DIGITUS®

4K/30 Hz HDMI EXTENDER SET OVER TCP/IP, 100 m

User Manual

DS-55129

Contents

Dear Customer

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or using this product. Please keep this manual for future reference.

Introduction

This product is a HDMI Extender based on the TCP/IP technology. With one CAT5e/6/7/8 cable, it is able to transmit signal from source (up to 4k/30Hz) to display (up to 4k/30Hz). It can also extend the IR, RS232, USB signals by using the same Cat5e/6/7/8 cable meanwhile. Besides, the IR function allows controlling the source from the remote side.

Features

- Interface:

  Sender: HDMI input x1, RJ45 x1, Line input x1, Line output x1, RS232 x1, IR output x1, USB 2.0 x1, DC Power Jack x1

  Receiver: HDMI output x1, RJ45 x1, Line input x1, Line output x1, RS232 x1, IR input x1, USB 2.0 x3, DC Power Jack x1

- Support TCP/IP
- Support HDMI resolution up to 4K/30Hz (RGB 4:4:4)
- Transmission distance can be up to 100m with 4K/30Hz
- Support cascading through an ethernet switch
- Support CAT5e, CAT6, CAT7, CAT8
- Support IR remote control
- Support RS232 signal bypass
- Support HDCP 1.4
- Support KVM function (USB 2.0 Extension)

Package Contents

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the shipping carton:

- 1x Sender
- 1x Receiver
- 2x 24V/0.5A DC Power Adapter
- 1x IR Sender (IR Extender)
- 1x IR Receiver (IR Blaster)
- 2x Phoenix Terminal Male
- 1x User Manual
- 4x Installation bracket for wall mounting (Optional)
- USB A to USB B cable

Panel Descriptions

1. Sender

① HDMI In: Connect HDMI source to this port

② USB: Connect this port to PC.

③ RS232 port: Connect to a PC or laptop for RS-232 commands transmission.

④ IR Out: Connect IR Receiver (Blaster) to this port for IR signal sending to control the HDMI source.

⑤ Line In: Connect to audio signal input.

⑥ Line Out: Connect to audio signal output.

⑦ LAN: Connect the Sender to the Receiver via this port with a Cat5e/6 cable.

⑧ DC 24V: Plug the 24V DC power supply into the unit and connect the adapter to an AC outlet.

⑨ Power Switch: Turn on to get power.

⑩ Power Indicator: The LED will turn on once the DC/24V is provided.

⑪ Link LED: When LED is "ON", it indicates TCP/IP link connection established between the Sender and the Receiver over the Cat5e/6 cable.

⑫ Video: LED will light up once source is connected.

⑬ Reset: For system reset.

2. Receiver

① HDMI Out: Connect HDMI display to this Port.

② USB: Connect to keyboard/mouse/U-disk.

③ RS232 port: Connect to the device that is to be controlled by RS-232 commands.

④ IR In: Connect IR Sender (Extender) to this port for IR signal reception from the remote control to control the HDMI source.

⑤ Line In: Connect mic port to this port.

⑥ Line Out: Connect to the audio device.

⑦ LAN: Connect the Sender to the Receiver using a Cat5e/6 cable.

⑧ LAN: Connect the Sender to the Receiver using a Cat5e/6 cable.

⑨ Power Switch: Turn on to get power.

⑩ Power LED: The LED will turn on once the DC/24V is provided at the end of Sender.

⑪ Link LED: When LED is "ON", it indicates TCP/IP link connection established between the Sender and the Receiver over the Cat5e/6 cable.

⑫ Video: LED will light up once source is connected.

⑬ Reset: For system reset.

Specifications

Signal Input/Output	
Sender Connector	HDMI input x1, RJ45 x1 Line input x1, Line output x1 RS232 x1, IR output x1 USB 2.0 x1, DC Power Jack x1
Receiver Connector	HDMI output x1, RJ45 x1 Line input x1, Line output x1 RS232 x1, IR input x1 USB 2.0 x3, DC Power Jack x1
Video format supported	
Max Resolution	3840*2160@30Hz, 4096*2160@30Hz
Transmission distance	
Cat5e/6 cable	100m for 4Kx2K@30Hz
HDMI cable	5m for 4Kx2K@30Hz
Operating Frequency	
HDMI Bandwidth	10.2G
IR	Full frequency band
RS232 Baud Rate	115200bps
Mechanical	
Material	Metal
Size (L-W-H)	
Sender	168*75*20.5mm
Receiver	168*75*20.5mm
Weight (Net)	
Sender	302g
Receiver	300g
Power Requirement	
Power Supply	24V DC, 0.5A, 12W
Power consumption (Max)	Sender (6W), Receiver (6W)
ESD Protection	
Human Body Model	±8kV (air-gap discharge) & ±4kV (contact discharge)
Environmental	
Operating Temperature	0 °C to +45°C
Operating Humidity	10% to 85 % RH (no condensation)
Storage Temperature	-10 °C to +80°C
Storage Humidity	5% to 90 % RH (no condensation)

Power Adapter Information

| Information published	Value and precision	Unit
Manufacturer's name or trade mark, commercial registration number and address	Dongguan Guanjin Electronics Technology Co.,Ltd Block 16 Qiantou New Industrial Park, Niushan, Dongcheng District, 523128 Dongguan City, Guangdong Province	-
Model identifier	K12V240050G	-
Input voltage	AC, 100-240V	V
Input AC frequency	50-60	Hz
Output voltage	DC, 12V	V
Output current	0.5	A
Output power	12	W
Average active efficiency	82.96	%
Efficiency at low load (10 %)	76	%
No-load power consumption	0.1	W

Connection and Operation

1) A) Connect the HDMI source to the HDMI input of Sender.

   B) Connect the HDMI output of Receiver to HDMI display.

2) There are two ways of connection:

   A) Point to Point connection: Connect the "LAN" of Sender to the "LAN" of Receiver with a Straight-Through Wired Cable (both ends connected by T568B).

   B) Point to Point connection through an Ethernet Switch: Connect the "LAN" of Sender and the "LAN" of Receiver to the same VLAN group on the ethernet switch with a Straight-Through Wired Cable (both ends connected by T568B)

   Note: VLAN division needs to be performed according to the instructions of the ethernet switch.

3) Power on the HDMI display and HDMI source.

4) Plug two 24V power adapters into DC power jacks of the Sender and Receiver to supply power for both. At this time, the "Power" indicator lights up, the "Link" light and "Video" light are on too. The display signal of the signal source output is displayed on display device. (Note: The ethernet cable supports up to 100 meters)

5) To achieve KVM function, connect USB port of Sender to PC and connect USB ports of Receiver to mouse/keyboard through USB cable. Data transmission can be achieved by connecting U-disk to USB port of Receiver.

6) Connect IR to "IR In" of Receiver and connect IE to "IR Out" of Sender to achieve remote control.

7) Connect DB9 serial cable to the Phoenix terminal male served (note the order of TX, RX, GND), then respectively

   A) Connect the RS232 port of Sender to RS232 equipped PC.

   B) Connect the RS232 port of Receiver to RS232 equipped device.

   Note: The baud rate is set to 115200, and the serial device can be connected to extend the serial information.

8) For remote audio input, connect mic port to "Line in" of Receiver and connect "Line out" of Sender to audio signal output.

9) For remote audio output, connect audio signal input to "Line in" of Sender and connect "Line out" of Receiver to the audio device.

Connection Diagram
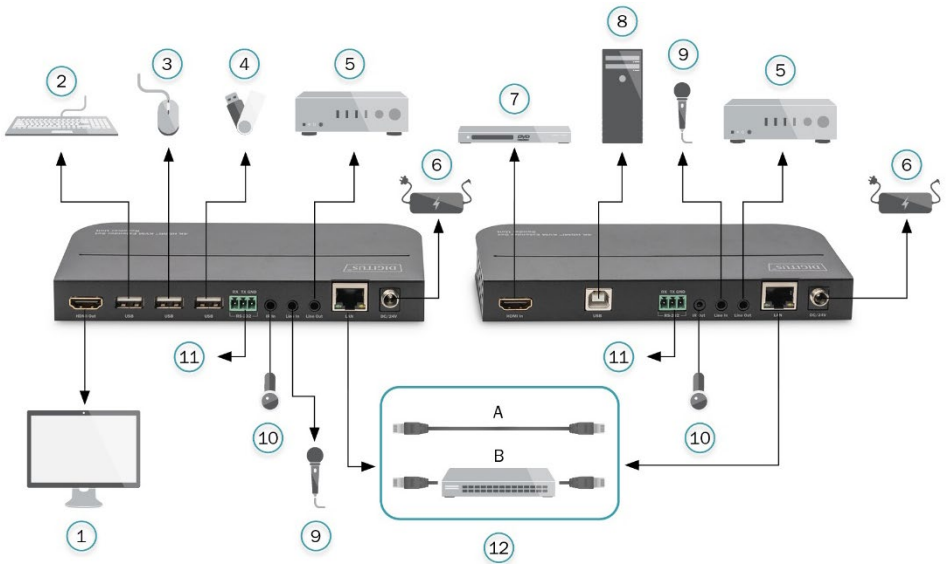
1	HDMI Display	7	DVD (HDMI Source)
2	Keyboard	8	PC
3	Mouse	9	Microphone
4	USB Stick	10	IR Blaster (Sender)/ IR Extender (Receiver)
5	Amplifier	11	RS-232 equipped PC
6	Power Supply	12	Two kinds of connection (A & B); Straight-Through Wired Cable (T568B), Max. 100 m for 4K@30 HZ

Disclaimer:

The product name and brand name may be registered trademark of related manufacturers. TM and ® may be omitted on the user manual. The pictures on the user manual are just for reference, and there may be some slight difference with the real products.

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