

BG-EXH-50C

**4K 18Gbps UHD HDMI Extender Over Category 5e/6/7 Cable with
Single Directional IR up to 165ft**

User Manual







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Statement

Please read these instructions carefully before connecting, operating, or configuring this product. Please save this manual for future reference.

Safety Precaution

- To prevent damaging this product, avoid heavy pressure, strong vibration, or immersion during transportation, storage, and installation.
- The housing of this product is made of organic materials. Do not expose to any liquid, gas, or solids which may corrode the shell.
- Do not expose the product to rain or moisture.
- Unplug this device during lightning storms
- Clean only with a soft dry microfiber cloth.
- To prevent the risk of electric shock, do not open the case. Installation and maintenance should only be carried out by qualified technicians.
- Do not use the product beyond the specified temperature, humidity, or power supply specifications.
- This product does not contain parts that can be maintained or repaired by users. Damage caused by dismantling the product without authorization from BZBGear is not covered under the warranty policy.
- Installation and use of this product must strictly comply with local electrical safety standards.
- Only use accessories specified by the manufacture
- Product specifications may be subject to technical upgrades without further notice



Introduction

The BZB-EXH-50C can extend high definition video / audio signal and one-way IR, and the distance is up to 164ft / 50 meters between transmitter and receiver over a single Cat5e/6/7 cable. It supports resolution up to 4K2K@60Hz 4:4:4, 18Gbps and HDCP 2.2. In addition, the extender is equipped with one-way IR pass-through which allows for source control and one HDMI loop output.

The extender includes two units: transmitter unit and receiver unit. The transmitter unit is responsible for capturing HDMI input signal and carries the signal via one cost effective Cat6 cable, and emitting IR control signals. The receiver unit is responsible for receiving the HDMI signal and transmitting IR control signal.

The extender offers the most convenient solution for HDMI extension over a single Cat5e/6/7 with long distance capability, and is the perfect solution for any application.

Features

- HDMI 2.0, HDCP 2.2 / HDCP 1.4 and DVI 1.0 compliant
- Supports 18Gbps bandwidth
- Supports input and output video resolution up to 4k2k@60Hz 4:4:4, extends distance up to 164ft / 50 meters
- Supports one HDMI loop output
- Supports one-way IR pass-through
- Supports HDR function
- Supports power over cat 5e/6/7 function, it means that either transmitter or receiver is powered supply by 12V/1A power adapter, the other doesn't need power supply.)
- Supports automatic copy EDID function
- Compact design for easy and flexible installation

Packing List

- 1x HDMI 18Gbps Extender (Transmitter)
- 1x HDMI 18Gbps Extender (Receiver)
- 1x IR Blaster cable (1.5 meters)
- 1x 20~60KHz IR Receiver cable (1.5 meters)
- 1x 12V/1A Locking Power adapter
- 1x User Manual
- 1x Quick Start Guide



Technical Specifications

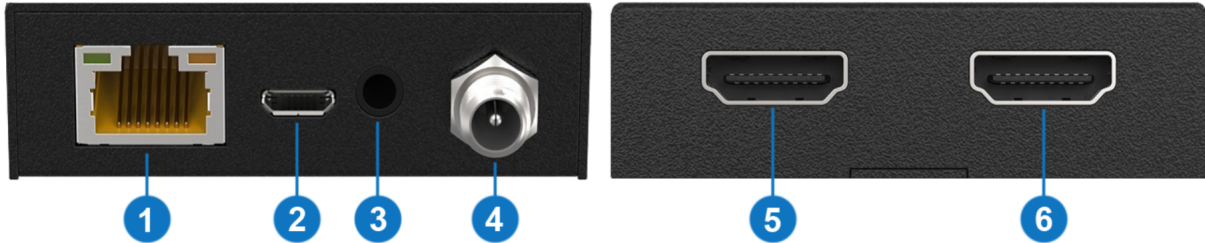
Technical		
HDMI Compliance	HDMI 2.0	
HDCP Compliance	HDCP 2.2 / HDCP 1.4	
Video Bandwidth	18Gbps	
Video Resolution	Up to 4K@60Hz 4:4:4	
Color Space	RGB / YCbCr 4:4:4, YCbCr 4:2:2/4:2:0, YUV 4:4:4	
Color Depth	8/10/12-bit (1080P@60Hz, 4K@30Hz, 4K@60Hz YCbCr 4:2:2/4:2:0) 8-bit (4K@60Hz 4:4:4)	
HDMI Audio Formats	LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, Dolby TrueHD, Dolby Digital Plus(DD+), DTS-ES, DTS HD Master, DTS HD-HRA, DTS-X	
ESD Protection	Human body model – ±8kV (Air-gap discharge) &±4kV (Contact discharge)	
Connections		
Transmitter	Inputs: 1x HDMI Type A [19-pin female] 1x SERVICE [Micro USB, Update port] Outputs: 1x HDMI Type A [19-pin female] 1x IR OUT [3.5mm Stereo Mini-jack] 1x CAT OUT [RJ45, 8-pin female]	
Receiver	Inputs: 1x IR IN [3.5mm Stereo Mini-jack] 1x CAT IN [RJ45, 8-pin female] 1x SERVICE [Micro USB, Update port] Outputs: 1x HDMI Type A [19-pin female]	
Mechanical		
Housing	Metal Enclosure	
Color	Black	
Dimensions	Transmitter / Receiver: 2.4" (W) x 3.5" (D) x 0.7" (H) [61mm (W) x 88mm (D) x 18mm (H)]	
Weight	Transmitter: 0.35lbs [160g], Receiver: 0.34lbs [155g]	
Power Supply	Input: AC 100 - 240V 50/60Hz Output: DC 12V/1A	
Power Consumption	3.84 W	
Operating Temperature	32 - 104°F / 0 - 40°C	
Storage Temperature	-4 - 140°F / -20 - 60°C	
Relative Humidity	20 - 90% RH (no condensation)	
Resolution / Distance	4K@60 - Feet / Meters	4K@30 / 1080P - Feet / Meters
CAT5e	164ft / 50M	164ft / 50M
CAT6/6a/7	197ft / 60M	230ft / 70M
HDMI IN/OUT	10ft / 3M	30ft / 10M

The use of “Premium High Speed HDMI” cable is highly recommended.



Operation Controls and Functions

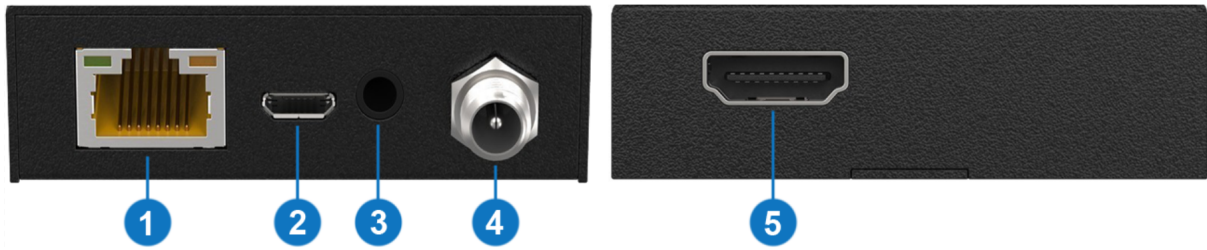
Transmitter Panel



Number	Name	Function description
1	CAT OUT	Connect to CAT IN port on the receiving end with a CAT6 cable.
2	SERVICE port	For firmware updated use.
3	IR OUT	Connect to wideband IR Blaster cable. The IR signal is from the IR IN port of the receiver.
4	DC 12V	Plug DC 12V/1A power supply into the unit and connect the adapter to an AC outlet. (Note: The extender supports power over cat5e/6/7 function, transmitter or receiver is powered by 12V/1A power adapter it means that either ; the other doesn't need power supply.)
5	HDMI OUT	HDMI loop output port, connect to HDMI display device such as TV or Projector with an HDMI cable.
6	HDMI IN	HDMI input port, connect to HDMI source device such as DVD or PS4 player with an HDMI cable.



Receiver Panel



Number	Name	Function description
1	CAT IN	Connect to CAT OUT port on the transmitter end with a CAT6 cable.
2	SERVICE port	For firmware updated use.
3	IR IN	Connect to wideband IR Receiver cable. The IR signal will send to the IR OUT port of the transmitter.
4	DC 12V	Plug DC 12V/1A power supply into the unit and connect the adapter to an AC outlet. (Note: The extender supports power over cat5e/6/7 function, transmitter or receiver is powered by 12V/1A power adapter it means that either ; the other doesn't need power supply.)
5	HDMI OUT	HDMI output port, connect to HDMI display device such as TV or Projector with an HDMI cable.



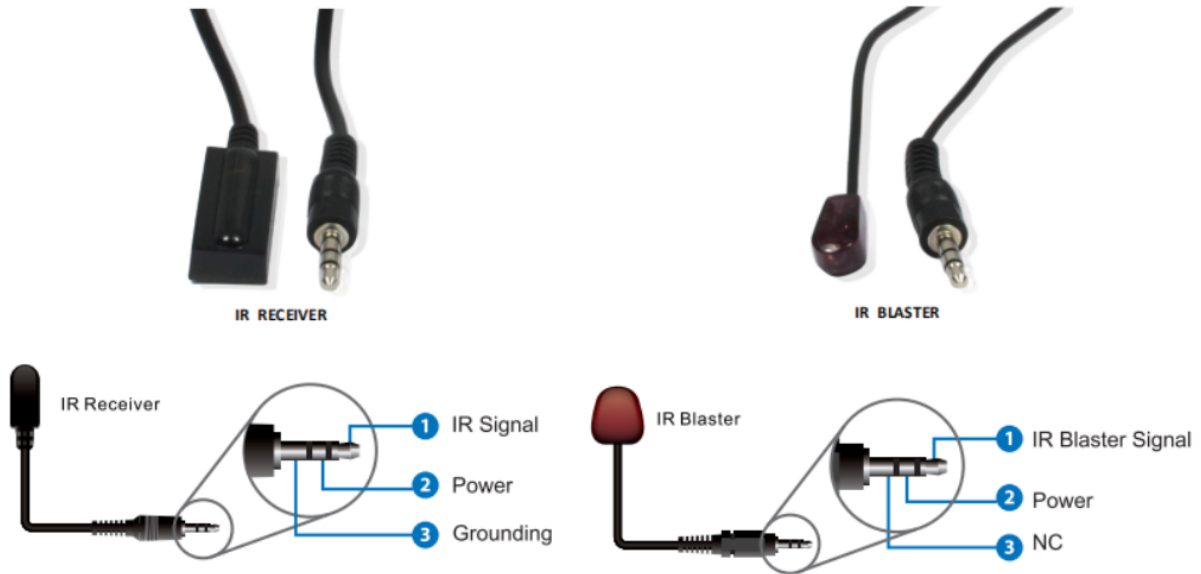
- Illuminating: HDMI signal with HDCP.
- Flashing: HDMI signal without HDCP.
- Dark: No HDMI signal.

- Illuminating: are in good connection status.
- Flashing: are in poor connection status.
- Dark: are not connected.

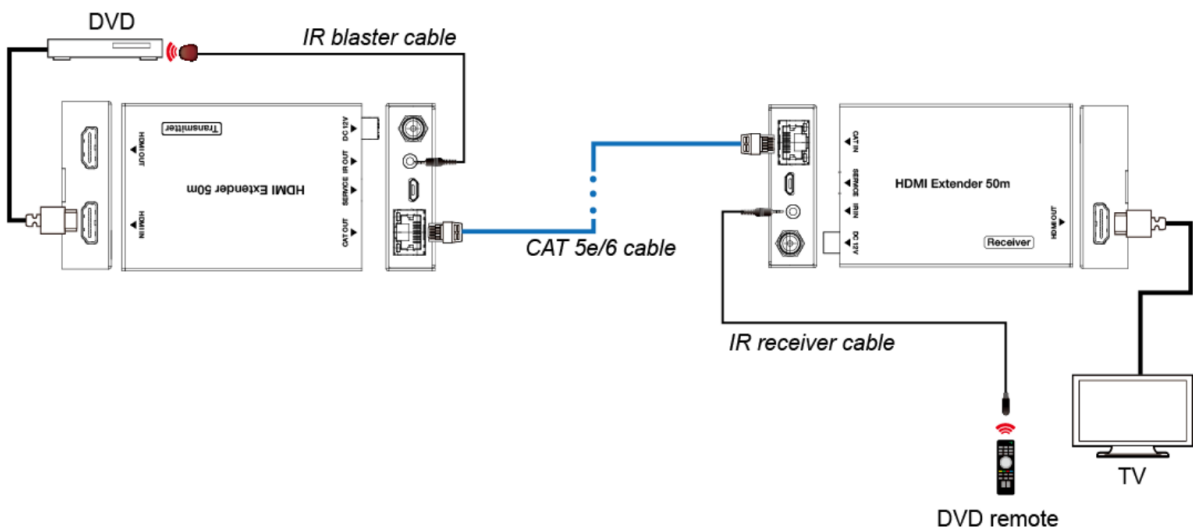


IR Cable Pin Assignment

IR Receiver and Blaster pin's definition as below:



The following is IR system diagram about IR cable use method.

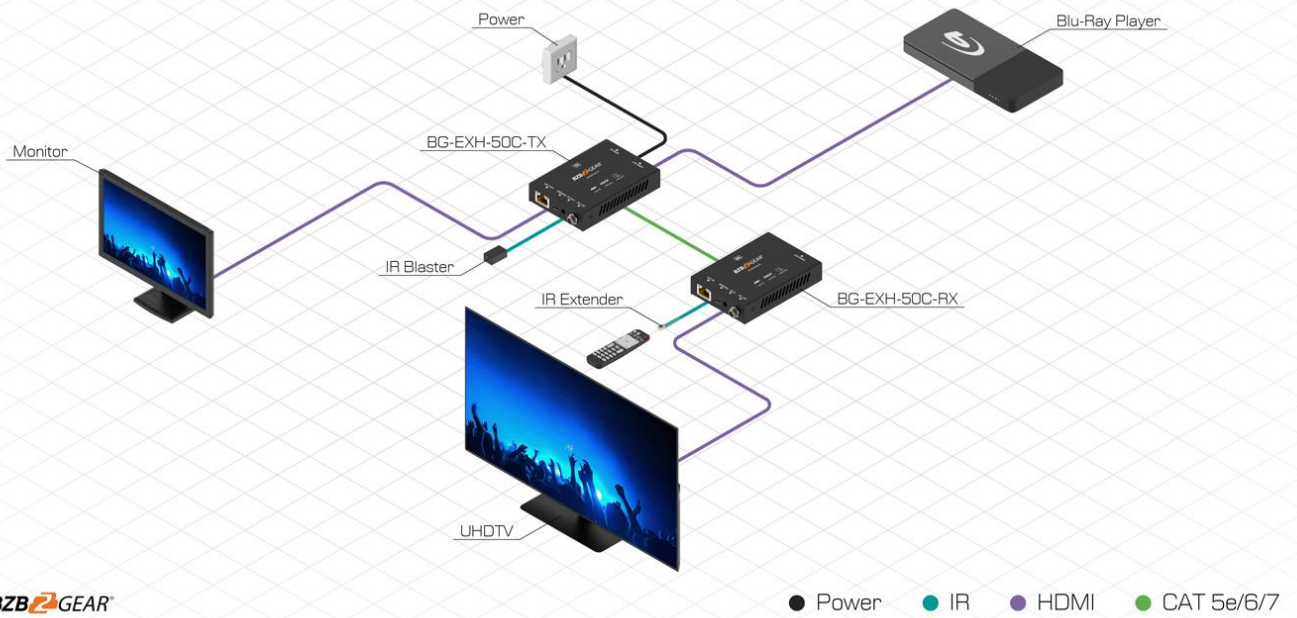


Note: IR remote sends signal distance for 0~5 meters / 0~8 meters, and angle is plus-minus 45 degrees / vertical direction.



Application Example

BG-EXH-50C
Connection Diagram



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Tech Support

Have technical questions? We may have answered them already!

Please visit BZBGear's support page (bzbgear.com/support) for helpful information and tips regarding our products. Here you will find our Knowledge Base (bzbgear.com/knowledge-base) with detailed tutorials, quick start guides, and step-by-step troubleshooting instructions. Or explore our YouTube channel, BZB TV (youtube.com/c/BZBTVchannel), for help setting up, configuring, and other helpful how-to videos about our gear.

Need more in-depth support? Connect with one of our technical specialists directly:

<u>Phone</u>	<u>Email</u>	<u>Live Chat</u>
1.888.499.9906	support@bzbgear.com	bzbgear.com

Warranty

BZBGear Pro AV products and cameras come with a three-year warranty. An extended two-year warranty is available for our cameras upon registration for a total of five years.

For complete warranty information, please visit bzbgear.com/warranty.

For questions, please call 1.888.499.9906 or email support@bzbgear.com.

Mission Statement

BZBGear is a breakthrough manufacturer of high-quality, innovative audiovisual equipment ranging from AVoIP, professional broadcasting, conferencing, home theater, to live streaming solutions. We pride ourselves on unparalleled customer support and services. Our team offers system design consultation, and highly reviewed technical support for all the products in our catalog. BZBGear delivers quality products designed with users in mind.



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