![BZBGEAR logo - Solutions to Amplify Your World™]

BG-EXD-150C

Direktronik Art 20124461

150m 4K60 DisplayPort HDBaseT Extender with USB KVM

User Manual

![DIREKTRONIK logo]

TABLE OF CONTENTS

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.

- 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.

Introduction

The BG-EXD-150C is a 4K60 DisplayPort (DP) range extender that can transmit DP video, bi-directional IR and RS-232 control signals, and also USB KVM signals. It can transmit DP signals at distances up to 328ft/100m for a 4K60 signal and 492ft/150m for a 1080P signal using a single CAT6 cable.

The BG-EXD-150C converts the DP signal into a standard HDBaseT signal and sends it via a LAN cable. Users can effortlessly control the signal source device or the display device using a remote thanks to the bi-directional IR signal pass-through feature. It supports video resolutions of up to 4K2K@60Hz YUV 4:4:4 and also offers a bi-directional POC function.

Furthermore, with support for DisplayPort 1.2, this extender facilitates the transmission of visually lossless 4K Ultra HD resolutions, making it ideal for striking digital signage or detailed content in medical settings. The extender is also compatible with lossless audio formats, including Dolby TrueHD and DTS-HD, enriching video content with powerful multi-channel sound, thus elevating the viewer's experience. The USB KVM connectivity ensures full control of a DisplayPort PC from a local console, which can be kept in a secure or temperature-controlled environment, all while seamlessly delivering consistent video content to the display.

Features

- DisplayPort 1.2a and HDCP 2.2 compliant
- 21.6Gbps video bandwidth
- Video resolution up to 4K2K@60Hz YUV 4:4:4
- Signal transmission distance up to 328ft/100m for 4K60 signals or 492ft/150m for 1080P signals via a single CAT6 cable
- LPCM 2.0 (96KHz), Dolby Digital Plus 5.1CH and DTS-HD Master 7.1CH
- Smart compression for visually lossless transmissions
- Control a remote DisplayPort PC via keyboard and mouse with the KVM function
- Bi-directional Power Over Cable (POC), IR, RS-232, and USB KVM signal pass-through
- Advanced EDID management
- Compact design for easy and flexible installation

Packing List

- 1x BG-EXD-150C Transmitter
- 1x BG-EXD-150C Receiver
- 1x 24V / 1A Locking Power Supply
- 1x IR Blaster Cable (1.5m)
- 1x IR Receiver Cable (1.5m)

- 2x 3-pin 3.81mm Phoenix connectors
- 4x Mounting ears
- 8x KM3*4 Machine Screws
- 1x 1.5m USB 2.0 Cable (A to B)
- 1x User Manual

Specifications

Technical Specifications	
DP Compliance	DP 1.2a
HDCP Compliance	HDCP 2.2
Video Bandwidth	Up to 21.6Gbps
Video Resolution	Up to 4K@60Hz YUV 4:4:4
USB Compliance	USB 1.1
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Color Space	RGB, YCbCr 4:4:4 / 4:2:2, YCbCr 4:2:0
Color Depth	8/10/12-bit
Audio Formats	LPCM 2.0 (96KHz), Dolby Digital Plus 5.1CH and DTS-HD Master 7.1CH
IR Level	5Vp-p/12Vp-p
IR Bandwidth	20K - 60KHz
Transmission Distance	1080P@60Hz – 492ft /150m, 4K@60Hz – 328ft / 100m
ESD Protection	Human body model — ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connections	
Transmitter	**Input:** 1 x DP IN [20-pin female] **Output:** 1 x HDBT OUT [RJ45, 8-pin female] **Control:** 1 x IR IN [3.5mm Stereo Mini-jack] 1 x IR OUT [3.5mm Stereo Mini-jack] 1 x RS-232 [3 pin-3.81mm Phoenix jack] 1 x PC [USB-A] 1 x Service [Micro USB]
Receiver	**Input:** 1 x HDBT IN [RJ45, 8-pin female] **Output:** 1 x DP OUT [20-pin female] **Control:** 1 x IR IN [3.5mm Stereo Mini-jack] 1 x IR OUT [3.5mm Stereo Mini-jack] 1 x RS-232 [3 pin-3.81mm Phoenix jack] 2 x USB 1.1 [USB-A] 1 x Service [Micro-USB]

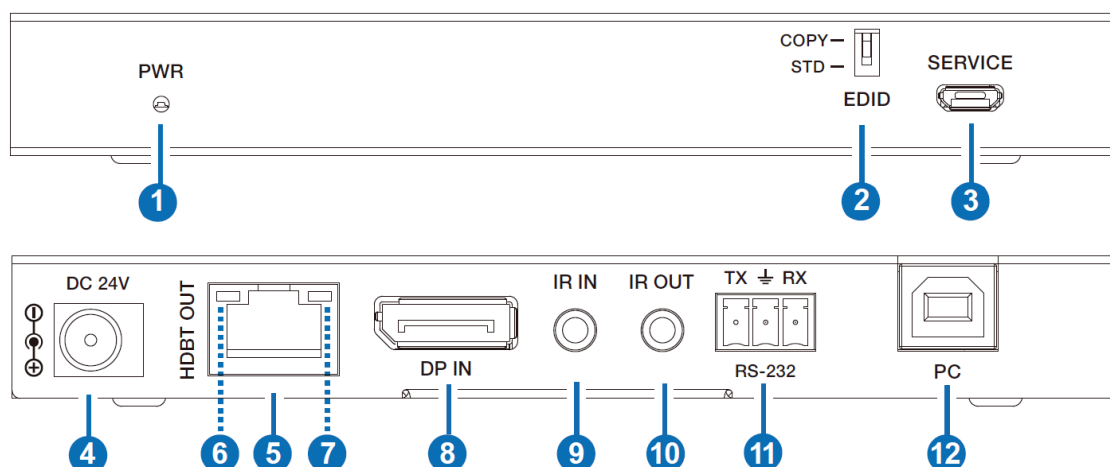| Mechanical	
Housing	Enclosure - Metal Composite
Color	Black
Dimensions (L x W x H)	140mm x 65mm x 18mm
Weight	0.5 lbs (8 oz)
Power Supply	DC 24V/1A (US/EU standard, CE/FCC/UL certified) Bi-directional POC
Power Consumption	Total power consumption: 13.2w
Operating Temperature	32° - 104°F / 0° - 40°C
Storage Temperature	-4° - 140°F / -20° - 60°C
Relative Humidity	20 - 90% RH (no condensation)

Resolution	8K30	4K60	4K24	1080P60
Cable Length	9.8ft / 3m	16ft / 5m	32ft / 10m	66ft / 20m

NOTE: The use of "Premium High Speed" HDMI 2.1 cables is highly recommended.
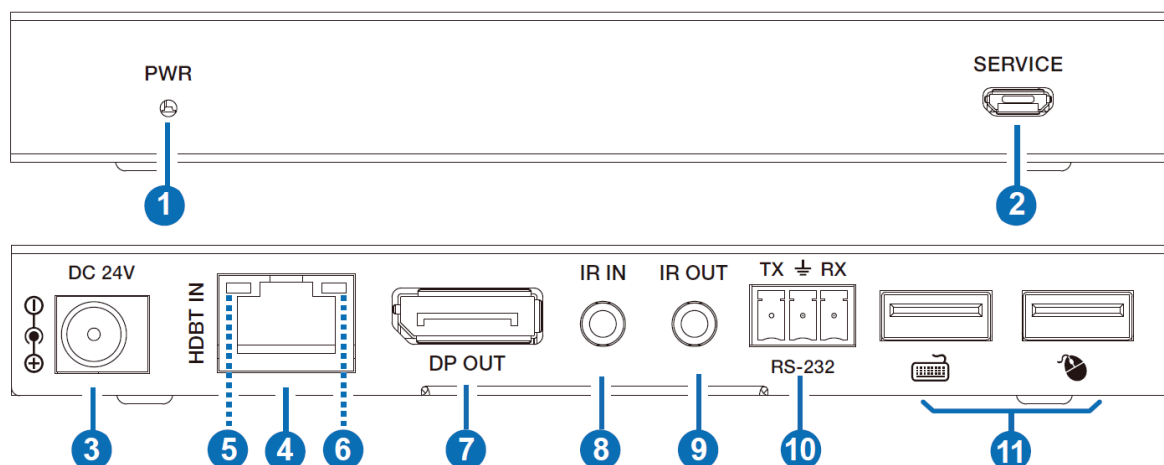
Operation Controls and Functions

Transmitter

No	Name	Description
1	PWR LED	The red LED is on when the Transmitter is powered on.
2	EDID DIP switch	Used for EDID setting (COPY by default). **COPY:** Copy the EDID of the DP OUT port of Receiver. **STD:** Default 1080P 2CH
3	SERVICE	Micro USB port, used to update MCU firmware.
4	DC 24V	DC 24V/1A power input port. **Note:** *The extender supports POC functionality which means that either Transmitter or Receiver is connected to 24V/1A power supply, the other does not need a power supply.*
5	HDBT OUT	HDBT output port, connected to the HDBT IN port of the Receiver with CAT6 cable.
6	Link Signal Indicator (Green)	**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.
7	Data Signal Indicator (Yellow)	**Solid**: DP signal with HDCP. **Flashing**: DP signal without HDCP. **Dark**: No DP signal.
8	DP IN	DP signal input port, connected to DP source device such as computer host.
9	IR IN	Connected to IR receiver cable. The IR receive signal will emit to the IR OUT port of the Receiver.
10	IR OUT	Connected to IR blaster cable. The IR emit signal is from the IR IN port of the Receiver.

11	RS-232	3-pin Phoenix connector, connected to a PC or control system for RS-232 command transmission.
12	PC	USB-B port, connected to PC.

Receiver

No	Name	Description
1	PWR LED	The power LED is on when the Receiver is powered on.
2	SERVICE	Micro USB port, used to update MCU firmware.
3	DC 24V	DC 24V/1A power input port. **Note:** *The extender supports POC functionality which means that either Transmitter or Receiver is connected to 24V/1A power supply, the other does not need a power supply.*
4	HDBT IN	HDBT input port, connected to the HDBT OUT port of the Transmitter with CAT6 cable.
5	Link Signal Indicator (Green)	**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.
6	Data Signal Indicator (Yellow)	**Solid:** DP signal with HDCP. **Flashing:** DP signal without HDCP. **Dark:** No DP signal.
7	DP OUT	DP signal output port, connected to DP display device such as TV or monitor.

| 8	IR IN	Connected to the IR receiver cable. The IR receive signal will emit to the IR OUT port of the Transmitter.
9	IR OUT	Connected to the IR blaster cable. The IR emit signal is from the IR IN port of the Transmitter.
10	RS-232	3-pin Phoenix connector, connected to a PC or control system for RS-232 command transmission.
11	USB-A	Two USB-A ports, connected to a keyboard or mouse.

IR Pin Definition

IR BLASTER   IR RECEIVER

IR BLASTER
1 +
2 -

IR RECEIVER
1 IR Signal
2 Grounding
3 Power 12V
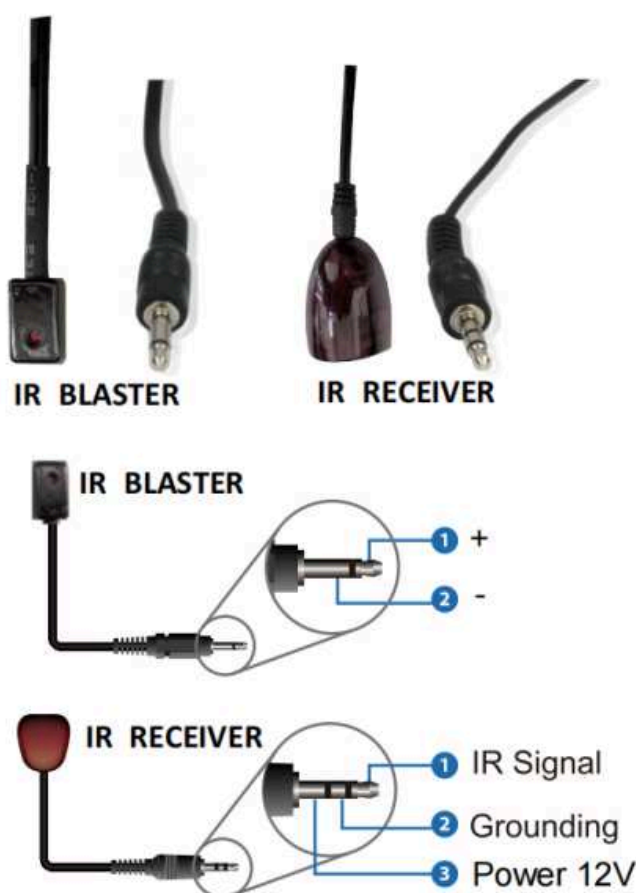
Note: When the angle between the IR receiver and the remote control is ± 45°, the transmission distance is 0-5 meters; when the angle between the IR receiver and the remote control is ± 90°, the transmission distance is 0-8 meters.

Connection Diagrams
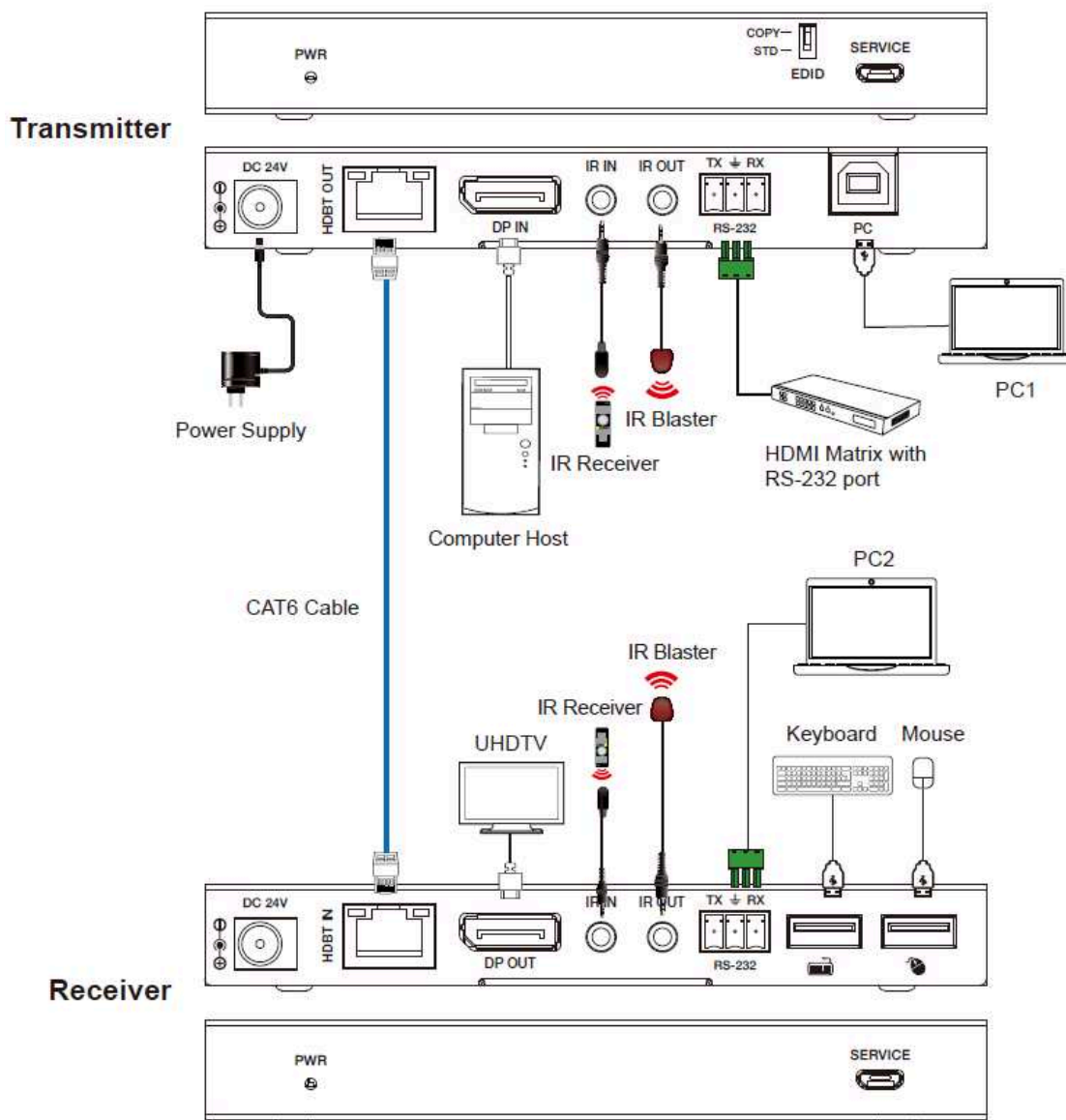
Tech Support

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:

Phone	**Email**	**Live Chat**
1.888.499.9906	support@bzbgear.com	bzbgear.com

DIREKTRONIK AB | Box 234 , 149 23 Nynäshamn | Besöksadress Konsul Johnsons väg 15 149 45 Nynäshamn
Telefon 08 52 400 700 | Fax | Epost info@direktronik.se | Org.nr 556281-9663 | Bankgiro 922-0179

SE   NO

Limited Product Warranty Terms

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.

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.

Copyright