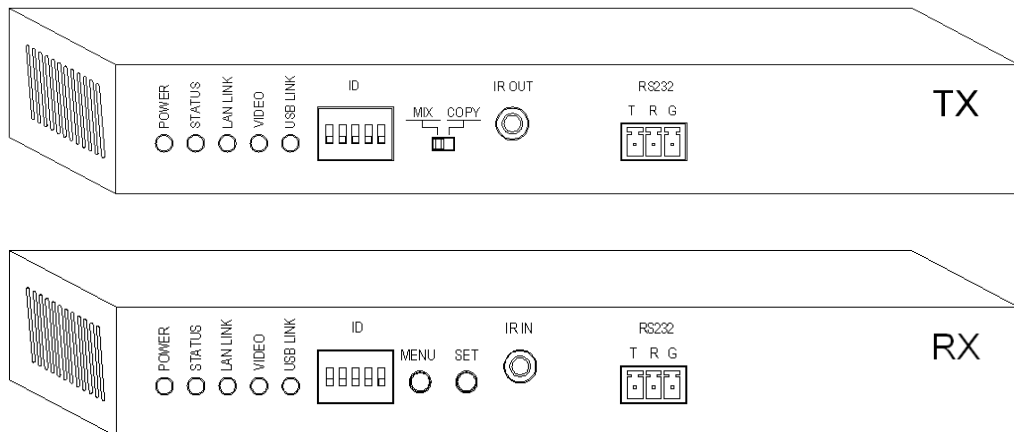


User Manual

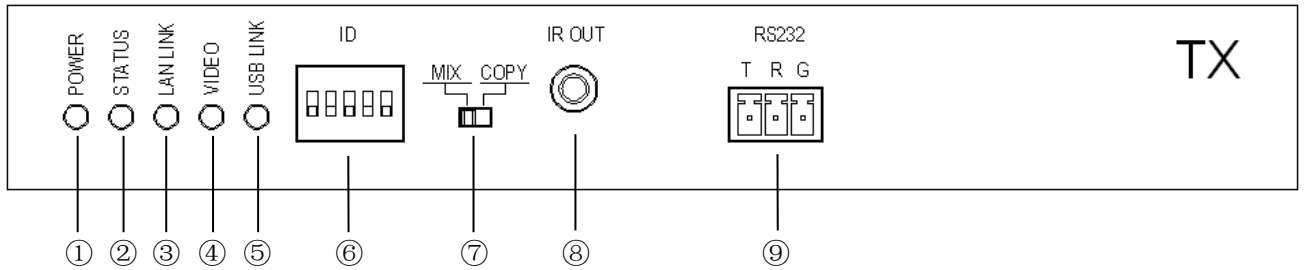
4K HDMI KVM OVER IP Extender

Model No AA6166 Multi Receiver Version



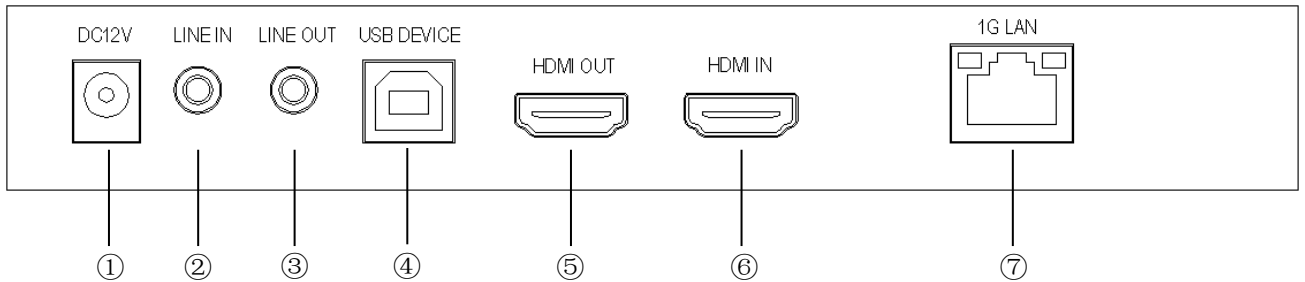
FEATURES OF THE INTERFACE:

Picture 1.0 Front panel of Transmitter (TX)



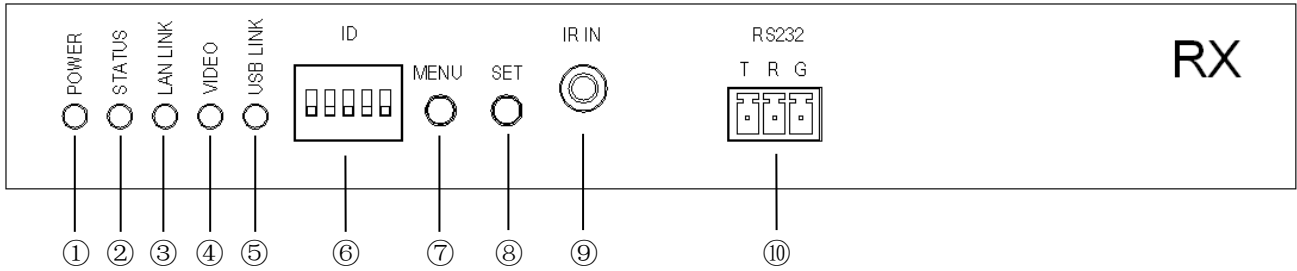
No.	Interface Name	Functional description
①	Power status indicator	Power status display, light up when power on.
②	System status indicator	Display system status, It will keep flashing when working normally.
③	LAN status indicator	Displays the network connection status, Light up when the device is connected successfully.
④	Video signal indicator	Light up when A/V signals are transmitted.
⑤	USB online indicator	Light up when USB device connected normally.
⑥	ID code switch	Only for HDEX0019M1. Used to set different IP addresses for devices. The IDs of TX and RX must be set to the same number. Power off and restart is required after setting up.
⑦	EDID mode switch	MIX mode: The EDID of TX and RX HDMI output ports are mixed. COPY mode: Read the EDID of HDMI output port on the RX side only.
⑧	IR output port	This port is connected with a 3.5mm IR transmission line, which can output the infrared remote control command transmitted from the RX side.
⑨	RS232 interface	This is a two-way RS232 serial COM port, Used for serial communication between peripheral devices.

Picture 1.1 Back panel of Transmitter (TX)



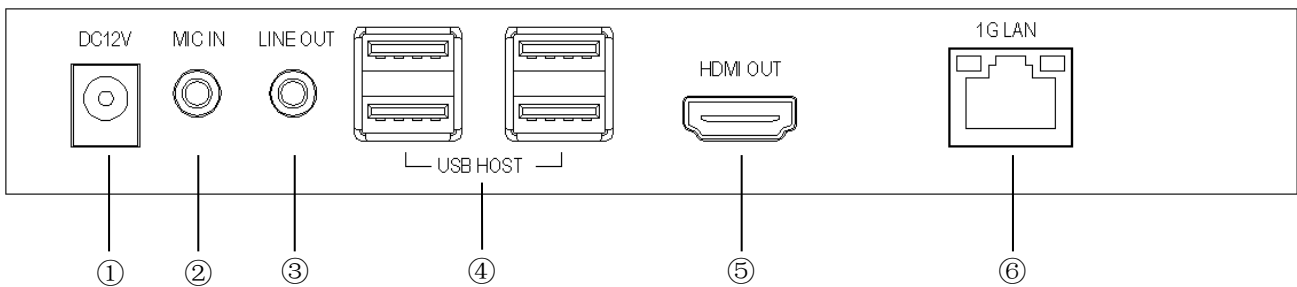
No.	Interface Name	Functional description
①	DC power supply port	Connect AC-DC power adapter for power supply
②	Line in port	Stereo analog audio input, connected to Line out port of the PC or other signal source.
③	LINE OUT port	Stereo analog audio output, connected to Aux in port of the audio power amplifier.
④	USB slave device interface	Connect to the PC host USB interface over a type-B USB cable.
⑤	HDMI Output port	Connect to the display device over a HDMI cable for local monitoring.
⑥	HDMI input port	Connect to the HDMI output port of the signal source over a HDMI cable.
⑦	1G LAN port	Connect to receiver or gigabit network switch over a network cable.

Picture 1.2 Front panel of Receiver (RX)



No.	Interface Name	Functional description
①	Power status indicator	Power status display, light up when power on.
②	System status indicator	Display system status, It will keep flashing when working normally.
③	LAN status indicator	Displays the network connection status, Light up when the device is connected successfully.
④	Video signal indicator	Light up when A/V signals are transmitted.
⑤	USB online indicator	Light up when USB device connected normally.
⑥	ID code switch	Only for HDEX0019M1. Used to set different IP addresses for devices. The IDs of TX and RX must be set to the same number. Power off and restart is required after setting up.
⑦	MENU Button	A short press brings up the OSD menu. Loop in the upper left corner of the TV screen: MAC address -> IP address -> Baud rate -> Update EDID. If you press this key for more than 3 seconds, EDID will be updated to TX (Only for HDEX0020M1). When the microphone is inserted into MIC IN Port, press this key for more than 3 seconds will enable the MIC function of RX and the TV screen will display "MIC owner".
⑧	SET Button	When "Baud rate" is selected from the menu, Short press this key to change the serial port baud rate. 115200 -> 57600 -> 38400 -> 19200 -> 9600 -> 4800 -> 2400 -> 1200 When "Update EDID" is selected from the menu, press this key to launch Update.
⑨	IR input port	This port is connected with a 3.5mm IR receiving line. It can receive the commands from the infrared remote control and transmit it to the TX side.
⑩	RS232 interface	This is a two-way RS232 serial COM port, Used for serial communication between peripheral devices.

Picture 1.3 Back panel of Receiver (RX)

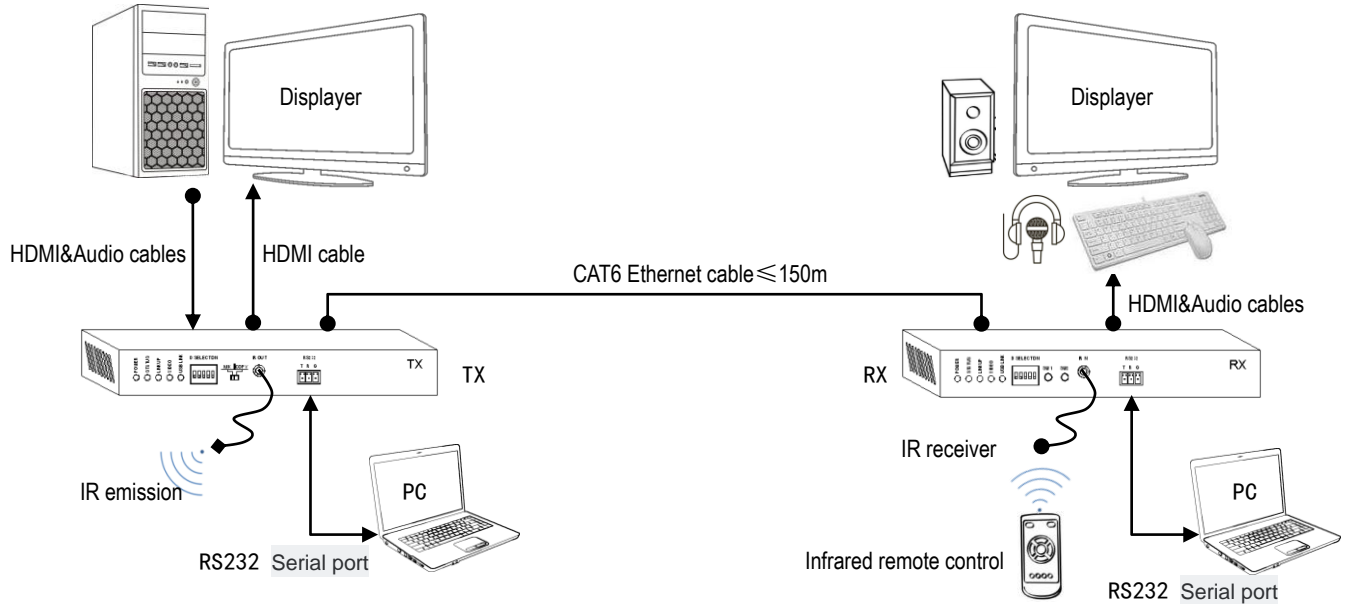


No.	Interface Name	Functional description
①	DC power supply port	Connect AC-DC power adapter for power supply
②	MIC in port	Connect external microphone.
③	LINE OUT port	Stereo analog audio output, connected to Aux in port of the audio power amplifier.
④	USB host device interface	This interface can be connected to keyboard, mouse, USB disk and other USB peripherals.

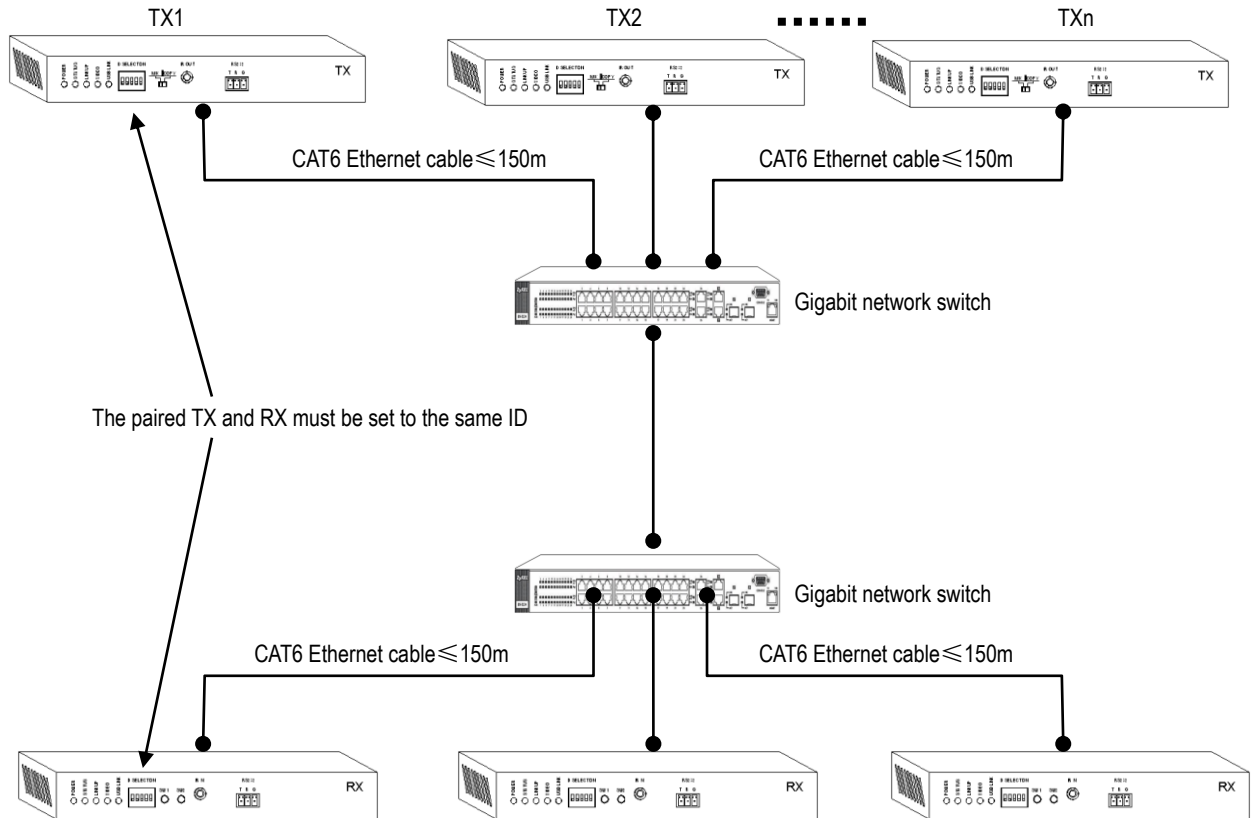
⑤	HDMI Output port	Connect to the HDMI input port of display device over a HDMI cable.
⑥	1G LAN port	Connect to receiver or gigabit network switch over a network cable.

Connection and operation:

1. One-to-One Connection Diagram (AA6162 and AA6166)

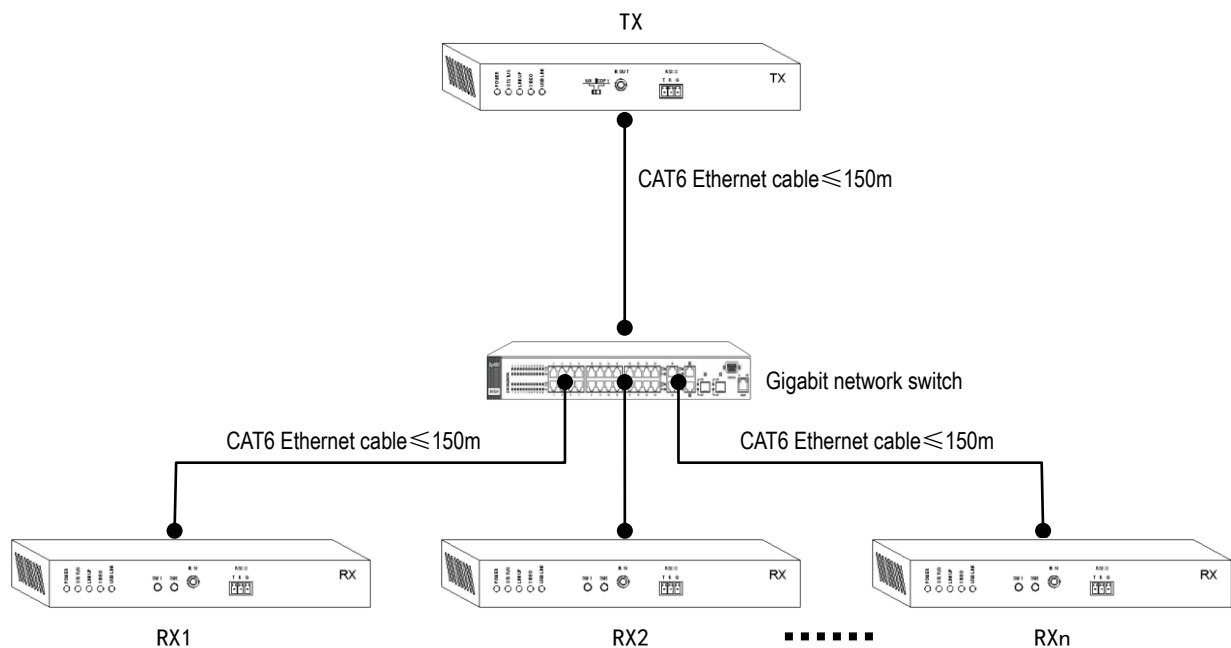


2. Multiple One-to-One Connection Diagram (AA6162)



3. One-to-Many Connection Diagram (AA6166)

..... RXn



4. Connection instructions

- 4.1 Connect the HDMI IN Port of the TX to the HDMI output port of signal source/PC over a HDMI cable.
- 4.2 Connect the HDMI OUT Port of the RX to the HDMI input port of display device over a HDMI cable.
- 4.3 Connect the 1G LAN Port of the TX to the 1G LAN Port of the RX over a network cable. Gigabit switches need to be inserted between TX and RX when multiplexing
- 4.4 TX and RX need to be set to the same ID number before use. (Only for HDEX0019M1)
- 4.5 Supply TX and RX with AC power adapter.
- 4.6 RS232, IR and other interfaces can be selected as required.

5. RS232 Communication:

- 5.1 To use RS232 to do communication, the TX RS232 Port Baud rate can be set to 115200. RX RS232 Baud rate can be adjusted between 1200-115200(refer to button function instruction),which need to be matched with the output connected serial port baud rate.
- 5.2 To use cross-link way for serial port connection, TXD to connect with RXD of the output connected device, the RXD to connect with the TXD of the output connected device, and GND to connect with GND.
- 5.3 At One to Many Connection mode, TX RS232 can send serial port data to many RX simultaneously and also can monitor many RX RS232.The TX only can receive data of one RX at the same time. When one of the RX send data, the TX will keep communicate with the RX, the other RX have to wait extra 0.2 seconds to get the chance of communicating

with the TX after the current RX stopped communication.

6. IR Extend

6.1 IR Extend is used for using IR remote to do distance control to the peripheral device.

6.2 To check if the working frequency of the IR remote is under the range of the 30-50HZ.

6.3 To point the IR Transmitter head at the peripheral device location.

6.4 At one to many connection mode, TX will monitor many RX IR interface. The TX only can receive one of the RX IR data. When one of the RX send data, the TX will keep communicating with the RX, the other RX have to wait the extra 2seconds to have the chance of communicating after the current RX stopped communicating.

7. Analog Audio Input and Output:

7.1 If the TX Line In or Line Out have cable connection, it will transmit the Line IN input audio to the RX automatically.

7.2 If the RX MIC IN or LINE Out have cable connection, the HDMI Output audio will be mute and the audio will be priority output from the LINE OUT Port.

7.3 TX Line Out audio signal is from RX MIC IN Port.

7.4 At One to Many Connection mode, it need to keep pressing the RX MENU button for lasting three seconds to get the chance of using the TX LINE OUT Channel. After done successfully, the RX will show "USB owner".

8. USB Expand:

8.1 To use the USB cable to connect the TX DEVICE Port to the PC. Normally no need to install driver, if meet the remind of driver installation, please download the driver by linking the Ethernet.

8.2 It can insert the Mouse, Keyboard and U-stick and other peripheral device to the RX USB Port. And the peripheral device driver still need to be installed at the PC.

8.3 The device can be used normally after the RX and RX USB LINK LED both go bright.

8.4 At One To Many connection mode, there are many RX, it need to short press the RX SET button to get the chance of using the RX USB Channel.

9. EDID Mode and Update:

9.1 There is one EDID Mode Switch, when choose MIX Mode, it will do mixed process to the EDID from both TX and RX HDMI Port Connected Device; when choose Copy Mode, it will only read the RX HDMI Port connected device.

9.2 HDEX0019M1 will update the new TV EDID to the TX automatically after detecting the RX HDMI port have connected the new TV.

9.3 HDEX0020M1 can update the new TV to the TX by keeping press the MENU button for three seconds after

HDEX0020M1 have detected the RX HDMI port have connect the new TV.

10. Other matters needing attention:

10.1 After change the ID set-up, it need to be active by power off and on again.

11.2 If meet exception, the user can try to update the EDID.

SPECIFICATIONS:

Model No.	AA6162 (One way) AA6166 (Multi way)
Model name	4K HDMI KVM OVER IP Extender
HDMI resolution	480P/720P/1080P@24Hz/30Hz/50Hz/60Hz, up to4K@30Hz Supports1080P@120Hz,/3D etc.
HDMI Audio format	Dolby True HD/DTS HD/Dolby Atoms/ Dolby Digital 5.1 / Dolby Digital Plus/ DTS 5.1/LPCM
HDMI Max bandwidth	297MHz
HDMI Max baud rate	8.91Gbps
LAN transmission rate	850 Mbps Max
Transmission delay	<80us
Output cable length	1080P/AWG 26 ≤12m
Transmission distance	≤100m (Cat 5e)/≤150m (Cat 6) Use network switch extensions to recover further transmission distances
Serial port baud rate	Supports 115200/57600/38400/19200/9600/4800/2400/1200bps
IR Carrier frequency	20-60KHz
Power adapter specification	AC 100~240V / DC12V/1.5A
Max working current	TX≤300mA / RX≤200mA
Working temperature range	-5 ~ +40°C
Working humidity range	5 to 85%RH (No Condensation)
Storage temperature	-15 to 55°C
Storage humidity	5 ~95%RH(No Condensation)
Size	177 x104x26 (mm) (mm)
Weight	TX≈420g/RX≈415g
Accessories	Manual x1, Power Adaptor x2, IR Transmitter cable x1, IR Receiver cable x1