



Advanced 150m HDMI Receiver HE-2150UM-R



User Manual

Thank you for purchasing this product.

Please read this manual carefully before use to ensure optimal performance and safety.

Please retain this manual for future reference.

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Safety and Compliance

FCC Statement (Class A)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

European Community Compliance Statement (Class A)

This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2014/30/EU.

Disposal of This Product

This product must not be disposed of with household waste. Please recycle it responsibly at a designated collection point for electronic waste in your country.

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What's in the box?

HE-2150UM-R	x 1
5pin-3.5mm Phoenix Connector (male)	x 1
3pin-3.5mm Phoenix Connector (male)	x 1
Mounting Ear	x 2
Machine Screw (M3*4)	x 4
Interchangeable 24V 1A Adapter	x 1
UK Plug	x 1
US Plug	x 1
AU Plug	x 1
EU Plug	x 1
IR Transmitter	x 1
IR Receiver	x 1
Thank you Card	x 1

Notice

The contents of this manual are subject to change without prior notice as part of continuous product improvement. All updates will be incorporated into subsequent versions of this documentation, ensuring users have access to the most current information regarding product features and procedures.

Overview

Taska **HE-2150UM-R** is a 4K long-range HDMI Receiver. It leverages an optimized version of HDBaseT technology. It allows you to reliably transmit high-definition audio, video, and control signals over a single CAT6/6a cable. It supports stunning video quality up to 4K@60Hz 4:4:4 and can extend your signal up to 120 meters for 4K content and 150 meters for 1080p content.

Its innovative bi-directional Power over Cable (PoC) design offers superior installation flexibility. This feature allows you to power both units from either the transmitter or receiver side using just one power adapter, simplifying setup and reducing cable clutter.

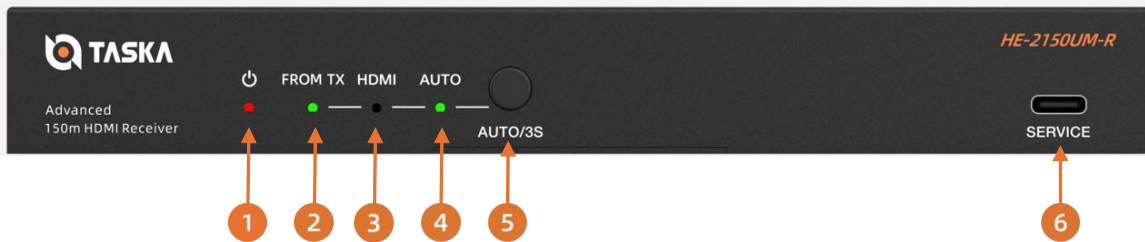
It offers flexible features like bidirectional IR and RS-232 control for managing your devices from a distance. It also includes advanced audio options such as output to analog stereo, making it a complete and versatile solution for any home or professional installation.

Features

- 4K HDMI Network Cable Extender, supports 1080P at a maximum distance of 150 meters and 4K at a maximum distance of 120 meters.
- Compatible with HDMI 2.0b, HDCP 2.2/HDCP 1.4, and DVI 1.0, with a maximum bandwidth of 18Gbps.
- The receiver supports one TX input and one local HDMI input, with auto-switching (HDMI 5V detection).
- LAN port supports PoE+ for powering the extender.
- The receiver supports audio stripping through analog L/R output.
- Bidirectional IR, RS-232, and CEC pass-through.
- HDR, HDR 10+, Dolby Vision, and HLG pass-through.
- Bidirectional PoC (Power over Cable) functionality.
- Designed for easy installation.

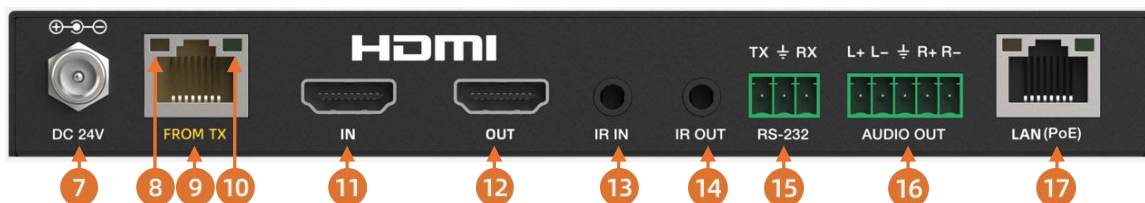
Panel Description

Front Panel



No.	Name	Function Description
1	POWER LED	The red LED will light on when the device is powered on.
2	FROM TX LED	The green LED will light on when the FROM TX input port is selected as the signal input channel.
3	HDMI LED	The green LED will light on when the HDMI input port is selected as the signal input channel.
4	AUTO LED	The green LED will light on when the Auto-Switching Mode is enabled.
5	AUTO/3S Button	- Press the button to select input channel. - Press and hold the button for 3 seconds to enable/disable the Auto-Switching Mode.
6	Service Port	The USB-C port, used for software upgrade and API commands control, operates at a fixed baud rate of 115200.

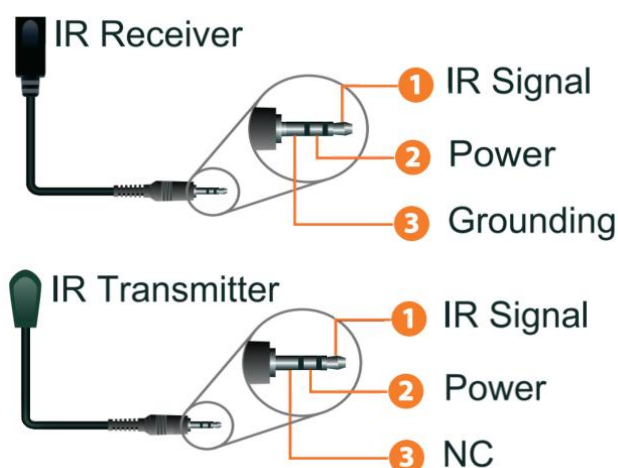
Back Panel



No.	Name	Function Description
7	DC 24V	DC 24V/1A Power Input. This is the DC power input port.
8	Data Signal Indicator	Signal Status Indicator. Flashing: Video signal is being transmitted. Off: No video signal is present.
9	FROM TX port	FROM TX Signal Input Port. Connect this port to the TO RX port on the transmitter using a CAT6/6A cable. This connection supports bidirectional PoC (Power over Cable) functionality.
10	Link Signal Indicator	Device Link Status Indicator. Solid On: Transmitter and receiver are properly connected. Flashing: The connection between transmitter and receiver is poor or unstable. Off: Transmitter and receiver are not connected.
11	HDMI IN port	HDMI Input. Connect to an HDMI signal source device via an HDMI cable.
12	HDMI OUT port	HDMI Output. Connect to an HDMI display device via an HDMI cable.
13	IR IN port	IR Input. Connect to an IR receiver which is bundled.

No.	Name	Function Description
14	IR OUT port	IR Output. Connect to an IR transmitter which is bundled.
15	RS-232 port	Serial Control Port. Used for RS-232 signal pass-through.
16	AUDIO OUT port	Analog Audio Output. Supports both balanced and unbalanced audio output. • Balanced Output (Max. 2Vrms): Connect to L+, L-, GND, R+, R-. • Unbalanced Output (Max. 1Vrms): Connect to (L+, GND, R+) or (L-, GND, R-).
17	LAN port (PoE)	Network Port with PoE. Used for Web GUI access and TCP/IP control. Supports Power over Ethernet (PoE).

IR Cable Definition



Operation Guide

Getting to start

The Web GUI allows to access **HE-2150UM-R** which is connected to the network switch. Users can configure the device directly through the intuitive web interface.

When the system is not connected to a router, you can access the Web GUI by entering following default IP address or default URL directly into a web browser.

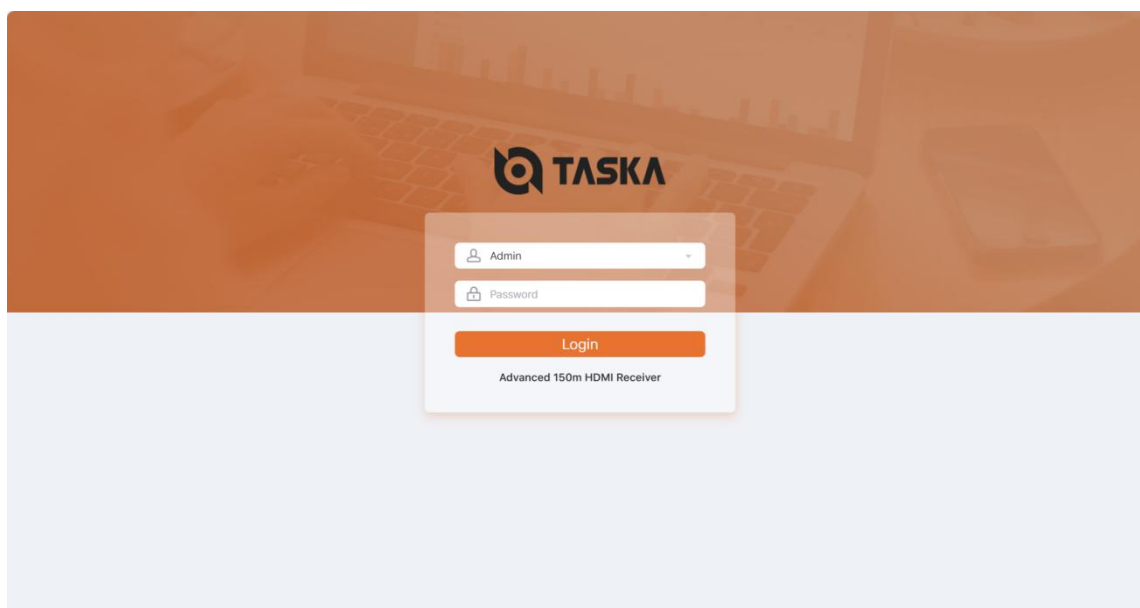
IP Address: 192.168.100.100

URL : http://HE-2150UM-R-XXXXX.local

Note: XXXXX is the last 5-digit of MAC address of the device. It can be modified in the Network page.

Steps to Access:

1. Connect your PC directly to the LAN port via an Ethernet cable.
2. Open a web browser (e.g., Chrome, Edge, or Firefox).
3. Enter the default addresses above or Domain Name URL and press **"Enter"**.
4. The Web GUI login interface will load for authentication.

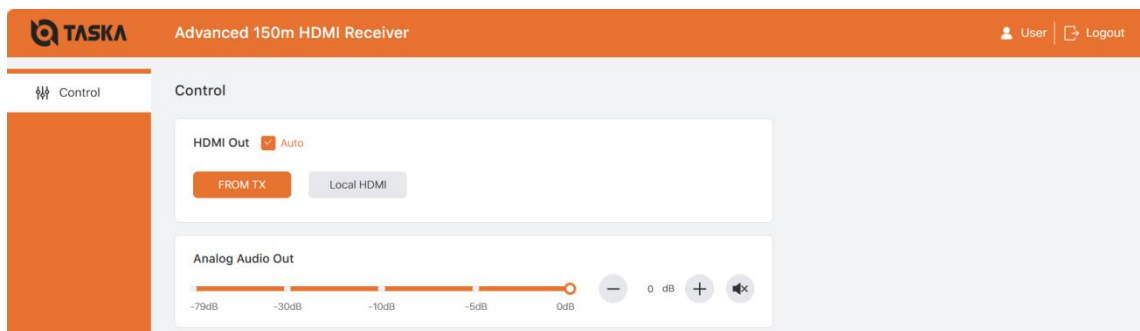


User need to use default username and password on the login interface.

Username: Admin or **Username: User**
Password: 1234 **Password: 1234**

Selecting "**Admin**" as the username and entering "**1234**" as the password, then click the "**Login**" button to access the Information page in the Web GUI with full access right.

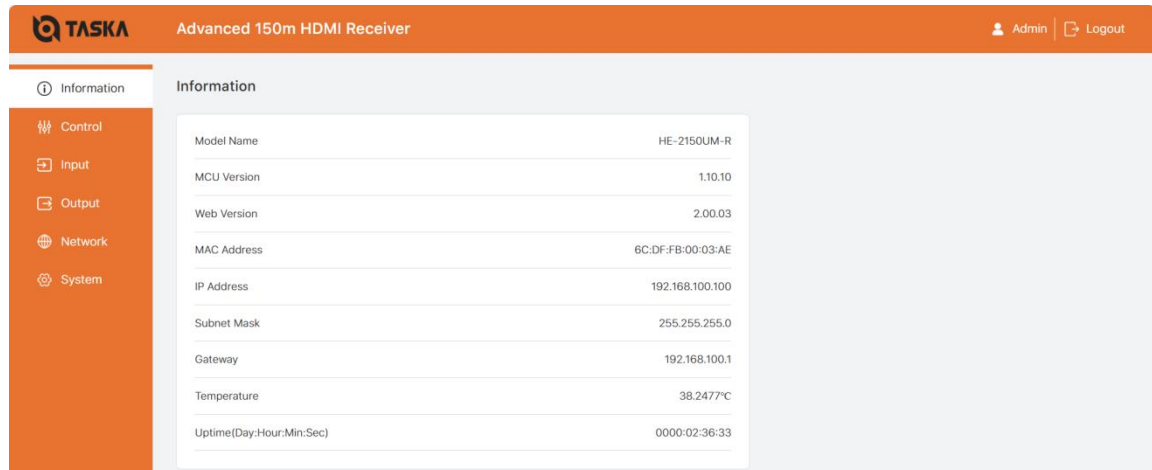
Selecting "**User**" as the username and entering "**1234**" as the password, then click the "**Login**" button to access the Information page in the Web GUI. You can access the Control page only to select input source and volume adjustment.



Web pages

Information

The Information page displays the product's basic details, such as the model name, software version, Web version, IP network configuration, current machine temperature, and system uptime.



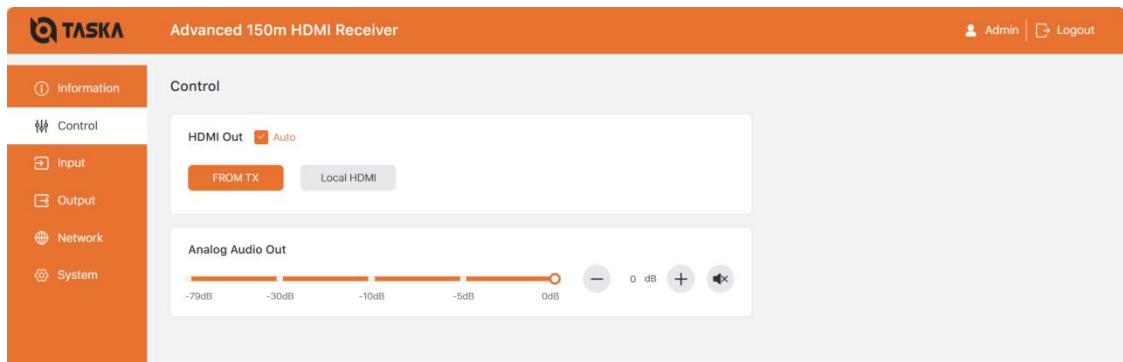
Furthermore, in the upper right corner of every page, you will find controls that allow you to:

- ① View the currently logged-in username (e.g., "User" or "Admin").
- ② Click the logout icon to securely end the session and return to the login interface.

Control

On the Control page, you can perform the following operations:

- ① **HDMI Out:** Select the input source for the HDMI output by clicking either "**FROM TX**" or "**Local HDMI**". To enable automatic source switching, tick the "**Auto**" checkbox.
- ② **Analog Audio Out:** Adjust the volume level or toggle the **mute/unmute** setting for the analog audio output.



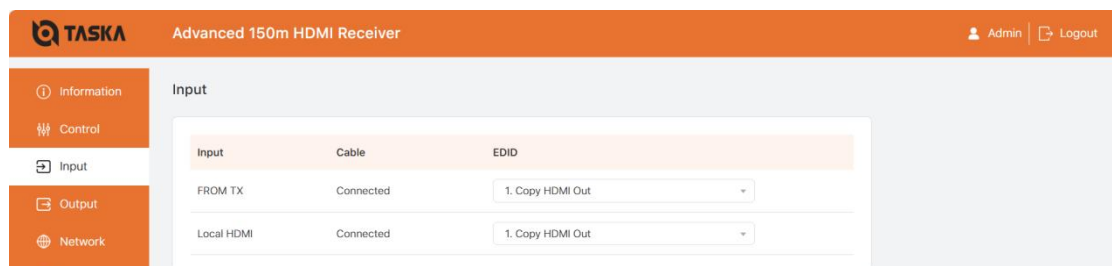
Input

On the Input page, you can manage the following settings:

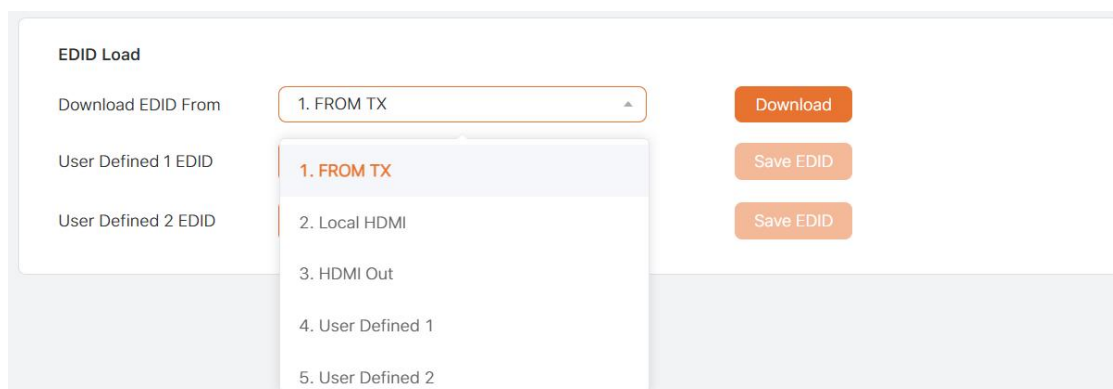
- ① **Input:** View the input channels of the device.
- ② **Cable:** Check the connection status for each channel, indicating whether it is connected to or disconnected from the signal source.
- ③ **EDID:** Click the drop-down list for each input channel to select and set its EDID. Available EDID options include:

No.	EDID Mode	No.	EDID Mode
1	Copy HDMI Out	11	720P60_444, Audio 2CH PCM
2	4K2K60_444, Audio 2CH PCM	12	1920x1200, Audio 2CH PCM
3	4K2K60_444, Audio 5.1CH DTS/DOLBY	13	1680x1050, Audio 2CH PCM
4	4K2K60_444, Audio 7.1CH DTS/DOLBY/HD	14	1600x1200, Audio 2CH PCM
5	4K2K30_444, Audio 2CH PCM	15	1440x900, Audio 2CH PCM
6	4K2K30_444, Audio 5.1CH DTS/DOLBY	16	1360x768, Audio 2CH PCM
7	4K2K30_444, Audio 7.1CH DTS/DOLBY/HD	17	1280x1024, Audio 2CH PCM
8	1080P60_444, Audio 2CH PCM	18	1024x768, Audio 2CH PCM
9	1080P60_444, Audio 5.1CH DTS/DOLBY	19	User Defined 1
10	1080P60_444, Audio 7.1CH DTS/DOLBY/HD	20	User Defined 2

Note: You must complete **Import user-defined EDID** process **before** you can select "User Defined 1" or "User Defined 2" as the active EDID from the drop-down list for an input channel.



- ④ **Export EDID to your computer:** Select the desired EDID (input, output, or user-defined) from the drop-down menu, then click "Download" to save it to your computer



- ⑤ **Import user-defined EDID:** Click "**Load EDID**" to select an EDID binary file from your computer and upload it to either **User Defined 1** or **User Defined 2**. After selecting, click "**Save EDID**" to apply the new EDID settings.

EDID Load

Download EDID From

1. FROM TX

Download

User Defined 1 EDID

Load EDID

No file chosen

Save EDID

User Defined 2 EDID

Load EDID

No file chosen

Save EDID

Output

On the Output page, you can perform the following operations:

- ① **Output:** View the output channel of the device.
- ② **Cable:** Check the connection status of output channel.
- ③ **Signal:** View the current output signal format.
- ④ **HDCP:** Click the drop-down list to set the HDCP version for the selected output channel.
 - **Auto:** HDCP version follows the connected display device.
 - **Force HDCP 1.4:** Enforces HDCP 1.4 compliance.
 - **Force HDCP 2.2:** Enforces HDCP 2.2 compliance.
 - **Signal Management:** Reserved mode.

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Advanced 150m HDMI Receiver
Admin | Logout

Information
Control
Input
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System

Output

Output	Cable	Signal	HDCP	Video Mode	Output Signal	Internal Timing	Internal Pattern
HDMI Out	Disconnected	None	1. Auto	1. Bypass	1. On	1. 4K60Hz	2. Checkb...

1. Auto
2. Force HDCP 1.4
3. Force HDCP 2.2
4. Signal Management

- ⑤ **Video Mode:** Click the drop-down list to set the output video display mode.
 - **Bypass:** The output video signal follows the input source.
 - **Internal Pattern:** The output video signal originates from the internal pattern generator.

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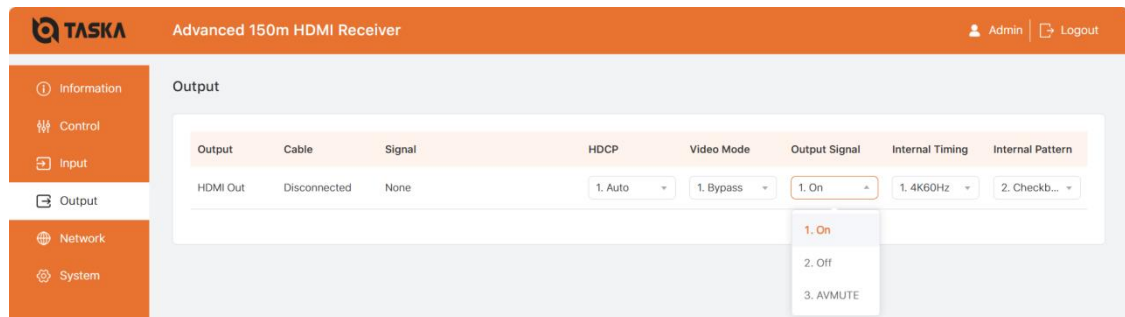
Output

Output	Cable	Signal	HDCP	Video Mode	Output Signal	Internal Timing	Internal Pattern
HDMI Out	Disconnected	None	1. Auto	1. Bypass	1. On	1. 4K60Hz	2. Checkb...

1. Bypass
2. Internal Pattern

⑥ **Output Signal:** Click the drop-down list to set the output signal status.

- On: Turns on both audio and video output.
- Off: Turns off both audio and video output.
- AVMUTE: Mutes the audio and video output and displays a black screen.



⑦ **Internal Timing:** Click the drop-down list to select the output resolution (e.g., 4K60Hz, 4K50Hz, 4K25Hz, 4K24Hz, 1080P60Hz, 480P60Hz, 576P50Hz).

Note: This setting is only available when the **Video Mode** is set to **Internal Pattern**.

⑧ **Internal Pattern:** Click the drop-down list to select the output pattern (e.g., Black, Checkboard, Strip, Red, Green, Blue, White, Ramp, Red ramp, Green ramp, Blue ramp, Prbs).

Network

On the Network page, You can configure the device's network settings.

Network Configuration

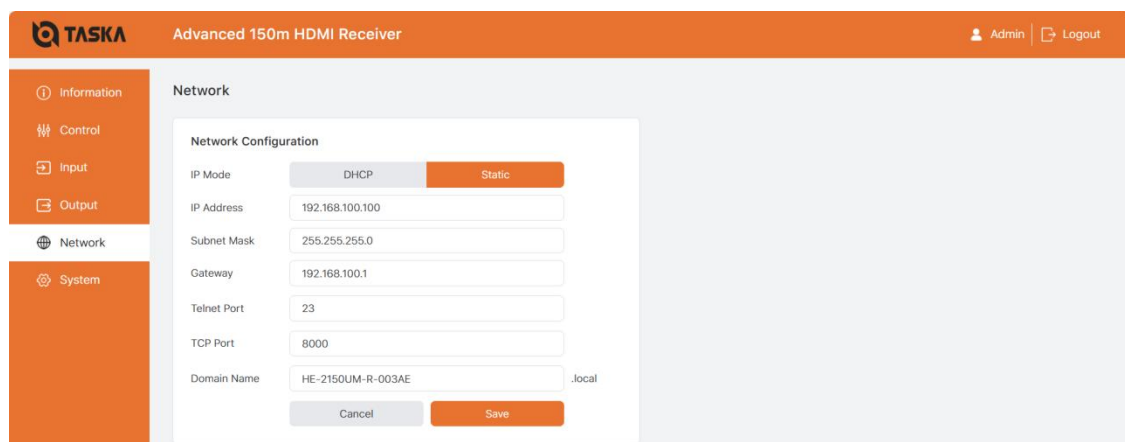
You can select the IP Mode (**Static** or **DHCP**).

DHCP Mode: If set to "**DHCP**," the system will automatically obtain and fill in the IP Address assigned by your router. In this mode, you cannot manually modify the IP address.

Static Mode: If set to "**Static**," you can manually configure the following parameters as required:

- IP Address
- Subnet Mask
- Gateway
- Telnet Port
- TCP Port
- Domain Name

After entering the values, click "**Save**" for the settings to take effect.



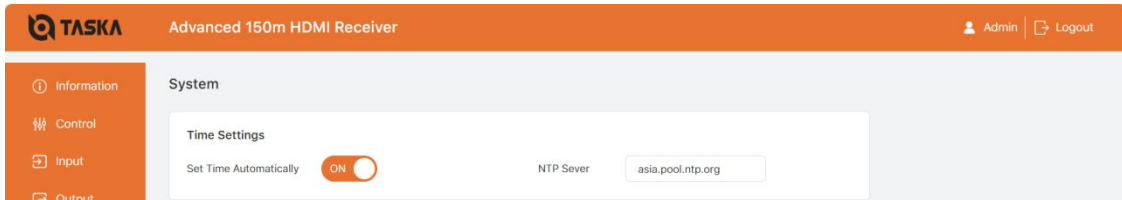
System

On the System page, you can configure the device's time, manage system utilities, update firmware, and change account passwords.

Time Settings

Toggle the "**Set Time Automatically**" switch to control the system time function.

- **ON:** The device synchronizes time from the network. You can specify a NTP Server URL.
- **OFF:** You can manually set the date and time.



System Utilities

This section provides the following controls:

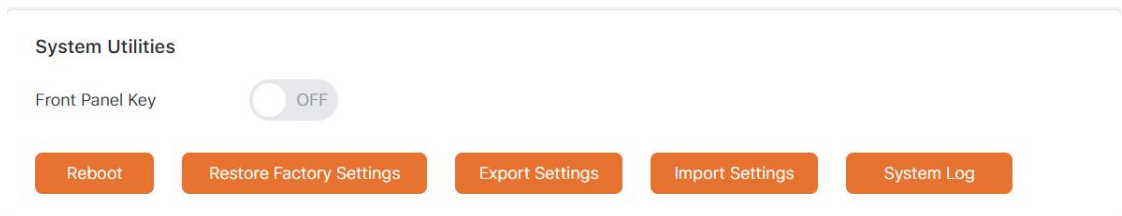
- ① **Front Panel Key:** A switch to lock ("ON") or unlock ("OFF") the physical buttons on the device's front panel.
- ② **Reboot:** A button to restart the device.
- ③ **Restore Factory Settings:** A button to reset all device configurations to their original factory defaults.

Note: Both reboot and restore actions will redirect you to the login interface.

- ④ **Export Settings:** A button to save the current device configuration to a .json file.
- ⑤ **Import Settings:** A button to load a device configuration from a .json file.

Note: Imported and exported settings files do not include network configurations.

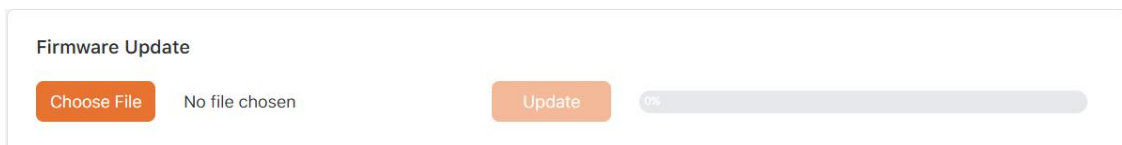
- ⑥ **System Log:** A button to download a log file containing device history, such as uptime, signal source events, video changes, and hardware power cycles.



Firmware Update

To upgrade the device software:

1. Click "**Choose File**" to select the firmware file from your computer.
2. Click "**Update**" to begin the process.
3. Once the progress bar reaches 100%, the firmware update is complete.



Account Passwords

You can change the login password (**maximum 16 characters**) for both the User and Admin accounts.

Account Passwords			
User	Old Password...	New Password...	Confirm Password...
Admin	Old Password...	New Password...	Confirm Password...

Save

Save

Enter the Old Password, the New Password, and confirm the New Password, then click "**Save**" to apply the change.

Password change rules:

- The password cannot be empty.
- The New Password must be different from the Old Password.
- The New Password and the Confirm Password must match exactly.

Protocol

You can configure and monitor the **HE-2150UM-R** using simple API commands via two methods:

Telnet: Connect your PC to the same network subnet as the **HE-2150UM-R**. Then, use a communication software (like PuTTY or a terminal) to establish a Telnet connection to the device's IP address.

USB-C: Use a USB-C to USB-C cable to connect your PC directly to the **HE-2150UM-R**. Then, use a serial port control software (like Tera Term or PuTTY) to access the device's command interface via the virtual serial port.

For the latest protocol specifications, please download the technical documentation from: <https://www.taska-tech.com>

Technical Specifications

Technical		
HDMI Compliance	HDMI 2.0b	
HDCP Compliance	HDCP 2.3	
Video Bandwidth	18Gbps	
Input Video Resolutions	4096x2160p60Hz, 4096x2160p59.94Hz, 4096x2160p50Hz, 4096x2160p30Hz, 4096x2160p29.97Hz, 4096x2160p25Hz, 4096x2160p24Hz, 4096x2160p23.98Hz, 3840x2160p60Hz, 3840x2160p59.94Hz, 3840x2160p50Hz, 3840x2160p30Hz, 3840x2160p29.97Hz, 3840x2160p25Hz, 3840x2160p24Hz, 3840x2160p23.98Hz, 1920x1080p60Hz, 1920x1080p59.94Hz, 1920x1080p50Hz, 1920x1080p30Hz, 1920x1080p29.97Hz, 1920x1080p25Hz, 1920x1080p24Hz, 1920x1080p23.98Hz, 1920x1080i60Hz, 1920x1080i59.94Hz, 1920x1080i50Hz, 1280x720p60Hz, 1280x720p59.94Hz, 1280x720p50Hz, 720x480p59.94Hz, 720x576p50Hz, 720x480i59.94Hz, 720x576i50Hz, 1600x1200p60Hz, 1440x1050p60Hz, 1440x900p60Hz, 1366x768p60Hz, 1280x1024p60Hz, 1024x768p60Hz, 800x600p60Hz, 640x480p60Hz	
Output Video Resolutions	Input to output passthrough	
Color Space	RGB 4:4:4, YCbCr 4:4:4/4:2:2/4:2:0	
Color Depth	8/10/12bit	
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG	
Audio Formats	HDMI IN/OUT: LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD Analog Audio De-embedding: LPCM 2CH (sample rate 32~192kHz)	
Analog Output Audio Parameters	Output Impedance	300 ohms
	Output Level (Max)	8.2dBu (2Vrms)
	Frequency Response	20Hz to 20kHz (-/+0.5dB)
	Audio Output Sync Delay	<1ms
	Audio S/N Ratio	>90dB@ HDMI 0dB, 1kHz A-weighted
	Audio THD+N	< 0.01% at +4dBu, 1KHz
Transmission	HDMI passive cable 3m CAT6/6A cable 120m@4K60 CAT6/6A cable 150m@1080P	
IR Frequency	20K-60KHz	
IR Level	5Vp-p	

Technical Specifications

Connection	
Input	1 x HDMI IN [Type A, 19-pin female] 1 x FROM TX [RJ45 connector, supporting 24V PoC]
Output	1 x HDMI OUT [Type A, 19-pin female] 1 x AUDIO OUT [5pin-3.5mm Phoenix connector]
Control	1 x LAN [RJ45, supporting PoE+] 1 x RS-232 [3pin-3.5mm Phoenix connector] 1 x IR IN [3.5mm audio jack] 1 x IR OUT [3.5mm audio jack] 1 x USB-C [USB 2.0 only, FW upgrade and API control]
Mechanical	
Color	Black
Dimensions	180mm [W] x 95mm [D] x 23mm [H]
Weight	476g
Electrical	
Power Consumption	7W (Max)
Power Supply	Locking 5.5mm x 2.5mm jack: DC 24V/1A PoE+ (IEEE802.3at Class 4, PD mode)
Environment	
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Operating Humidity	20~80% RH (Non-condensing)
Storage Humidity	10~90% RH (Non-condensing)

Warranty

Taska Technology Limited warrants that the **HE-2150UM-R** is free from defects in materials and workmanship under normal use for a period of 60 months (5 years) from the original date of purchase. To obtain warranty service, customers must contact their local authorized Taska distributor.

This warranty does not apply under the following conditions:

- A. Damage resulting from negligence, accident, lightning, water, acts of God, or improper handling;
- B. Failure to operate the equipment in accordance with the procedures specified in the official user manual;
- C. Repairs, modifications, or alterations performed by unauthorized service centers;
- D. Removal, alteration, or defacement of the original product serial number;
- E. Damage caused by the use of unauthorized external equipment that affects performance, safety, or reliability;
- F. Products for which replacement parts or components are discontinued and no longer available.

Proof of purchase is required for all warranty claims.



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