BZBGEAR®

Amplify Your World™

BG-Air4Kast-MKX

**4K60 UHD Wireless HDMI Extender Kit with Multi-Receiver Support
(Up to 4 Receivers)**

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.

- 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

This 4K@60Hz HDMI KVM Wireless Extender delivers high-performance, cable-free video and control by pairing a compact transmitter and receiver with advanced ipcolor STREAM technology. Operating on the reliable 5GHz wireless band, it enables ultra-clear UHD video with low latency and strong resistance to interference—making it a dependable alternative to traditional wired HDMI and USB extensions. With support for resolutions up to 4096×2160@60Hz, this solution ensures sharp, fluid visuals for professional and consumer AV environments alike.

Designed for flexibility and ease of deployment, the BG-Air4Kast-MKX supports 1-to-4 wireless transmission, allowing a single source to be shared with multiple displays, and offers a 50-meter line-of-sight range in point-to-point configurations. Integrated KVM, IR passback, and touchscreen support allow users to fully control the source from the receiver side, while features like HDMI loop-out, SSID pairing, and channel switching ensure stable operation even in multi-system installations. Ideal for video conferencing, home entertainment, multimedia education, and control rooms, this wireless extender delivers reliable 24/7 performance while eliminating the complexity and cost of long cable runs.

Features

- **ipcolor STREAM Wireless Technology:** Delivers high-definition, low-latency video transmission for smooth real-time performance.
- **4K@60Hz UHD Resolution:** Supports up to 4096×2160@60Hz with backward compatibility for lower resolutions.
- **1-to-4 Wireless Distribution:** Allows one transmitter to connect to up to four receivers for multi-display setups.
- **50m Long-Range Transmission:** Provides up to 50 meters of line-of-sight wireless range in 1-to-1 mode.
- **HDMI Transmitter Loop-Out:** Enables simultaneous local monitoring while extending the signal wirelessly.
- **SSID Pairing & Channel Switching:** Prevents interference when multiple systems operate in the same space.
- **IR Passback Support:** Allows remote control of source devices from the receiver location.
- **KVM Control Passback:** Supports keyboard and mouse control for full remote system operation.
- **Touchscreen Support:** Ensures compatibility with interactive displays and touch-based control systems.
- **5GHz Wireless Operation:** Uses the 5GHz band for stable, anti-interference wireless performance.
- **Micro-USB Firmware Upgrade:** Allows easy firmware updates to maintain performance and compatibility.
- **24/7 Reliable Operation:** Designed for continuous, always-on professional AV use.

Packing List

- BG-Air4Kast-MKX-RX Transmitter ×1
- BG-Air4Kast-MKX-TX Receiver ×1
- 5V 2A Power Adapter ×2
- Antenna ×4
- Mounting Ear ×4
- Screw ×10
- Grounding Screw ×2
- IR Receiver Extension Cable ×1
- IR Blaster Extension Cable ×1

Specifications

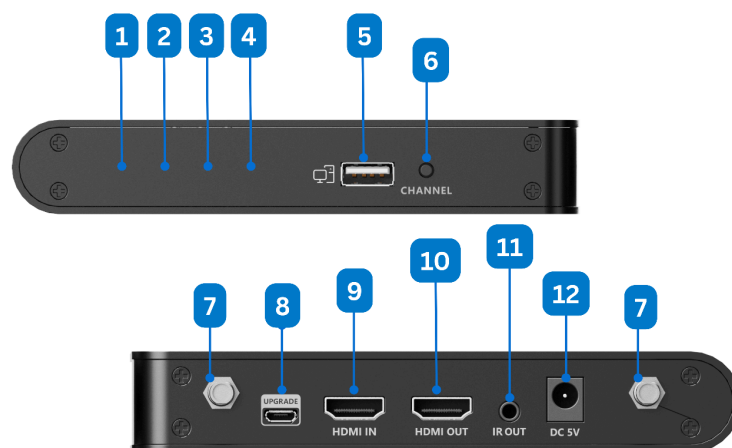| Category	Item	Specification
HDMI Interface & Performance	HDMI Version	HDMI 2.0
	HDCP Compliance	HDCP 1.4 / HDCP 2.2
	Maximum Bandwidth	18Gbps
	Supported Resolutions	4096×2160 @ 24/30/50/60Hz 3840×2160 @ 24/30/50/60Hz 1920×12001080p @ 50/60Hz 720p @ 50/60Hz
	TMDS Signal Level (I/O)	0.7 ~ 1.2 Vp-p
	DDC Signal Level (I/O)	5 Vp-p (TTL)
Wireless Transmission	Operating Frequency	5.18 ~ 5.24 GHz
	Transmission Distance	One-to-One: ≤ 50 m One-to-Two: ≤ 30 m One-to-Three: ≤ 20 m One-to-Four: ≤ 15 m
	Latency	4K@60Hz: 120 ~ 180 ms 1080p@60Hz: 70 ~ 120 ms Latency may vary based on resolution, distance, and connection conditions
	Connection Modes	One-to-One One-to-Two One-to-Three One-to-Four
	SSID Pairing	Supported
Protection	ESD Protection	±8 kV Contact Discharge (Level 3) ±15 kV Air Discharge (Level 3) Complies with IEC 61000-4-2
	Surge Protection	Lightning and surge protection

IR Control	IR Frequency Range	20 ~ 60 kHz
	IR Receiving Distance	≤ 5 m
Environmental	Operating Temperature	-4°F to 140°F / −20°C to 60°C
	Storage Temperature	-22°F to 158°F / −30°C to 70°C
	Operating Humidity	0 ~ 90% RH (Non-condensing)
Physical	Dimensions (W × L × H)	TX: 4.5 × 4.9 × 0.81 in / 115 × 125 × 20.6 mm RX: 4.5 × 4.9 × 0.81 in / 115 × 125 × 20.6 mm
	Color	Black
	Housing Material	Iron
	Net Weight	TX: 0.77 lb / 349 g RX: 0.72 lb / 326 g
Power	Input Power	DC 5V / 2A
	Power Consumption	Transmitter (TX): ≤ 5W Receiver (RX): ≤ 4W

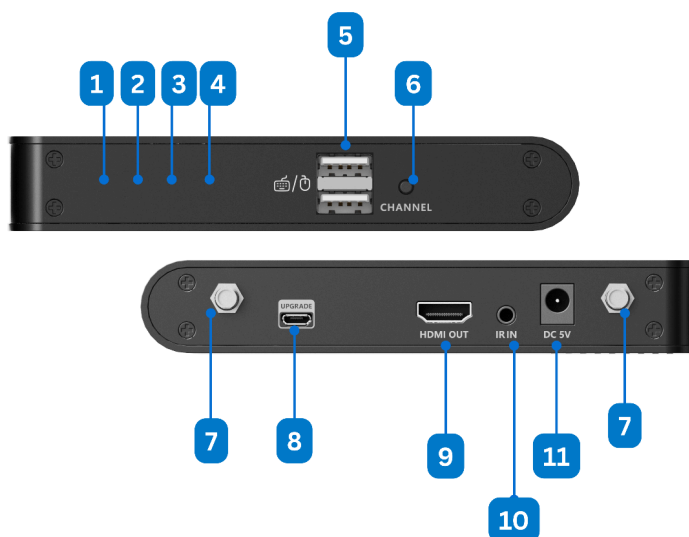# Operation Controls and Functions

Transmitter Front and Rear Panel

1. **Power Indicator:** Lights up when the unit is powered on.
2. **WiFi Indicator:** Slow flash = waiting for connection; steady on = connection successful; quick flash = SSID pairing mode.
3. **Signal Indicator:** Off = no HDMI signal; steady on = HDMI signal transmitting; quick flash = restoring factory settings.
4. **KVM Indicator:** Flashing = KVM data transmitting; steady on = USB connection to computer established.
5. **USB-A Port:** Connects to the computer for KVM control using a USB cable.
6. **Channel Switch Button:** Press to change channels; hold 5 seconds for SSID pairing; hold 10 seconds to restore factory settings.
7. **Antenna Connectors:** Connect external antennas for wireless transmission.
8. **Micro-USB Port:** Used for firmware upgrades.
9. **HDMI Input:** Connects to an HDMI source device.
10. **HDMI Output:** Connects to a local HDMI display.
11. **IR Output:** Connects to an IR blaster extension cable.
12. **Power Input:** Connects to a DC 5V/2A power adapter.
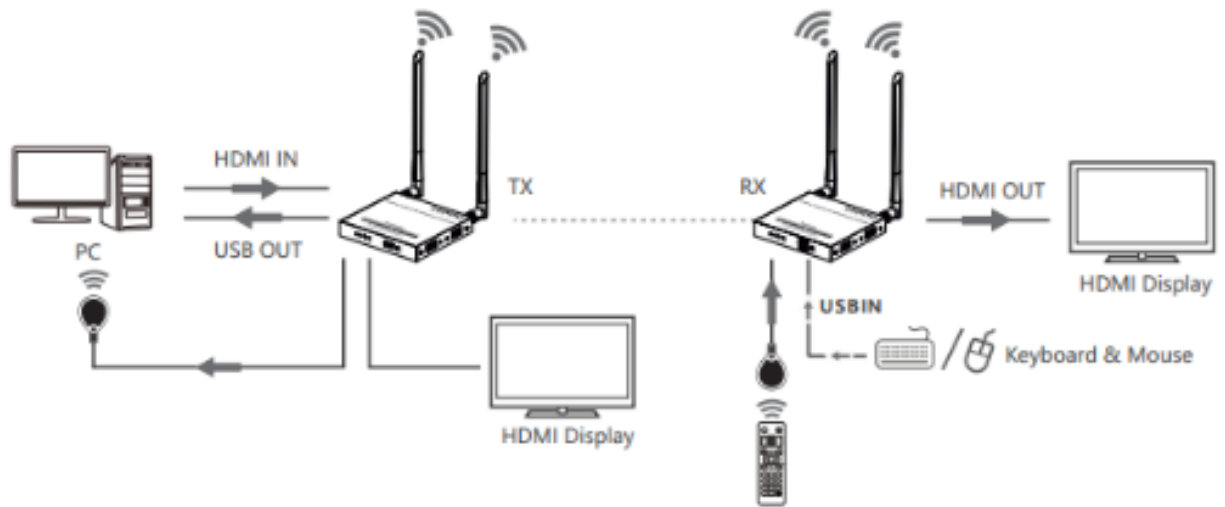
Receiver Front and Rear Panel

1. **Power Indicator:** Lights up when power is applied.
2. **WiFi Indicator:** Slow flash = waiting for connection; steady on = connection successful; quick flash = SSID pairing mode.
3. **Signal Indicator:** Off = no HDMI signal; steady on = HDMI signal transmitting; quick flash = restoring factory settings.
4. **KVM Indicator:** Flashing = KVM data transmitting; steady on = mouse and keyboard connected.
5. **USB-A Port:** Connects a mouse and keyboard for KVM control.
6. **Channel Switch Button:** Press to switch channels; hold 5 seconds for SSID pairing; hold 10 seconds to restore factory settings.
7. **Antenna Connectors:** Used to connect external antennas.
8. **Micro-USB Port:** Used for firmware upgrades.
9. **HDMI Output:** Connects to an HDMI display using an HDMI cable.
10. **IR Input:** Connects to an IR receiver extension cable.
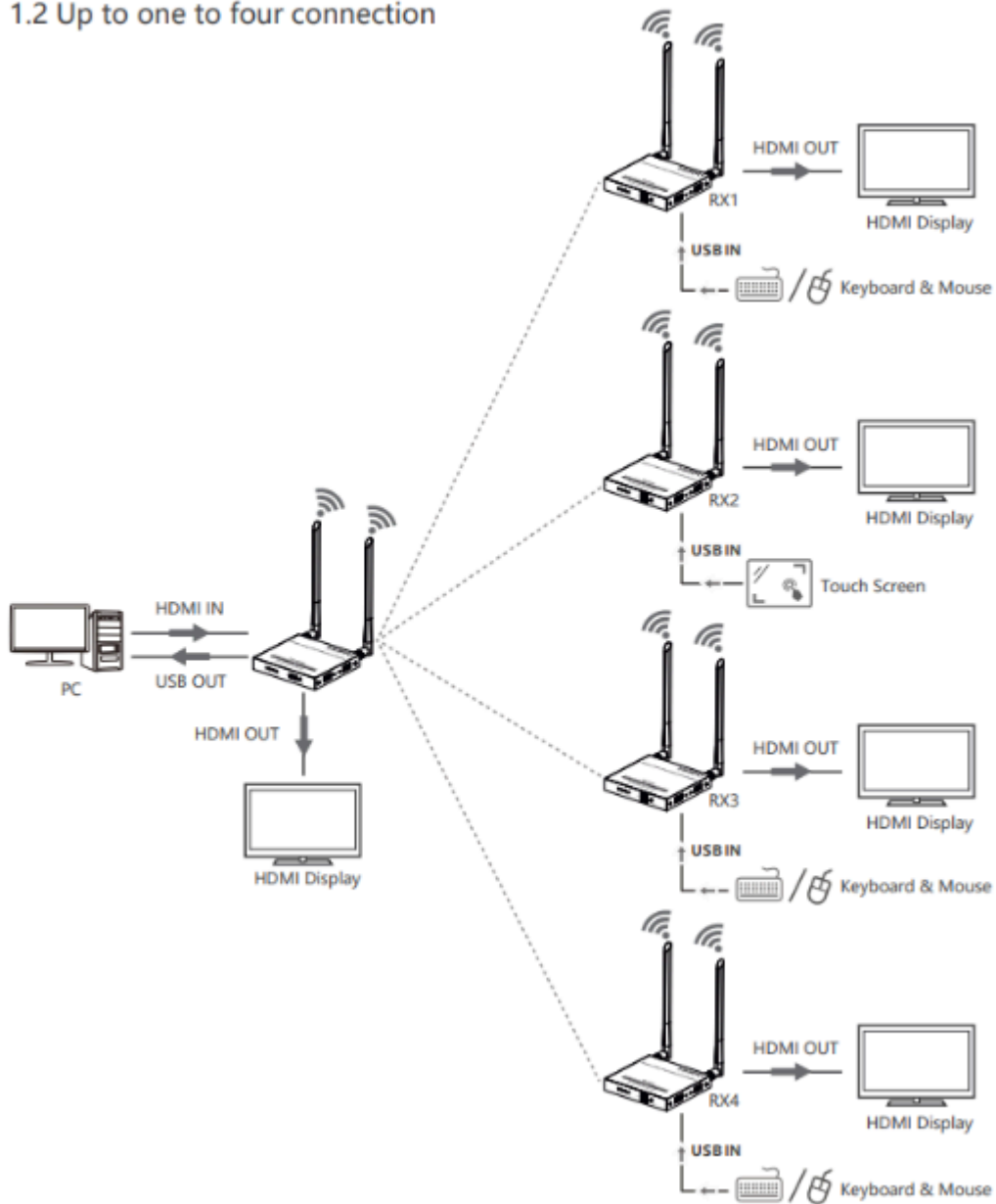11. **Power Input:** Connects to a DC 5V/2A power adapter.

Connection Diagram

One-to-One Connection Diagram

One-to-Many Connection Diagram

1.2 Up to one to four connection

Connection Instructions

1. **Connect HDMI Devices:**
   - Connect your source device (e.g., computer, media player) to the **HDMI IN** port on the transmitter using an HDMI cable.
   - Connect the **HDMI OUT** port of the receiver to your display device using another HDMI cable.

2. **Set Up IR Passback (Optional):**
   - Connect the **IR blaster extension cable** to the transmitter's **IR OUT** port.
   - Connect the **IR receiver extension cable** to the receiver's **IR IN** port.
     - Ensure the emitter of the IR blaster is positioned as close as possible to the source device's IR window.
     - Point your remote control at the IR receiver extension cable to operate the source device.

3. **Set Up KVM Function (Optional):**
   - Connect your keyboard and mouse to the **USB port** of the receiver.
   - Connect the computer to the transmitter's **USB port** using a USB cable.

4. **Power On Devices:**
   - Connect the included **DC 5V/2A power adapters** to the transmitter and receiver to power them on.

5. **Pairing Multiple Sets (Optional):**
   - When using multiple transmitters and receivers in the same area, pair each set to a unique SSID to prevent interference.
   - After pairing, manually switch each transmitter and receiver to different channels as needed.

6. **Pairing Steps:**
   - Enter **SSID pairing mode** by holding the channel switch buttons on both the transmitter and receiver for **5 seconds**.
   - Both WiFi indicators will flash quickly, indicating pairing mode.
   - Once the receiver WiFi indicator changes from **quick flash to slow flash**, short press the transmitter channel switch button to end pairing.
   - The TX/RX WiFi indicators will then flash slowly or stay steady on, confirming a successful connection.

7. **Frequency Channels:**
   - Channel 1: 5.180 GHz
   - Channel 2: 5.200 GHz
   - Channel 3: 5.220 GHz
   - Channel 4: 5.240 GHz

FAQ

Q: Why can't the transmitter and receiver connect, showing "Search ipcolor Tx…" on the screen?
 A:

1. Move the transmitter and receiver closer together to improve signal strength.
2. Power cycle the transmitter and receiver by unplugging and reconnecting the power.
3. Re-pair the transmitter and receiver following the SSID pairing instructions.

Q: Why is the Wi-Fi indicator steady on, but the screen shows "Please check the TX input signal"?
 A:

1. Ensure the transmitter (TX) is connected to an HDMI source and that the resolution is supported.
2. Test the HDMI source and cable by connecting it directly to the display to rule out source or cable issues.
3. Try using a different HDMI source or cable if the problem persists.

Q: Why is the display stuttering or unstable?
 A:

1. Make sure the transmitter and receiver are within range and reduce obstacles between them.
2. Switch to a different wireless channel to avoid interference from other devices.
3. Power cycle the transmitter or receiver to reset the connection.

Troubleshooting

Problems	Causes	Solutions
No Power / All LED off	Power supply not connected, connected fully, or wrong power supply.	Check if the power supply is connected correctly and the output voltage value is within recommended specifications.
No sound or sound issues	The HDMI connection is faulty, the audio format is not supported by the displays, or the source player is set to another port for audio output	Check if the HDMI cables are connected correctly. Check if the audio format is supported by the display and that a user has not changed the supported audio format on the player`s audio output. Ensure output settings from the HDMI source device as set correctly.
No picture or picture flickers	The HDMI cable may be faulty or the category cable quality is faulty.	Check if the HDMI and category cable connections are correct and undamaged. Change to another good working HDMI cable or category cable (CAT6 or better cable is recommended).

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

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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