

# BG-EXH-150C

**4K 18Gbps UHD HDMI HDBaseT Extender Over Category 5e/6/7**  
**Cable up to 495ft with 2-Way IR/CEC/PoC/RS-232**

## User Manual







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## Statement

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

## Safety Precaution

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- 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

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The BG-EXH-150C is an 18Gbps HDMI extender that can extend high definition video, audio, RS-232, bi-directional IR, up to 492ft / 150 meters between transmitter and receiver via a single CAT cable. The BG-EXH-150C also features power over cable (PoC) capabilities meaning only one of the units, transmitter or receiver, needs to be plugged into power.

The system supports resolutions up to 4K2K@60Hz 4:4:4 at 18Gbps and it is also HDCP 2.2 compliant. One HDMI loop output is integrated into the transmitter to view content locally. It also features audio extraction via the L/R audio output. In addition, the extender is equipped with two way IR pass-through which allows for source and display control. This set of robust features makes the BG-EXH-150C a convenient solution for HDMI extension via a single Cat5e/6 with long distance capabilities.

## Features

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- HDCP 2.2 / HDCP 1.4 and DVI 1.0 compliant
- 18Gbps video bandwidth
- The maximum extended transmission distance via a single Cat5e/6 cable:
  - 394ft / 120 meters for 4K2K signal;
  - 492ft / 150 meters for 1080P signal
- HDMI loop output on transmitter unit
- Extract audio to analog stereo on receiving unit
- Bi-directional IR, RS-232 and CEC pass-through
- HDR, HDR10+, Dolby Vision, and HLG function supported
- PoC (Power over Cable) functionality
- Compact design for easy and flexible installations

## Packing List

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- |   |                                    |
|---|------------------------------------|
| • 1 x 18Gbps HDMI over HDBaseT Extender (Transmitter) | • 4 x Mounting Ear                 |
| • 1 x 18Gbps HDMI over HDBaseT Extender (Receiver)    | • 2 x 3-pin Phoenix connector      |
| • 1 x IR Blaster cable (1.5 meters)                   | • 1 x 24V/1A Locking Power adapter |
| • 1 x 20~60KHz IR Receiver cable (1.5 meters)         | • 1x User Manual                   |
|   | • 1x Quick Start Guide             |



## Technical Specifications

Technical			
HDCP Compliance	HDCP 2.2 / HDCP 1.4		
Video Bandwidth	18Gbps		
Video Resolution	4K2K@50/60Hz 4:4:4 4K2K@50/60Hz 4:2:2 4K2K@50/60Hz 4:2:0 4K2K@30Hz 4:4:4 1080p, 1080i, 720p, 720i, 480p, 480i All HDMI 3D TV formats All PC resolutions including 1920 x 1200		
Color Space	RGB / YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0		
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		
L/R Audio Formats	PCM 2.0		
ESD Protection	Human body model: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)		
Transmitter	Inputs: 1x HDMI Type A [19-pin female] Outputs: 1x HDMI Type A [19-pin female] 1x HDBT OUT [RJ45, 8-pin female] Control: 1x IR IN [3.5mm Stereo Mini-jack] 1x IR OUT [3.5mm Stereo Mini-jack] 1x RS-232 [Phoenix jack] 1x SERVICE [Mini-USB, Update port]		
Receiver	Inputs: 1x HDBT IN [RJ45, 8-pin female] Outputs: 1x HDMI Type A [19-pin female] 1x AUDIO OUT [3.5mm Stereo Mini-jack] Control: 1x IR IN [3.5mm Stereo Mini-jack] 1x IR OUT [3.5mm Stereo Mini-jack] 1x RS-232 [Phoenix jack] 1x SERVICE [Mini-USB, Update port]		
Mechanical			
Housing	Metal Enclosure		
Color	Black		
Dimensions	Transmitter / Receiver: 5.5" (W) x 2.5" (D) x 0.7" (H) [140mm (W) x 65mm (D) x 18mm (H)]		
Weight	Transmitter: 0.35lbs [160g], Receiver: 0.34lbs [155g]		
Power Supply	Input: AC 100 - 240V 50/60Hz Output: DC 24V/1A (Locking connector)		
Power Consumption	9.36 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			
4K2K	394ft / 120M		
1080P	492ft / 150M		
Resolution / Cable Length	4K@60 - Feet / Meters	4K@30 - Feet / Meters	1080P@60 - Feet / Meters
HDMI IN / OUT	16ft / 5M	32ft / 10M	50ft / 15M
The use of “Premium High Speed HDMI” cable is highly recommended.			



## Operation Controls and Functions



### Transmitter Panel

1. **Power LED:** Red LED indicates that the transmitter is powered on.
2. **SERVICE port:** Micro USB firmware update port.
3. **DC 24V:** DC 24V/1A power supply input port.
4. **Connection Indicator lamp:**
  - **Solid:** Transmitter and Receiver are in good connection status.
  - **Flashing:** Transmitter and Receiver are in poor connection status.
  - **Dark:** Transmitter and Receiver are not connected.
5. **HDBT OUT:** RJ45 connector for connecting the HDBT IN port of the receiver with a CAT 5e/6 cable.
6. **Data Indicator lamp:**
  - **Solid:** HDMI signal with HDCP.
  - **Flashing:** HDMI signal without HDCP.
  - **Dark:** No HDMI signal.
7. **HDMI OUT:** HDMI loop output.
8. **HDMI IN:** HDMI source input.
9. **IR IN:** IR input port for receiving the signal of IR remote.
10. **IR OUT:** IR output port for control of source device. This IR output signal is from the IR IN port of the receiver.
11. **RS-232:** 3-pin Phoenix connector for RS-232 command transmission. The RS-232 command will pass-through from transmitter to receiver or from receiver to transmitter.

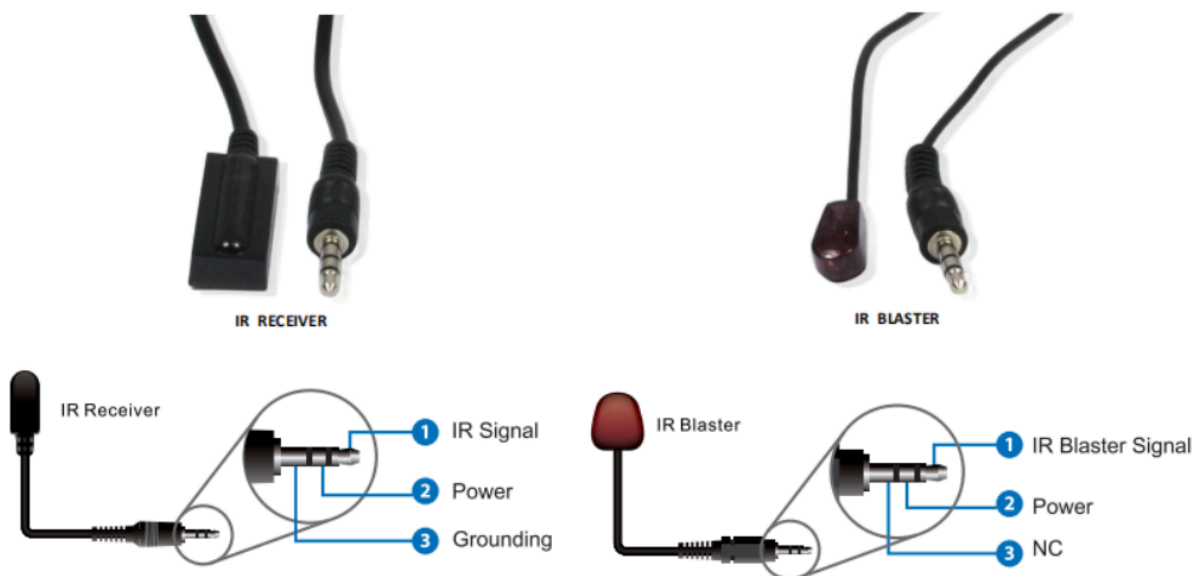


## Receiver Panel

12. **Power LED:** Red LED indicates that the receiver is powered on.
13. **SERVICE port:** Micro USB firmware update port.
14. **DC 24V:** DC 24V/1A power supply input port.
15. **Connection Indicator lamp:**
  - Solid: Transmitter and Receiver are in good connection status.
  - Flashing: Transmitter and Receiver are in poor connection status.
  - Dark: Transmitter and Receiver are not connected.
16. **HDBT IN:** RJ45 connector for connecting the HDBT OUT port of transmitter with a CAT 5e/6 cable.
17. **Data Indicator:**
  - Solid: HDMI signal with HDCP.
  - Flashing: HDMI signal without HDCP.
  - Dark: No HDMI signal.
18. **HDMI OUT:** HDMI output for display.
19. **AUDIO OUT:** 3.5mm stereo connector for analog audio output.
20. **IR IN:** IR input port for receiving the signal of IR remote.
21. **IR OUT:** IR output port for control of display device. The IR output signal is from the IR IN port of the transmitter.
22. **RS-232:** 3-pin Phoenix connector for RS-232 command transmission. The RS-232 command will pass-through from transmitter to receiver or from receiver to transmitter.

## IR Cable Pin Assignment

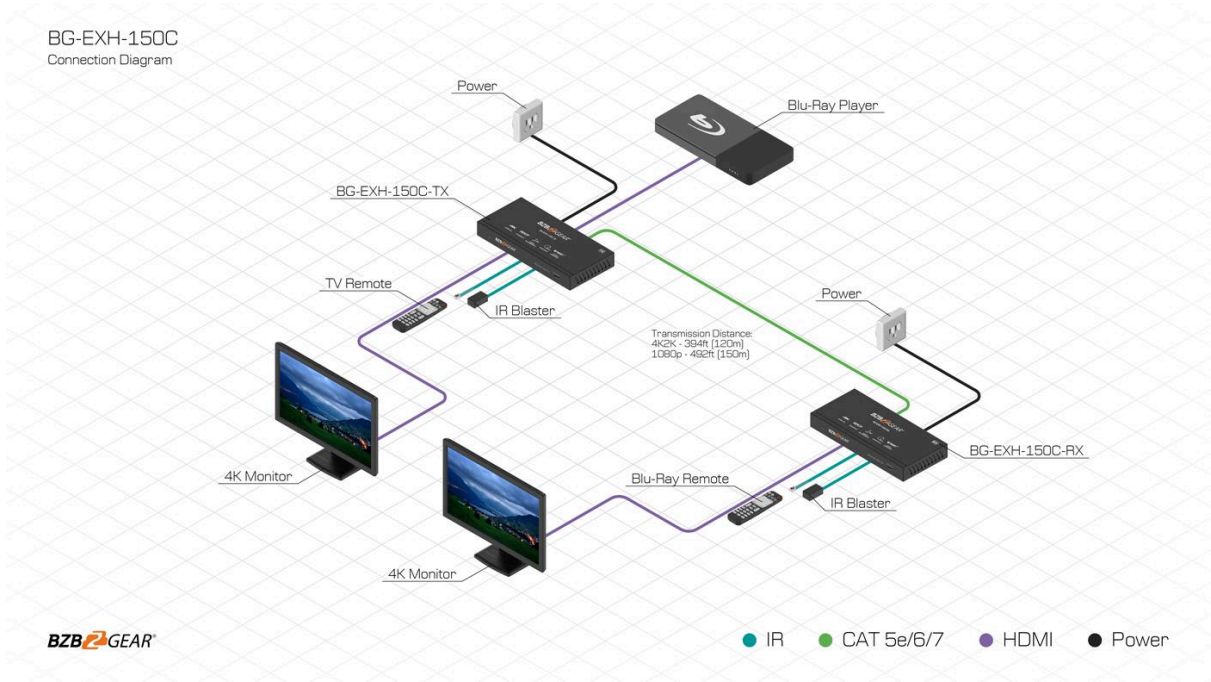
IR Receiver and Blaster pin's definition as below:







# Application Example





## Tech Support

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Have technical questions? We may have answered them already!

Please visit BZBGear's support page ([bzbgear.com/support](https://bzbgear.com/support)) for helpful information and tips regarding our products. Here you will find our Knowledge Base ([bzbgear.com/knowledge-base](https://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](https://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	<a href="mailto:support@bzbgear.com">support@bzbgear.com</a>	<a href="https://bzbgear.com">bzbgear.com</a>

## Limited Product Warranty Terms

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Pro Line: 5-year warranty from the date of purchase for AV/Broadcasting products bought on or after August 1, 2024.

Essential Line: 3-year warranty from the date of purchase for AV/Broadcasting products bought on or after August 1, 2024.

Cables: Lifetime Limited Product Warranty.

For complete warranty information, please visit [bzbgear.com/warranty](https://bzbgear.com/warranty).

For questions, please call 1.888.499.9906 or email [support@bzbgear.com](mailto:support@bzbgear.com).

## Mission Statement

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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.

## Copyright

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