Check if the USB cable at the transmitting end works normally

② Check whether the USB device on the receiving end works normally

③ Check if the indicator light next to the USB interface flashes slowly