

4K60Hz HDMI KVM & USB, RS232, IR, Audio over IP Extender

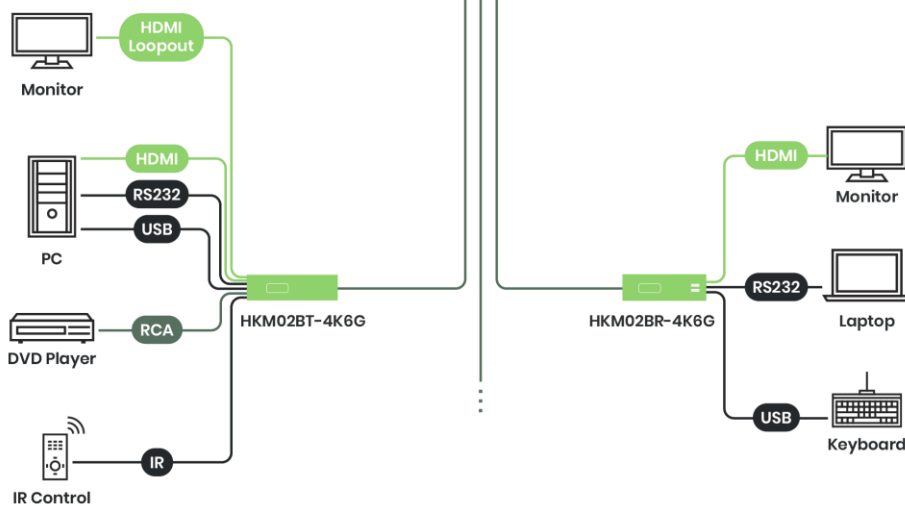
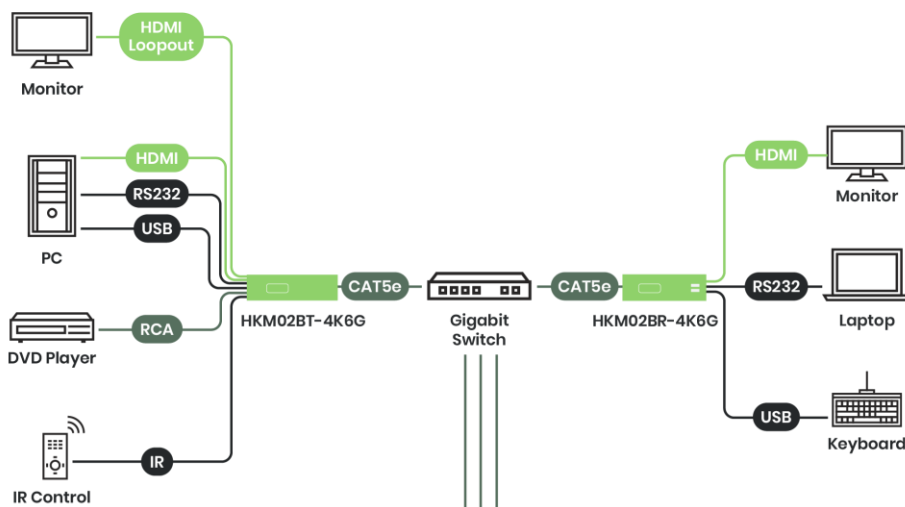
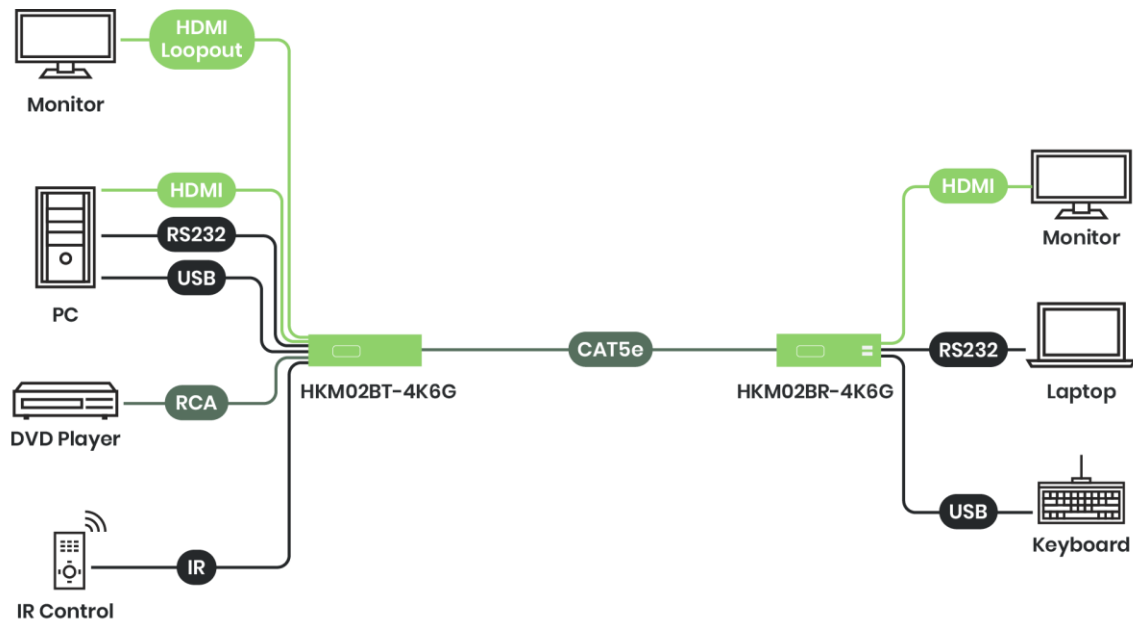
Introduction

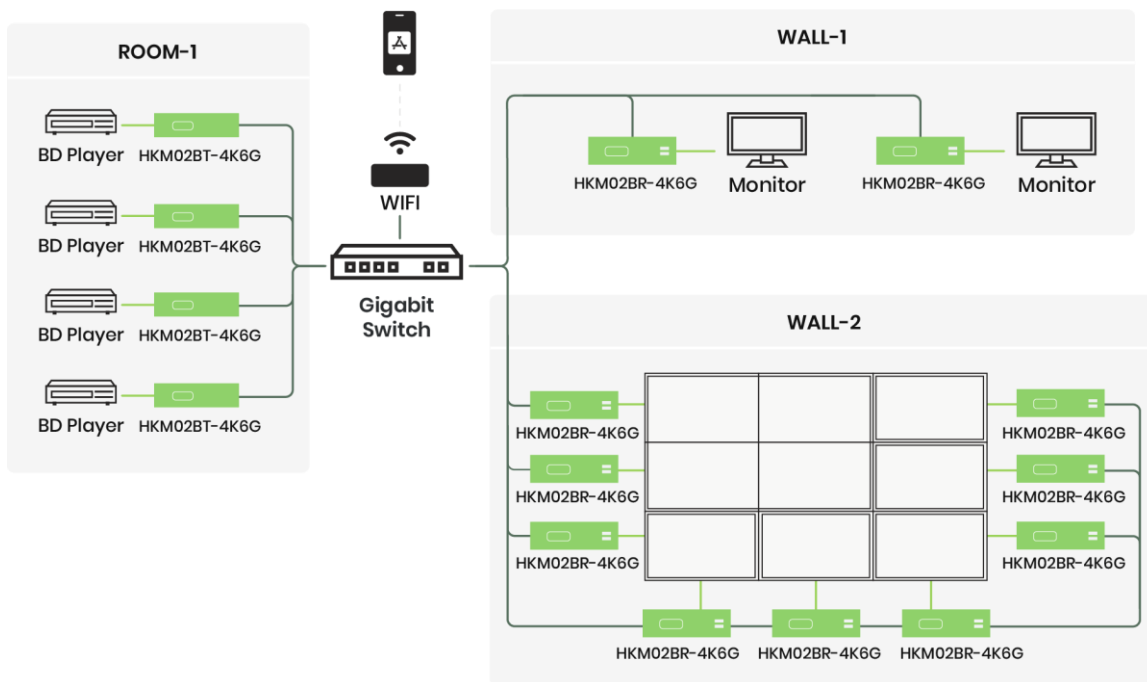
HKM02B-4K6G uses AV over IP technology to route up to 1000 4K60Hz HDMI sources to up to 60000 display over IGMP and jumbo frame protocol gigabit switches, which can achieve HDMI signal extending, distributing, switching and routing. Additionally, the boundless switching function allows you to use one mouse to operate multiple PCs by moving the mouse cursor across the monitor's borders. HKM02B-4K6G is a multifunctional system that integrates multiple media. You can perfectly apply it to large-scale security rooms, classrooms, trading rooms, and many more

Features

- Resolution up to 4K60Hz 4:4:4.
- Signal extension up to 100m over CAT5e (or greater), 60km over fiber optic cable
- Workable with Ethernet switches for HDMI extension, distribution, switching and matrix.
- Built-in loop out, an extra local HDMI display at Tx side
- Built-in 4 USB ports for remote control
- Video Wall
- Video Resolution Hybrid Mode (simple scaling: 4K60/1080p in to 1080p/4K60Hz out)
- Image Rotation

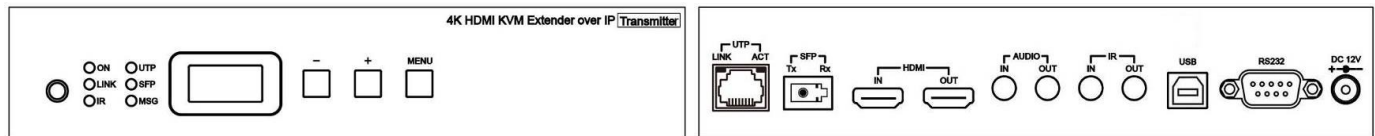
Application Diagram





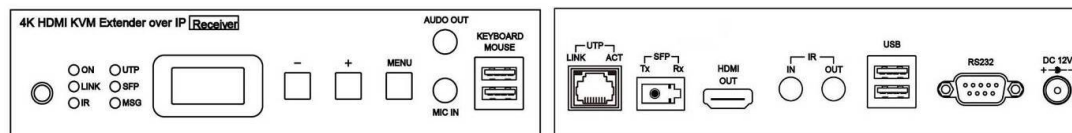
I/O Interface

HKM02BT-4K6G



Item	Interface	Description
	LED Indicator	Explained in LED Indicator
	Panel Button	Explained in Panel Button Functions
	RJ45	To connect to HKM02BR-4K6G or switch
	SFP	To connect to HKM02BR-4K6G or switch
	HDMI in	To connect to HDMI source
	HDMI out	To connect to monitor or TV
	Audio in	To connect to audio source
	Audio out	To connect to audio receiver such as speaker
	IR in	To connect to IR receiver
	IR out	To connect to IR emitter
	USB Type-B	To connect to USB Host
	RS232	To connect to RS232 device
	DC Jack	To connect to DC 12V 1.5A

HKM02BR-4K6G



Item	Interface	Description
	LED Indicator	Explained in LED Indicator
	Panel Button	Explained in Panel Button Functions
	Audio in	To connect to audio source such as microphone
	Audio out	To connect to audio receiver such as speaker
	USB Type-A x 4	To connect to USB device
	RJ45	To connect to HKM02BT-4K6G or switch
	SFP	To connect to HKM02BT-4K6G or switch

	HDMI out	To connect to monitor or TV
	IR in	To connect to IR receiver
	IR out	To connect to IR emitter
	RS232	To connect to RS232 device
	DC Jack	To connect to DC 12V 1.5A

Panel Button Function

Button	-	+	Menu
Short Press	Reduce Number	Increase Number	Menu/Cancel
	Enter		
Press 1 seconds	Carry	Decomposition	
Press 3 seconds			
Press and hold then power on	Factory Default	Engineering Mode	Set Factory Default then enter Engineering Mode

Reduce Number: switches channel or function number down

Increase Number: switches channel or function number up

Carry: shifts the three numbers in display one position to the left

Decomposition: shifts the three numbers in display one position to the right

In engineering mode Power and Link LED will be flash together, IP address of unit will be set to Static IP 192.168.0.88 temporarily, users can login to the web page by browser to update firmware.

Front Panel LED Indication

Panel LED	Status	HKM02B-4K6G
Power (Green)	On	Boot completed
	Flash Twice	Booting
	Flash Slowly	Transmitter: stop link Receiver: video output be turned off
	Breathing(Fading)	Screen saver mode (not available for transmitter)
Link(Blue)	On	Connected & video is streaming
	Flash	Connecting, or no source input from transmitter
IR(Red)	On	Transmitting /receiving IR signal
UTP (Green)	On	Connected by UTP RJ45 port
	Flash	Transmitting /receiving data from UTP RJ45 port
SFP(Blue)	On	Connected by Fiber SFP port
	Flash	Transmitting /receiving data from Fiber SFP port
MSG(Red)	On	Other message (IR, RS232, System setting...)
	Flash 2~9 Times	System warning, Alert (Refer to MSG/IR Status Indication)

MSG/IR LED Status Indication

Times	HKM02B-4K MSG LED
Always ON	IR control, RS232 control, system setting
2	IR control disabled
3	Transmitters channel conflict
4	DHCP server not found
5	Rest to factory default
6	Engineering mode / Firmware update mode
7	Manufacture setting mode
8	Aux system stopped
9	Aux system firmware boot sector error
10	Aux system firmware type error

RJ45 LED Indication

RJ45 LED	Status	Description
LINK (Green)	On	Ethernet connected
ACT (Orange)	Flash	Data transmission

Technical Specification

HKM02B-4K6G	HKM02BT-4K6G	HKM02BR-4K6G
Compliance		
Standard	HDMI 2.0 HDCP 2.2	
Video Resolution	4K@60Hz 4:4:4	
Audio	LPCM up to 12-Channels Dolby Digital Plus Dolby True HD Dolby Atmos DTS-HD Master Audio DTS X	
Transmission Distance	120m	
Ports & Interfaces		
Video Input	1 x HDMI Type-A	1 x RJ45 1 x SFP
Video Output	1 x RJ45 1 x SFP	1 x HDMI Type-A
Analog Audio Input	Line In 3.5mm Stereo Phone Jack	Mic In 3.5mm Mono Phone Jack
Analog Audio Output	Line Out 3.5mm Stereo Phone Jack	
USB	1 x USB 2.0 Type-B	2 x USB 2.0 Type-A 2 x USB 1.1 Type-A
IR	Internal Receiver: 20~60KHz / ±45° / 5M	
	External Receiver: 3.5mm Stereo Phone Jack 20~60KHz / ±45° / 5M	
	External Transmitter: 3.5mm Stereo Phone Jack: 20~60KHz / ±45° / 5M	
RS232	DB9 Female	DB9 Male
Power Input	1 x Micro USB	1 x Micro USB
Power		
Power Supply	12V 1.5A	12V 1.5A
Ambient Temperature		
Operation	-20 to 70°C	
Storage	-40 to 80°C	

Operating Altitude	2000m	
Humidity	Up to 95%	
Physical Characteristics		
Dimension	232 x 117 x 40mm	189 x 97 x 40mm