BZBGEAR®
Amplify Your World™

BG-STREAM-E

HDMI to IP/UVC POE Encoder

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

The BG-STREAM-E HDMI to IP/UVC converter is a versatile device designed for high-quality video conversion from HDMI sources to IP streams or USB 3.0 UVC outputs. It features a single HDMI input and multiple output options, including an RJ45 port for IP streaming and a USB 3.0 Type-B port for UVC output, supporting streaming protocols such as RTSP, RTMP, HLS, TS, SRT, NDI HX, and Dante AV-H. With support for resolutions up to 1080p at 60/50fps and advanced H.265/H.264/AVC encoding, it ensures efficient compression and excellent video quality.

The device also supports AAC-LC audio with a configurable bit rate and a sample rate of 48KHz. Additional features include DHCP client support, POE input, a user-friendly web UI for system configuration, a compact size, and a secure locking DC jack power input, making it ideal for professional AV setups.

Features

- HDMI to IP and USB 3.0 Type B (UVC) conversion
- Supports up to 1080p resolution at 60/50fps
- Hardware compression in real-time mode
- H.265/H.264/AVC codec support
- AAC-LC audio codec with 48KHz sample rate
- Multiple streaming protocols: RTSP, NDI-HX, Dante AV-H, HLS, RTMP, TS, SRT
- DHCP client and configurable network settings
- Web UI for easy configuration and management
- UVC over IP support
- System control options: restore to default, reboot
- Account and password management
- DC locking power and PoE support
- Compact size: 103.8mm x 71.2mm x 26mm

Packing List

- 1x BG-STREAM-E
- 1x DC Power Adapter

Specifications

Technical Specifications	
Input Interface	Video • 1×HDMI
Output Interface	Video • 1×RJ45 (RTSP/RTMP/HLS/TS/SRT/NDI HX/Dante AV-H Support) • 1×USB3.0 Type B (UVC) output.
Video Support	H.265/H.264/AVC, Baseline/Main/High Profile Supported HDMI output Resolutions • 1920×1080p@60/50fps • 1920×1080p@30/25/24fps • 1920×1080i@60/50fps • 1280×720p@60/50fps • 1280×1024p@60fps • 1280×960p@60fps • 1024×768p@60fps • 800×600p@60fps • 640×480p@60fps • 720×480p@60fps • 720×576p@50fps
Audio Support	• AAC-LC • Configurable bit rate range from 32Kbps to 384Kbps • Sample rate: 48KHz, 16bit
Max. FPS	1920×1080p@60/50fps
Network / Ethernet Support	• 1×RJ45 for 10/100/1000Mbps Ethernet • DHCP Client
Streaming Protocol Support	• NDI Support (Separate License with NDI Required) • Dante AV-H (Separate License with Dante AV-H Required) • RTSP over UDP/TCP/Multicast/HTTP • RTMP (Publish) • TS over IP • HLS
Additional Features	• UVC Device Supported • Web UI for System Configuration • Firmware Upgradable
Power Supply	• DC Input • PoE Support
Unit Dimensions	4.1in x 2.8in x 1in / 103.8mm x 71.2mm x 26mm

Operation Controls and Functions

Front and Rear Panel

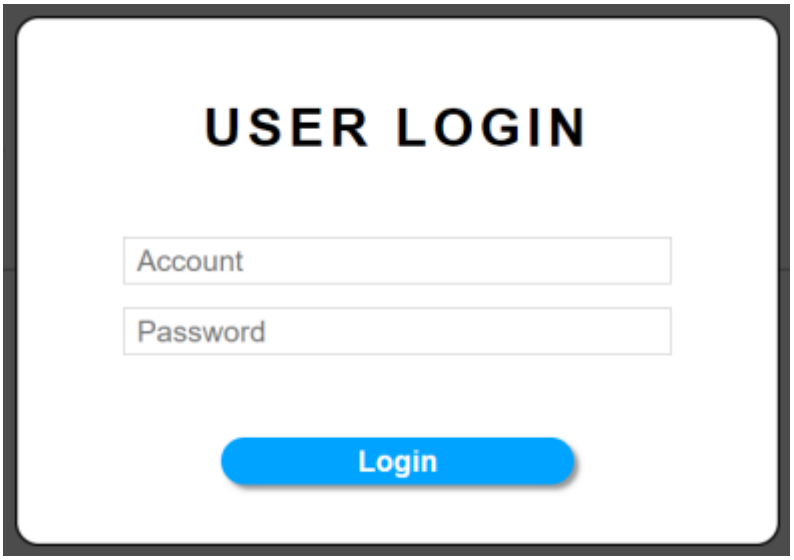
1. RJ45 Out / PoE In: Connect to a network or directly to a PC. (Note: A PoE-enabled network device is required for PoE functionality.)
2. Locking DC Power Adapter: Securely connect the power supply
3. Factory Reset: Use a pin to press and hold for a complete factory reset
4. HDMI In: Connect any compatible HDMI video source
5. UVC Out: Transmit video and audio via USB

Web UI

To access the BG-STREAM-E Web UI, open an IP Finder tool and search for the device's IP address. Identify the correct IP address by matching it with the device's MAC address, then use it to open the control interface.

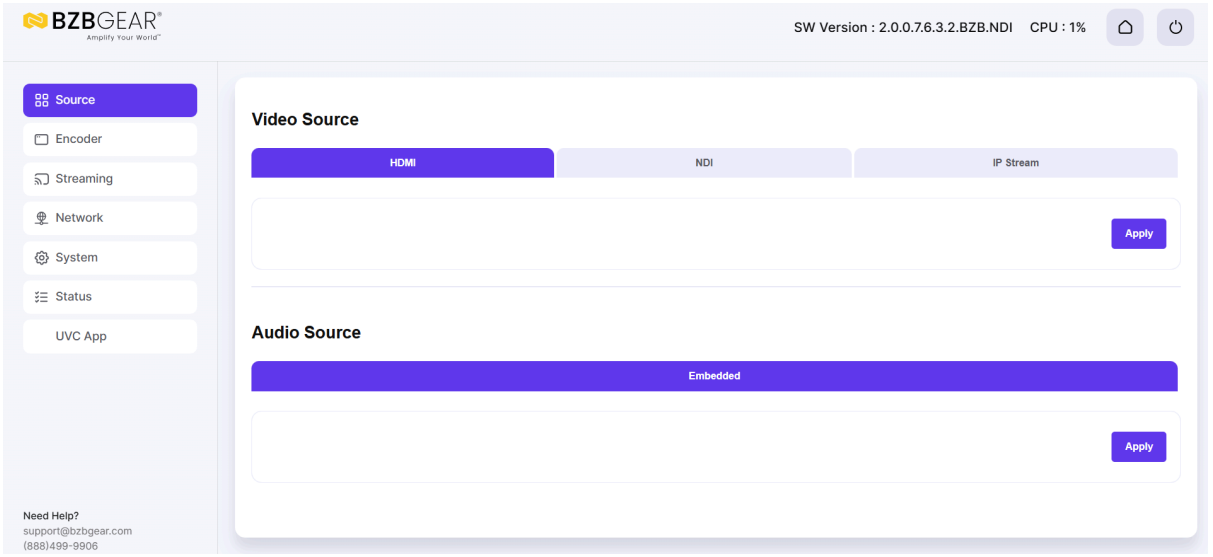
The Web UI is an intuitive interface that allows users to easily control the BG-STREAM-E from a standard PC or portable devices (e.g., Android, iPhone, iPad, etc.), providing a more convenient and flexible control experience.

Access and Login Instructions

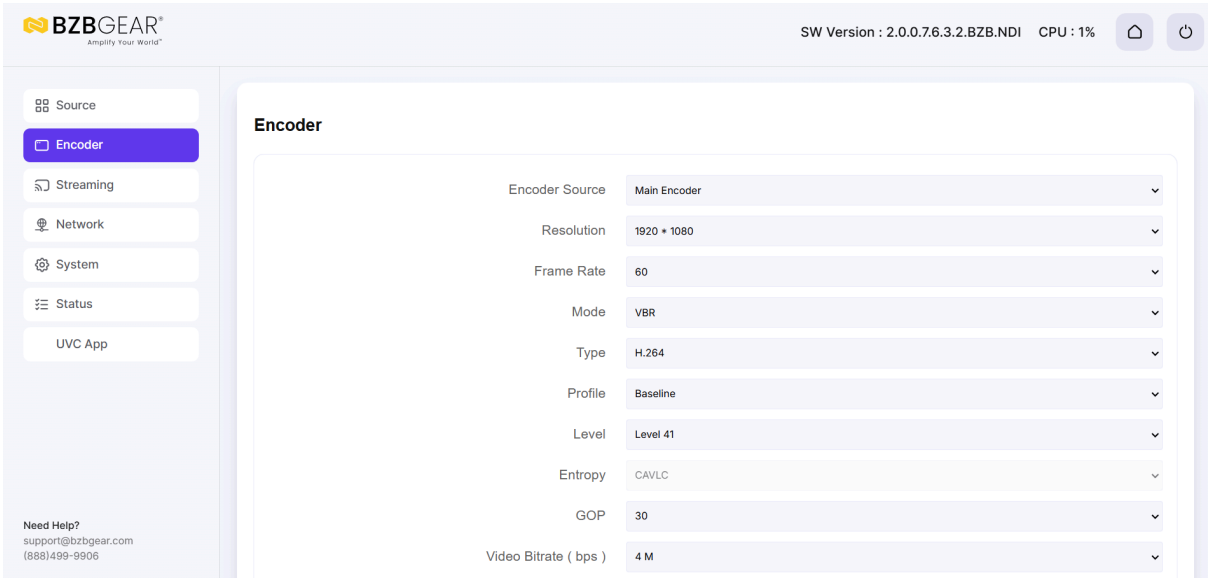


Username: admin
Password: 0000

Source Page



Encoder Page

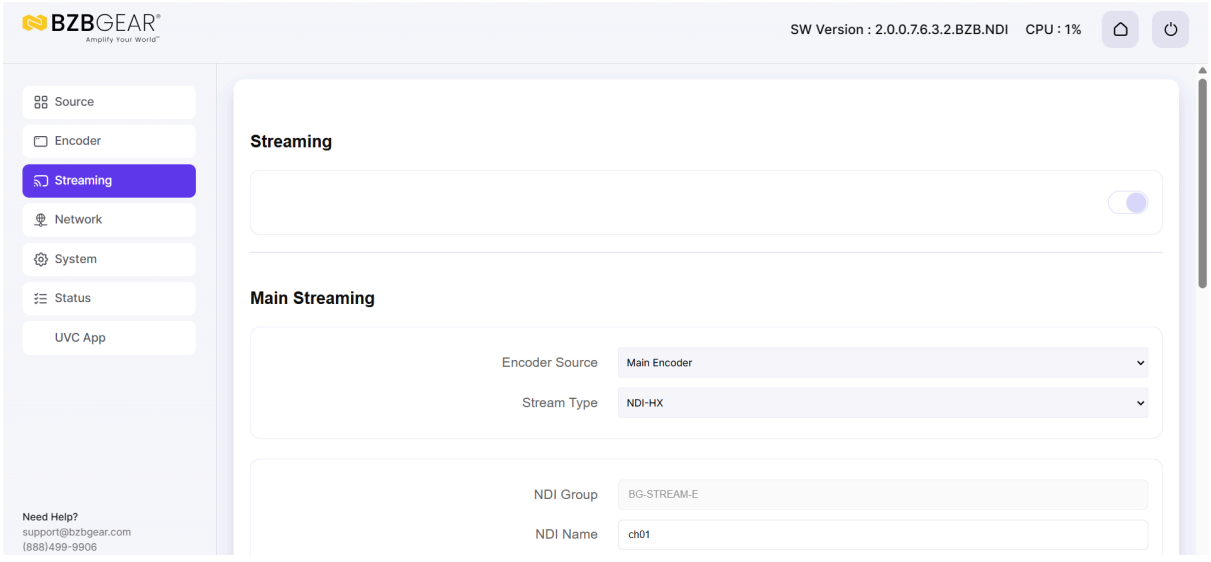


Encoder Basic Settings

On the **Encoder Basic** page, users can configure the video encoding parameters for the BG-STREAM-E. The device supports selectable video resolutions ranging from **160 × 120 up to 1920 × 1080**, as well as adjustable bitrates from **44 Kbps to 100 Mbps**.

Users can quickly modify both the encoding resolution and bitrate to match network conditions, streaming platform requirements, or desired video quality. Adjustments take effect rapidly, making it easy to optimize performance as needed.

Streaming Page



On the **Streaming** page, users can start or stop streaming, select the desired streaming protocol, and configure parameters for each streaming format. The BG-STREAM-E

supports multiple streaming methods to accommodate a wide range of workflows and platforms.

Once a streaming type is selected, configure its parameters and click **Start** to begin streaming, or **Stop** to end the session.

1. RTSP Streaming

Use this mode to stream via RTSP protocol.

Settings Description

Setting	Description
Stream Type	Select **RTSP**
RTSP Port	Sets the RTSP server port
RTSP HTTP Port	Sets the RTSP HTTP server port
Account	Username required for RTSP client authentication
Password	Password required for RTSP client authentication
Session Name	Name of the RTSP session
Multicast	Enables or disables multicast streaming
Enable	Uses broadcast transmission. Recommended when multiple clients are viewing, reduces CPU usage
Disable	Uses unicast transmission. May increase CPU usage when multiple clients are connected
Content	Select the streaming content source

2. NDI®|HX Streaming

Use this mode to stream using NDI-HX for low-latency IP video workflows.

Settings Description

Setting	Description
Stream Type	Select **NDI-HX**

NDI Group	Assigns the device to an NDI group
Device Name	Network device identification
NDI Name	Name displayed to NDI receivers

3. HLS Streaming

To start HLS streaming, simply select **HLS** and click **Start**. The device will automatically begin broadcasting using HLS streaming format.

4. RTMP Streaming

Use RTMP streaming for platforms such as YouTube, Facebook, and other RTMP-compatible services.

Settings Description

Setting	Description
Stream Type	Select **RTMP**
RTMP URL	Enter the RTMP server address
Account / Password	Optional authentication credentials. Viewers must enter these to access the stream
Content	Select the streaming content source

5. SRT Streaming

SRT streaming supports **Listener** and **Caller** modes.

SRT Listener Mode

Setting	Description
Stream Type	Select **SRT**
SRT Mode	Select **Listener**
SRT Port	Enter the listening port

Passphrase	Set encryption password (if required)

SRT Caller Mode

Setting	Description
Stream Type	Select **SRT**
SRT Mode	Select **Caller**
SRT Port	Enter the port
Caller IP Address	Enter the destination IP
Latency (20–8000ms)	Sets network latency buffer
Stream ID	Assign stream identification
Passphrase	Set encryption password (if required)

6. TS Streaming

Use TS streaming for MPEG-TS-based transport streaming.

Setting	Description
Stream Type	Select **TS**
TS URL	Enter the TS server address

7. Dante AV Streaming

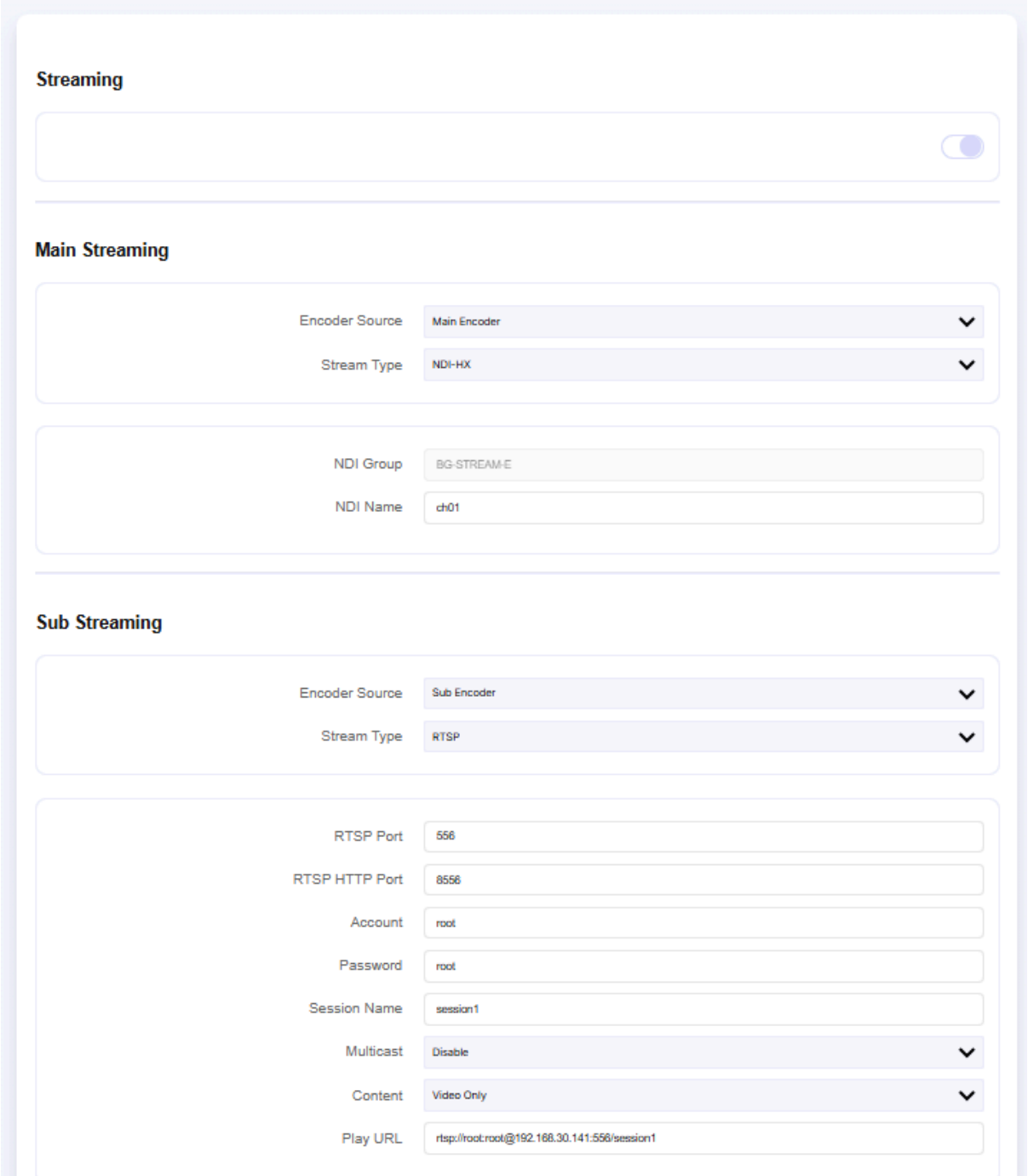
Note: Dante AV-H requires a separate license.

Dante Controller Setup

1. **Download and install Dante Controller** from the Audinate website.
2. Open Dante Controller and verify the device appears in the device list.
3. Double-click the TX device to confirm operation status.
4. In the Web UI, set **IP/UVC** → **HDMI2** → **Dante RX Mode** and click **Apply**.
5. Configure streaming routing by assigning TX and RX.
    - Icons indicate: video, left audio, and right audio.
6. Click the routing block (square) to apply settings.

7. Start streaming and verify status from the Web UI.

Network Page



The **Network** page is divided into three sections: **Network Settings**, **Network Status**, and **Time Settings**. These options allow users to configure network parameters, review connection information, and synchronize system time.

1. Network Settings

Use this section to configure the device's network connection.

Setting	Description
LAN Port	Select the LAN port to configure.
DHCP	Enable or disable DHCP. When enabled, network parameters are obtained automatically from a DHCP server. When disabled, users must manually enter all required network settings.
Static IP	Manually assign a static IP address to the device.
Subnet Mask	Configure the subnet mask for the network.
Default Gateway	Set the default gateway for network routing.
Primary DNS	Configure the primary DNS server.
Secondary DNS	Configure the secondary DNS server (optional).

Note: When DHCP is disabled, ensure valid IP, Subnet Mask, Gateway, and DNS values are entered to maintain proper network connectivity.

2. Network Status

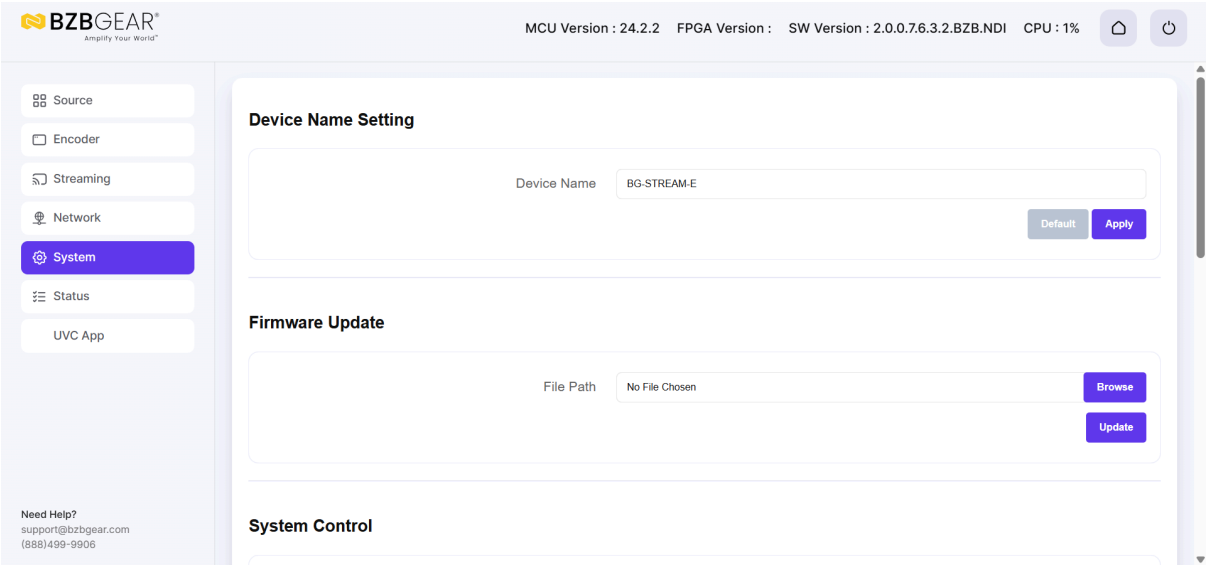
This section displays the current network connection information, including assigned IP address and connection status. Use this page to verify that the device is properly connected to the network.

3. Time Settings

Use this section to configure system time synchronization.

Setting	Description
Time Server	Specify the NTP server address used for time synchronization.
Sync Type	Select the synchronization method used to maintain accurate system time.

System Page



The **System** page contains several management tools that allow users to configure device identity, update firmware, control system functions, manage login credentials, set session duration, and adjust image rotation.

1. Device Name

Use this section to assign a custom **Device Name**.
This name helps identify the unit on the network and within streaming or control environments.

2. Firmware Update

Use this section to update the device firmware.

1. Click **Browse** to select the firmware file.
2. Click **Update** to begin the upgrade process.

Important:
- Do **not** power off or disconnect the device during the firmware update.
- Wait until the upgrade process is fully completed before operating the device.

3. System Control

This section provides system maintenance controls.

Function	Description
Restore to Default	Resets all settings to factory defaults. All user configurations will be erased.
Reboot	Restarts the device.

Note: Restoring to default will remove all custom settings.

4. Account & Password

Use this section to create or modify the login **account** and **password**.
Updating credentials enhances system security and prevents unauthorized access.

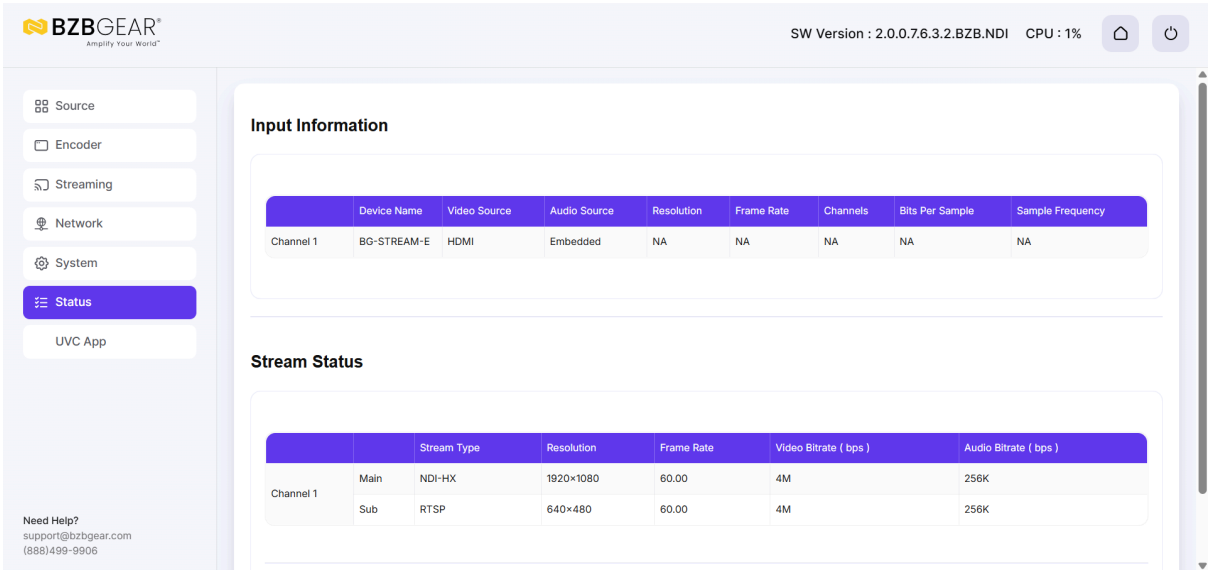
5. Time Period

This setting defines the allowed **user session duration** after login.
When the configured time expires, the user will be automatically logged out.

6. Rotate Status

Use this section to set the **rotation angle** of the HDMI input video.
Select the desired rotation setting as required by your installation or display orientation.

Status Page

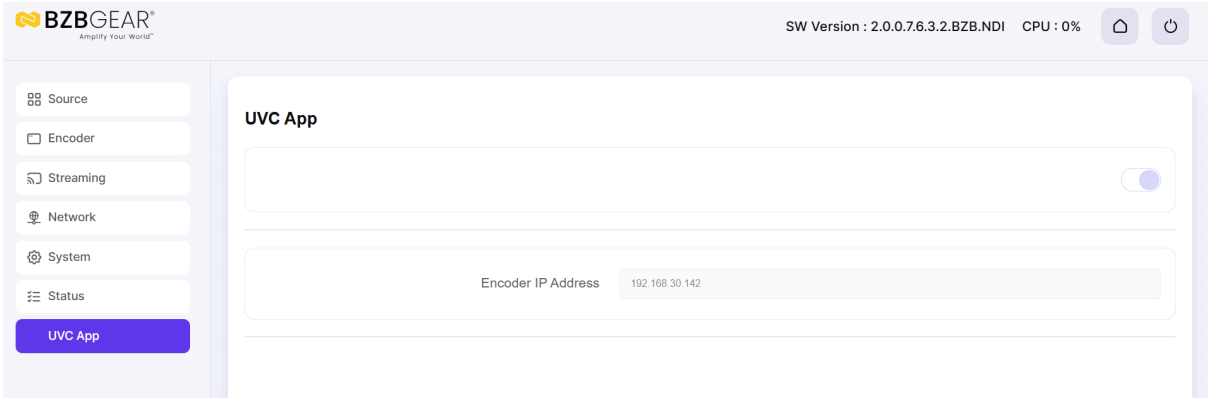


The **Status** page provides real-time information about the device's operation. This page displays current **video input details** and **streaming status**, allowing users to quickly verify signal conditions and streaming activity.

- **Video Input Information** – Shows details such as resolution, frame rate, and input format of the connected video source.
- **Streaming Status** – Indicates whether streaming is active and displays relevant streaming parameters for each enabled streaming protocol.

Use this page to confirm that the video signal is detected correctly and that streaming services are functioning as expected.

UVC over IP Page



The **UVC over IP** function allows users to configure and operate a UVC device across an IP network. Follow the steps below to enable and use UVC over IP functionality.

Step 1 – Detect UVC Devices

Open the Web UI for **SC6E0N1 IPUVC to HDMI 2.0**.
Click the **Enumeration** button to scan and display available UVC camera names and supported resolution information.

Step 2 – Enable UVC Host Function

Click **Start** to activate the UVC Host function.

Step 3 – Access UVC Application Page

From the Web UI of **SC6E0N1 HDMI to IPUVC**, go to the **UVC App** page.
Connect the **USB Type-B** port of the device to the notebook/PC.

Step 4 – Connect to UVC Host

After opening the UVC App page, enter the **UVC Host device IP address**, then start the function to establish communication.

Step 5 – UVC Device Detection

Once connected, a new **UVC over IP device** will appear in the computer's **Device Manager**, confirming successful detection.

Step 6 – Use with Third-Party Software

Launch your preferred third-party UVC-compatible software.
The **UVC over IP device** will be listed as an available video source and can now be selected for use.

Connection Diagram

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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