



BG-UDAIC-E14

DIREKTRONIK ART 20124377

1X4 4K60 UHD 18Gbps HDMI Splitter & Distribution Amplifier

up to 230ft

User Manual





DIREKTRONIK

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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.
- 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-UDAIC-E14 is an extender splitter kit that distributes 1 HDMI input to 4 HDMI outputs and extends these signals up to 230 feet (70m). The kit supports resolutions up to 4K@60Hz and the transmitter is also equipped with an HDMI loop out to view the content near the source. The unit is also capable of bi-directional IR, advanced EDID, and RS232 control .

Features

- Zero latency transmission
- Split and extend 1 HDMI input signal to 4 HDMI outputs
- Up to 4K@60Hz resolutions
- Transmission distance up to 230 feet or 70 meters by using Cat6/6A/7 cables
- Bi-directional IR
- HDMI loop out
- Audio extraction from the TV or source device on the receiver end via S/PDIF.
- EDID passthru or manually set the EDID
- RS-232 command control
- Surge Protection, Lightning Protection, ESD Protection
- Equipped with rack mount ears

Packing List

- | | |
|---------------------------------|-----------------------------------|
| 1. 1x HDMI Splitter Extender TX | 6. 1x Terminal Block (RS-232) |
| 2. 4x HDMI Splitter Extender RX | 7. 1x IR Blaster Extension Cable |
| 3. 1x User Manual | 8. 4x IR Receiver Extension Cable |
| 4. 1x DC12V/2A | 9. 20x Mounting Brackets |
| 5. 4x DC5V/2A | 10. 40x Screw |



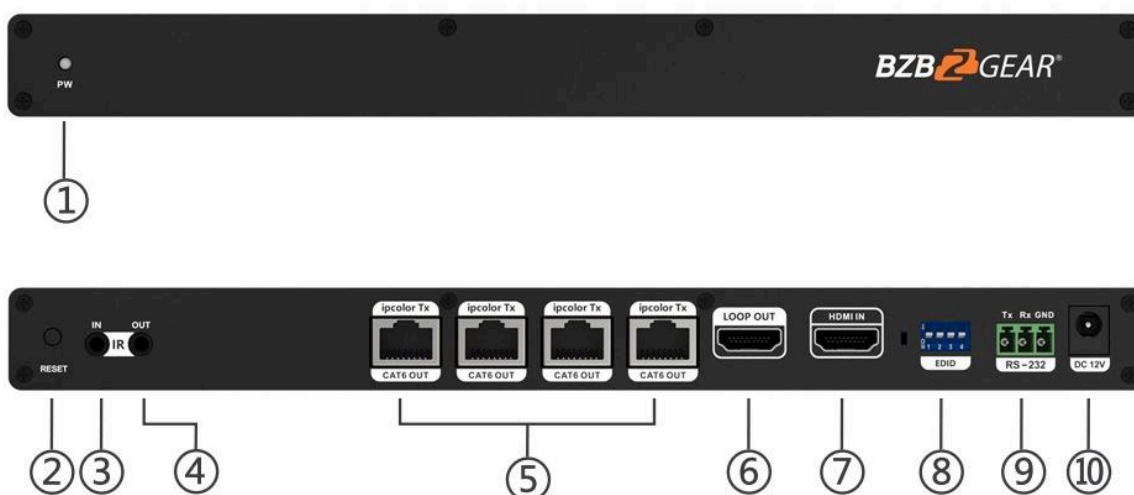
Specifications

| Item | Specification |
|----------------------------|---|
| Transport protocol | ipcolor |
| Split mode | 1 IN 4 OUT |
| Transmission Distance | CAT6/6A/7<70m |
| HDMI signal | HDMI 2.0, HDCP2.2 |
| Resolution | 480i@60Hz, 480p@60Hz, 576i@50Hz, 576p@50Hz, 720p@50/60Hz, 1080i@50/60Hz, 1080p@50/60Hz, 1280x960, 1280x800, 1280x768, 1680x1050, 1360x768, 1366x768, 1600x900, 1024x768, 800x600, 3840x2160@24/25/30/50/60Hz, 4096x2160@24/25Hz |
| Audio formats | LPCM/DTS-HD/DTS-Audio/Dolby Digital 5.1 |
| IR | Bi-directional IR passback (20-60khz) |
| RS-232 | 3-pin: TxD-RxD-GND, follows RS-232 levels |
| Working Temperature | -20~60°C |
| Storage Temperature | -30~70°C |
| Humidity (no condensation) | 0~90% |
| Protection | ESD protection 1a Contact discharge level 3 1b Air discharge level 3 Implementation of the standard: IEC 61000-4-2 |
| | Lightning protection |
| | Surge protection |
| | |
| Power supply | TX: DC 12V/2A RX: DC 5V/2A |
| Power consumption | TX<13W RX<4W |
| Material | Aluminum alloy material + crystal panel |
| Color | Black |
| Weight | TX: 640g RX: 210g |
| Dimension | TX: 264.00(L) x 104.00(W) x 23.50(H)mm RX: 106.0(L) x 99.0(W) x 26.2(H)mm |



Panel Description

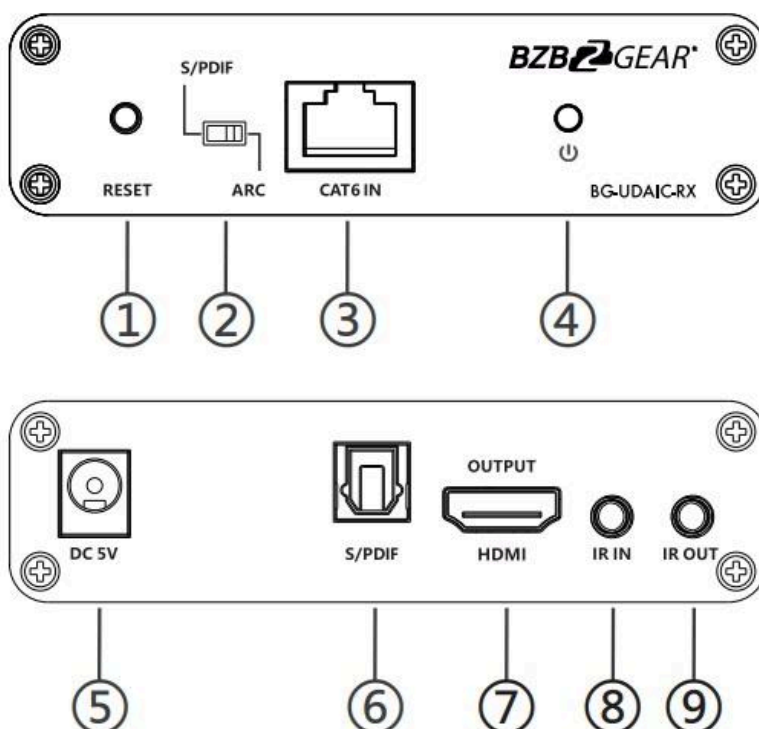
Transmitter (TX)



| No. | Name | Function Description |
|-----|------------------|---|
| 1 | Power indicator | The blue light will illuminate when powered on |
| 2 | Reset button | Restarts the device |
| 3 | IR in | Connect to the IR receiver extension cable |
| 4 | IR out | Connect to the IR blaster extension cable |
| 5 | RJ45 output port | Connect using CAT 6/6a/7 network cables |
| 6 | HDMI output port | Connects to a local HDMI display device using an HDMI cable |
| 7 | HDMI input port | Connects to an HDMI source device using an HDMI cable |
| 8 | EDID DIP switch | Configure output resolution using the EDID DIP switch |
| 9 | RS-232 Port | Connects to an external device to control the transmitter |
| 10 | Power | Connects to the supplied DC 12V/2A power adapter |



Receiver (RX)

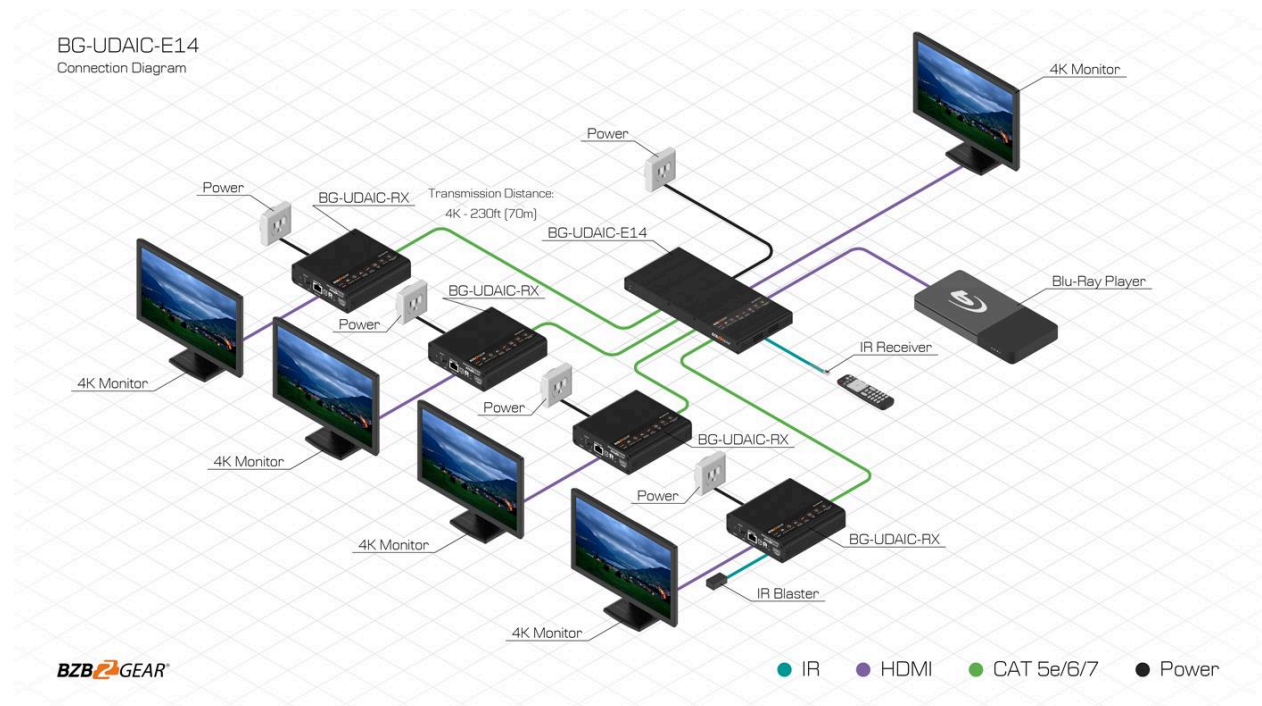


| No. | Name | Function Description |
|-----|------------------------|---|
| 1 | Reset button | Restarts the device |
| 2 | Audio switch | Choose the audio source (output from the S/PDIF port) S/PDIF: From the source device ARC: From the TV (receiver end) |
| 3 | RJ45 signal input | Connect using CAT 6/6a/7 network cables |
| 4 | Power/Signal indicator | When the device is powered on, the blue indicator light will be solid if the HDMI signal is detected. If the HDMI signal is not detected, the light will flash. |
| 5 | Power | Connects to the supplied DC 5V/2A power adapter |
| 6 | S/PDIF output | Connect to a speaker or amplifier |
| 7 | HDMI output | Connects to an HDMI display device |
| 8 | IR in | Connect using an IR receiver extension cable |
| 9 | IR out | Connect using an IR blaster extension cable |



Installation Procedures

Connection Diagram



Connection Instructions

1. Connect the source device to the transmitter's HDMI IN port using an HDMI cable.
2. Connect the transmitter's CAT6 OUT port to the receiver's CAT6 IN port using network cables.
3. Connect the receiver's HDMI OUTPUT port to the display devices using HDMI cables.
4. If using an HDMI loop out, connect the transmitter's LOOP OUT port to the display using an HDMI cable.
5. If using the RS-232 control, connect the transmitter's RS-232 port to the external control device.
6. Plug the power into the devices.

IR User Guide

1. The IR blaster extension cable connects to the IR OUT port of the transmitter or receiver. The IR receiver extension cable connects to the IR IN port of the transmitter or receivers.
2. The emitter of the IR blaster extension cable is recommended to be as close as possible to the IR receiving window of the target device.
3. Point the remote control at the receiving head of the IR receiver extension cable to operate.



Control Settings

RS232 Settings

The default configuration is as follows:

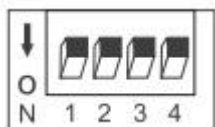
Baud rate: 9600 / Data bits: 8 / Stop bits: 1 / Parity: 0

| Control Commands | Function Descriptions | |
|---|---|-----------------|
| ES XX On/n | Turn on the network signal output port(s), choose from “01” to “04” (the network ports from right to left are: 01, 02, 03, 04.); “All” means all four ports | |
| ES XX Off/n | Turn off the network signal output port(s), choose from “01” to “04” (the network ports from right to left are: 01, 02, 03, 04.); “All” means all four ports | |
| Reset/n | Restart the device | |
| Recover/n | Restore device to factory settings | |
| Baud XX /n | Set the baud rate value: 9600 (default), 19200, 38400, 57600, 115200 | |
| Examples of control commands are shown below: | | |
| Control Command | ES 04 On/n | |
| Function Description | Turn on network signal output port 04 | |
| Return Values | Received successfully | ES 04 On OK |
| | Receive failed | ES 04 On FAIL |
| Control Command | ES All Off/n | |
| Function Description | Turn off all the network signal output ports | |
| Return Values | Received successfully | ES All Off OK |
| | Receive failed | ES All Off FAIL |
| Control Command | Reset/n | |
| Function Description | Restart the device | |
| Return Values | Received successfully | Reset OK |
| | Receive failed | Reset FAIL |
| Control Command | Baud 19200/n | |
| Function Description | Set the baud rate value: 9600 | |
| Return Values | Received successfully | Baud 19200 OK |
| | Receive failed | Baud 19200 FAIL |



EDID Settings:

The transmitter has 16 built-in EDID settings that can be configured using the DIP switch. Flipping the DIP switch upward indicates a “1” and flipping downward indicates a “0.”



Switch up for "1"



Switch down for "0"

| Switch Status | | | | EDID Information |
|---------------|---|---|---|----------------------|
| 1 | 2 | 3 | 4 | |
| 0 | 0 | 0 | 0 | 4K@60Hz 2CH |
| 1 | 0 | 0 | 0 | 4K@60Hz 5.1CH |
| 0 | 1 | 0 | 0 | 4K@60Hz 7.1CH |
| 0 | 0 | 1 | 0 | 4K@60Hz HDR 7.1CH |
| 0 | 0 | 0 | 1 | 4K@30Hz 2CH |
| 1 | 1 | 0 | 0 | 4K@30Hz 5.1CH |
| 1 | 0 | 1 | 0 | 4K@30Hz 7.1CH |
| 1 | 0 | 0 | 1 | 4K@30Hz HDR 7.1CH |
| 0 | 1 | 1 | 0 | 1080p@60Hz 2CH |
| 0 | 1 | 0 | 1 | 1080p@60Hz 5.1CH |
| 0 | 0 | 1 | 1 | 1080p@60Hz 7.1CH |
| 1 | 1 | 1 | 0 | 1080i@60Hz 2CH |
| 1 | 1 | 0 | 1 | 1080i@60Hz 5.1CH |
| 1 | 0 | 1 | 1 | 1080i@60Hz 7.1CH |
| 0 | 1 | 1 | 1 | 1080p@60Hz HDR 7.1CH |
| 1 | 1 | 1 | 1 | Auto |

Auto: Auto output at a resolution compatible with all displays.



FAQ

Q: Why does my display device not have an image?

A:

1. Check the power supply and all cables and ensure they are properly connected.
2. Check if the HDMI signal input is detected.
3. Check the corresponding network output and ensure it has not been turned off by the RS-232 command.

Q: Why is the output image unstable?

A:

1. Check the length of the network cable and ensure it is within the 70-meter limit.
2. Press the "reset" button on TX and RX panels to restart and reconnect.

Q: Why does the TV have a snowy/fuzzy screen?

A:

1. The HDMI cable may be defective or exceeds the recommended cable length and needs replacing.
2. The recommended length of the HDMI cable connected to the transmitter is ≤ 3 meters, and the recommended length of the HDMI cable connected to the receiver is ≤ 5 meters.



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

1.888.499.9906

Email

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Live Chat

bzbgear.com



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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.

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