



# 4x2 HDMI+USB-C Switcher Nexus42NEO



## 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?

|                                               |     |
|-----------------------------------------------|-----|
| Nexus42NEO .....                              | x 1 |
| 3pin-3.5mm Phoenix Connector (male) .....     | x 1 |
| 5pin-3.5mm Phoenix Connector (male) .....     | x 2 |
| 6pin-3.5mm Phoenix Connector (male) .....     | x 1 |
| Mounting Ear .....                            | x 2 |
| KM3x6 Machine Screw (For Mounting ears) ..... | x 4 |
| Rubber Foot .....                             | x 4 |
| M3x5 Machine Screw (For Rubber feet) .....    | x 4 |
| DC24V 7.5A Power Supply .....                 | x 1 |
| UK Power Cord .....                           | x 1 |
| IR Blaster Cable (1.5m) .....                 | 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

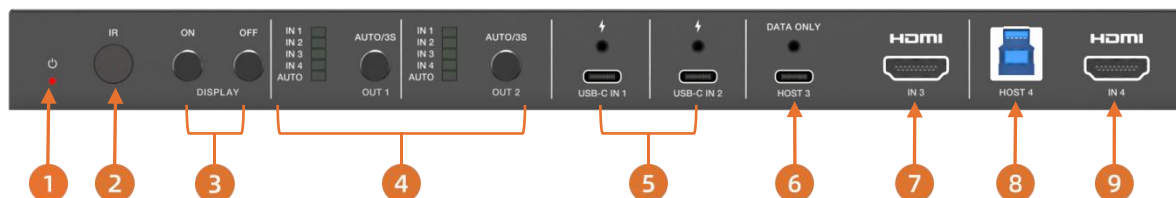
Taska **Nexus42NEO** is a 4x2 HDMI and USB-C Switcher designed as the ultimate connectivity hub for modern BYOD huddle rooms. With two HDMI and two full-featured USB-C inputs, it delivers stunning 4K@60Hz 4:4:4 visuals to dual HDMI displays. The system streamlines meetings by consolidating video, 5Gbps data, 1G Ethernet, and 100W laptop charging into a single-cable solution. Whether using its automated switching logic or professional control interfaces like WebUI and API, the **Nexus42NEO** ensures a high-performance collaborative experience.

## Features

- USB 3.2 Gen 1 (5Gbps) host and local hub.
- USB 3.2 Gen 1 (5Gbps) device with 5V/1.5A power output.
- Featuring a 4-input, 2-output architecture, it allows users to switch between two HDMI and two full-featured USB-C input.
- Support balanced/unbalanced analog audio embedding to USB or HDMI audio.
- Support balanced/unbalanced analog audio de-embedding from USB or HDMI™ audio.
- Advanced EDID management.
- User defined welcome screen and no signal display image.
- Dual 1G Ethernet ports with 802.1x and VLAN.
- IR Window for IR learning and control.
- Auto display on/off control.
- External device control via CEC/IR/RS-232/LAN/GPIO.
- Control via front panel buttons, RS-232, API and WebUI control.

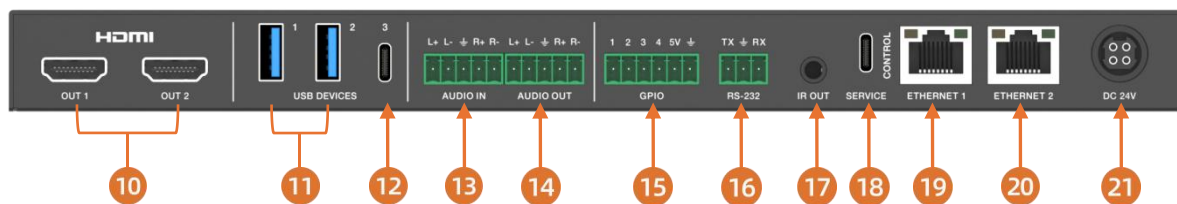
## Panel Description

### Front Panel



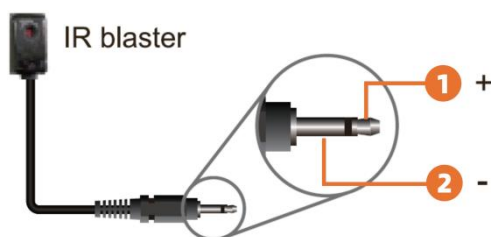
| No. | Name                                                             | Function Description                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | POWER LED                                                        | <b>Green</b> Lights on when the device is operating normally<br><b>Red</b> Lights on when the device is in standby                                                                                                                                                                                                                                                                                                                |
| 2   | IR Window                                                        | IR signal receiving window. It can be used for IR learning.                                                                                                                                                                                                                                                                                                                                                                       |
| 3   | DISPLAY<br>ON/OFF                                                | Press to enable or disable the output to display devices. Refer to "Display Page" in WebUI for more details.                                                                                                                                                                                                                                                                                                                      |
| 4   | IN1/IN2/IN3/IN4/AUTO<br>switch button<br>& indicator (OUT1/OUT2) | <ul style="list-style-type: none"> <li>• Short press to switch between IN1/IN2/IN3/IN4. The corresponding LED lights up when a channel is selected.</li> <li>• Long press for 3 seconds to enable or disable auto switching mode. The AUTO LED lights up when auto switching is enabled.</li> </ul>                                                                                                                               |
| 5   | USB-C<br>IN1/IN2                                                 | <b>USB-C input port</b> , supporting USB 3.2 Gen 1, DP Alt mode, 1G Ethernet, and up to 100W charging. <ul style="list-style-type: none"> <li>• <b>Note 1:</b> The 1G Ethernet function can be enabled/disabled on the System page in Web UI. If the connected PC needs network access, the Ethernet must be connected.</li> <li>• <b>Note 2:</b> The connected PC must support DP Alt mode to transmit video signals.</li> </ul> |
| 6   | HOST3                                                            | <b>USB-C upstream port</b> . Connect to a computer.                                                                                                                                                                                                                                                                                                                                                                               |
| 7   | HDMI IN3                                                         | <b>HDMI Input</b> . Connect to an HDMI signal source device via an HDMI cable.                                                                                                                                                                                                                                                                                                                                                    |
| 8   | HOST4                                                            | <b>USB-B upstream port</b> . Connect to a computer.                                                                                                                                                                                                                                                                                                                                                                               |
| 9   | HDMI IN4                                                         | <b>HDMI Input</b> . Connect to an HDMI signal source device via an HDMI cable.                                                                                                                                                                                                                                                                                                                                                    |

## Back Panel



| No. | Name            | Function Description                                                                                                                                                                                                                                             |
|-----|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10  | HDMI OUT 1/2    | <b>HDMI Output.</b> Connect to an HDMI display device via an HDMI cable.                                                                                                                                                                                         |
| 11  | USB DEVICES 1/2 | <b>USB-A downstream port,</b> output power 5V/1.5A. Connect to a USB device.                                                                                                                                                                                     |
| 12  | USB DEVICES 3   | <b>USB-C downstream port,</b> output power 5V/1.5A. Connect to a USB device.                                                                                                                                                                                     |
| 13  | AUDIO IN        | <b>Analog Audio Input.</b> Supports both balanced and unbalanced audio input. <ul style="list-style-type: none"> <li>Balanced Output (Max. 2Vrms): Connect to L+, L-, GND, R+, R-.</li> <li>Unbalanced Output: Connect to L+, GND, R+.</li> </ul>                |
| 14  | AUDIO OUT       | <b>Analog Audio Output.</b> Supports both balanced and unbalanced audio output. <ul style="list-style-type: none"> <li>Balanced Output (Max. 2Vrms): Connect to L+, L-, GND, R+, R-.</li> <li>Unbalanced Output (Max. 1Vrms): Connect to L+, GND, R+.</li> </ul> |
| 15  | GPIO            | Used for user-defined function extension.                                                                                                                                                                                                                        |
| 16  | RS-232          | <b>RS-232 control port.</b> Connect to a PC or control system for API command control of this product or other devices with RS-232 ports.                                                                                                                        |
| 17  | IR OUT          | <b>IR signal output port.</b> Connect to an IR blaster cable.                                                                                                                                                                                                    |
| 18  | SERVICE         | <b>USB 2.0 Type-C port.</b> Supports API command control and firmware upgrade.                                                                                                                                                                                   |
| 19  | LAN 1           | <b>1G Ethernet port.</b> Connect to a PC to access the WebUI for parameter configuration in either Separated Mode or Switch Mode.                                                                                                                                |
| 20  | LAN 2           | <b>1G Ethernet port.</b><br>Separated Mode: For 1G Ethernet network access only.<br>Switch Mode: For API, WebUI, and 1G Ethernet network access                                                                                                                  |
| 21  | DC 24V          | DC 24V / 7.5A power input port.                                                                                                                                                                                                                                  |

## IR Cable Definition



## Operation Guide

### Getting to start

The WebUI allows to access **Nexus42NEO** 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 WebUI by entering following default IP address or default URL directly into a web browser.

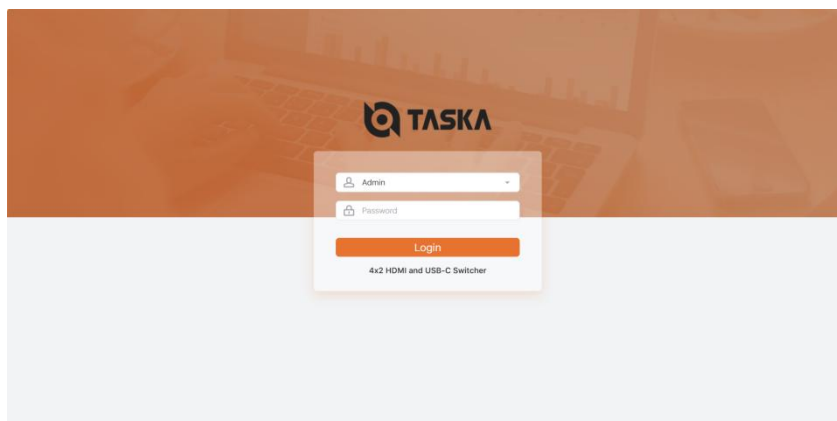
**IP Address : DHCP**

**URL : http://Nexus42NEO-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 WebUI login interface will load for authentication.



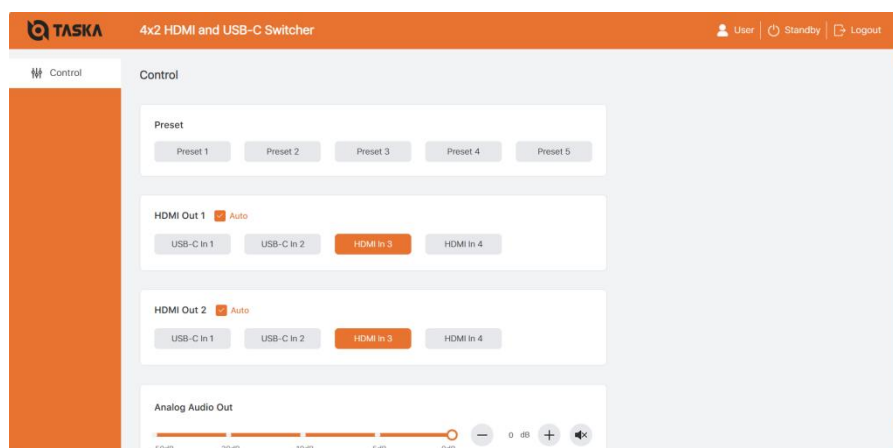
User need to use default username and password on the login interface.

**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 WebUI with full access right.

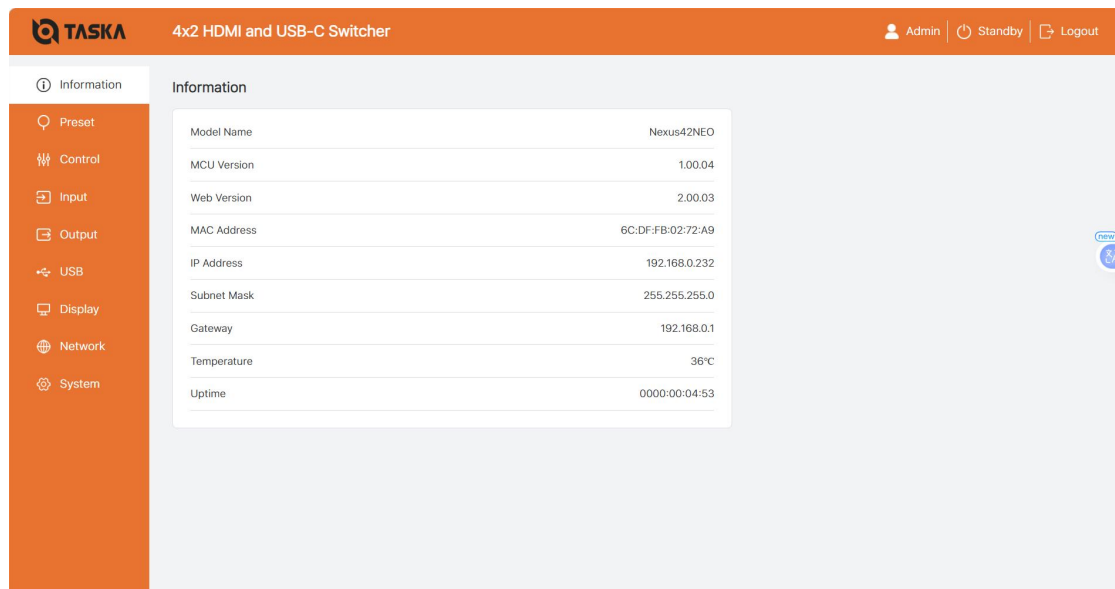
Selecting **"User"** as the username and entering **"1234"** as the password, then click the **"Login"** button to access the Information page in the WebUI. You can access the Control page only to select input source and volume adjustment.



## 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 to switch the device between Standby and Power On.
- ③ Click the logout icon to securely end the session and return to the login interface.

### Preset

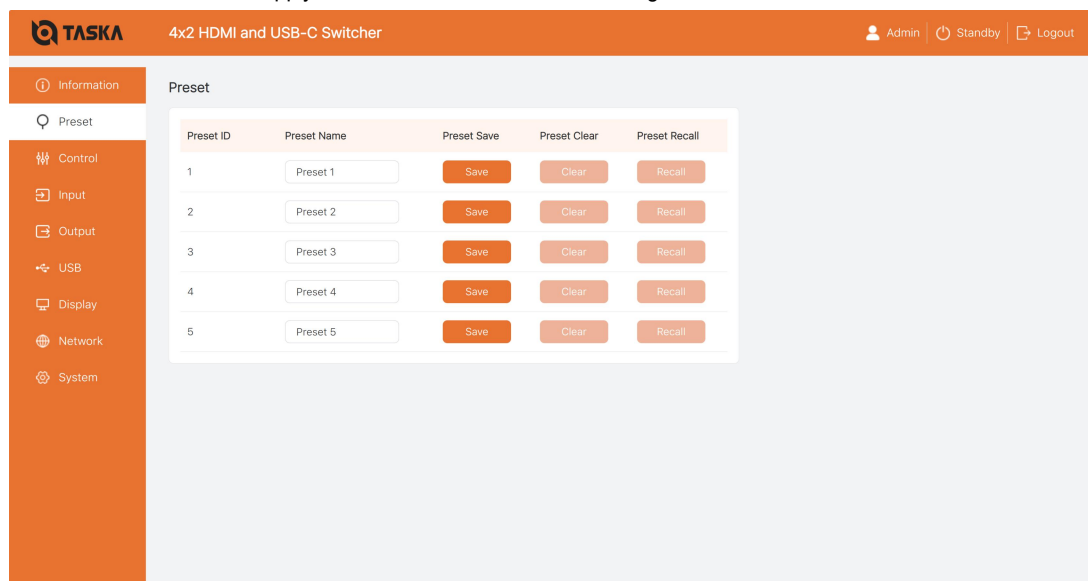
On the **Preset** page, allows you to configure, save, and manage up to five custom preset scenes.

**Preset Name:** Enter a custom identifier for the preset scene (maximum 16 characters).

**Preset Save:** Click Save to store the current scene configuration.

**Preset Clear:** Click Clear to reset or delete the saved preset parameters.

**Preset Recall:** Click Recall to apply and activate the saved scene configuration.



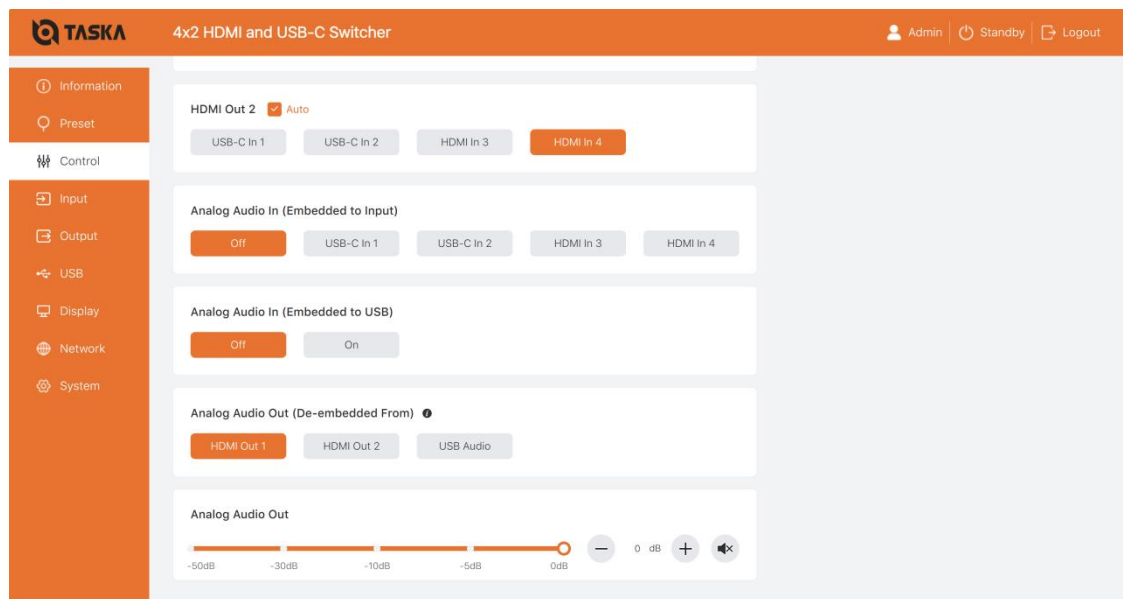
## Control

The **Control** page provides routing and management options for video switching and analog audio embedding/de-embedding.

- ① **HDMI Out 1 / HDMI Out 2:** Select **USB-C In 1**, **USB-C In 2**, **HDMI In 3**, or **HDMI In 4** to route the desired video source to HDMI Output 1 or 2. Check the **Auto** box to enable automatic input switching.
- ② **Analog Audio In (Embedded to Input):** Select an input channel (**USB-C In 1**, **USB-C In 2**, **HDMI In 3**, or **HDMI In 4**) to embed analog audio into that video stream, which will then play through the display device connected to the corresponding HDMI output. Select **Off** to disable input audio embedding.
- ③ **Analog Audio In (Embedded to USB):** Select **On** to route the analog audio input to the host PC as a UAC input device. Select **Off** to disable USB audio embedding.
- ④ **Analog Audio Out (De-embedded From):** Select **HDMI Out 1**, **HDMI Out 2**, or **USB Audio** as the source for analog audio de-embedding.

**Note:** Audio embedding (**Analog Audio In**) and audio de-embedding (**Analog Audio Out**) cannot function simultaneously; audio from **Analog Audio In** cannot be routed directly to **Analog Audio Out**.

- ⑤ **Analog Audio Out:** Adjust the output volume levels or mute/unmute the analog audio output.



## Input

On the **Input** page, you can view input signal status, customize channel names, manage HDCP compliance, and configure EDID management.

- ① **Input:** View the input channels of the device. Displays the specific input channel identifier.
- ② **Name:** Customizes the input channel label (maximum 16 characters).
- ③ **Cable:** Displays the physical connection status for each input port (e.g., Connected / Disconnected).
- ④ **Signal:** Displays the basic signal format details for the active input source.

⑤ **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   | Auto                                 | 12  | 1080P60_444, Audio 7.1CH DTS/DOLBY/HD |
| 2   | Copy HDMI Out 1                      | 13  | 720P60_444, Audio 2CH PCM             |
| 3   | Copy HDMI Out 2                      | 14  | 1920x1200, Audio 2CH PCM              |
| 4   | 4K2K60_444, Audio 2CH PCM            | 15  | 1680x1050, Audio 2CH PCM              |
| 5   | 4K2K60_444, Audio 5.1CH DTS/DOLBY    | 16  | 1600x1200, Audio 2CH PCM              |
| 6   | 4K2K60_444, Audio 7.1CH DTS/DOLBY/HD | 17  | 1440x900, Audio 2CH PCM               |
| 7   | 4K2K30_444, Audio 2CH PCM            | 18  | 1360x768, Audio 2CH PCM               |
| 8   | 4K2K30_444, Audio 5.1CH DTS/DOLBY    | 19  | 1280x1024, Audio 2CH PCM              |
| 9   | 4K2K30_444, Audio 7.1CH DTS/DOLBY/HD | 20  | 1024x768, Audio 2CH PCM               |
| 10  | 1080P60_444, Audio 2CH PCM           | 21  | User Defined 1                        |
| 11  | 1080P60_444, Audio 5.1CH DTS/DOLBY   | 22  | User Defined 2                        |

⑥ **HDCP**: Select **ON** or **OFF** from the drop-down list to enable or disable HDCP compliance for the selected input port.

## EDID Load

In the **EDID Load** section, you can perform the following operations:

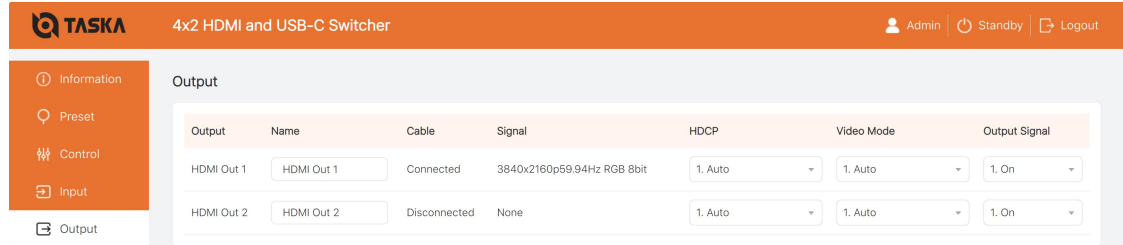
- ① **Download EDID from**: Select an input, output port or User Defined (**USB-C In 1**, **USB-C In 2**, **HDMI In 3**, **HDMI In 4**, **HDMI Out 1**, **HDMI Out 2**, **User Defined 1**, or **User Defined 2**) from the drop-down list, then click **Download** to export its EDID data as a .bin file.
- ② **User-Defined EDID**: Click **Load EDID** to upload a custom .bin file, then click **Save EDID** to assign it as **User Defined 1** or **User Defined 2**.

**Note**: A maximum of two custom EDID profiles are supported at a time.

## Output

On the **Output** page, you can view output connection status, customize output names, configure HDCP modes, select video scaling, control signal outputs, and manage test patterns or welcome screen images.

- ① **Output:** Displays the specific output channel identifier.
- ② **Name:** Customizes the output channel label (maximum 16 characters).
- ③ **Cable:** Displays the physical connection status for each output port (e.g., Connected / Disconnected).
- ④ **Signal:** Displays the basic signal format details for the active output source.
- ⑤ **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.
- ⑤ **Video Mode:** Click the drop-down list to set the output video display mode.
  - **Auto:** Sets the output resolution automatically based on the connected display's EDID.
  - **Bypass:** Passes the input source resolution directly to the output without scaling.
  - **Force 1080P:** Automatically downscales incoming 4K signals to 1080p.
  - **Internal Pattern:** Generates a user-defined test pattern (configured in the **Internal Pattern** section).
- ⑥ **Output Signal:** Click the drop-down list to set the output signal status.
  - **On:** Enables the output channel.
  - **Off:** Disables the output channel.
  - **AVMUTE:** Mutes the audio and video output and displays a black screen.

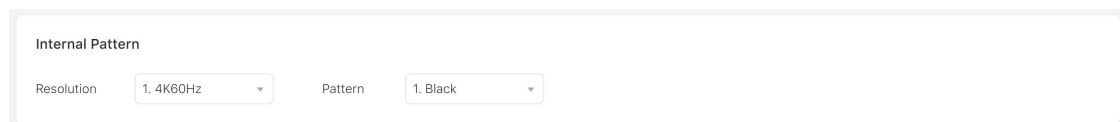


| Output     | Name       | Cable        | Signal                     | HDCP    | Video Mode | Output Signal |
|------------|------------|--------------|----------------------------|---------|------------|---------------|
| HDMI Out 1 | HDMI Out 1 | Connected    | 3840x2160p59.94Hz RGB 8bit | 1. Auto | 1. Auto    | 1. On         |
| HDMI Out 2 | HDMI Out 2 | Disconnected | None                       | 1. Auto | 1. Auto    | 1. On         |

## Internal Pattern

In the **Internal Pattern** Section, you can configure the internal test generator parameters.

- ① **Resolution:** Select the test pattern output resolution (**4K60Hz, 4K50Hz, 4K25Hz, 4K24Hz, 1080P60Hz, 480P60Hz, or 576P50Hz**).
- ② **Pattern:** Select the desired test pattern (1. Black, 2. Checkboard, 3. Strip, 4. Red, 5. Green, 6. Blue, 7. White, 8. Ramp, 9. Red ramp, 10. Green ramp, 11. Blue ramp, 12. PRBS).



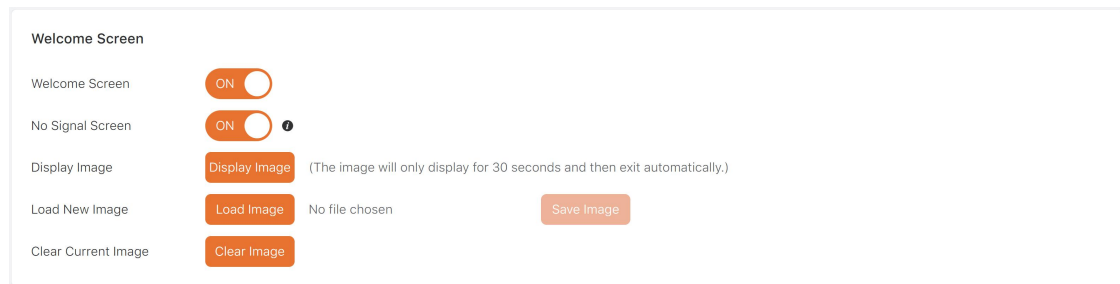
Internal Pattern

Resolution: 1. 4K60Hz Pattern: 1. Black

## Welcome Screen

In the **Welcome Screen** Section, you can manage splash images and standby screen behaviors.

- ① **Welcome Screen:** Select **On** or **Off** to enable or disable the welcome screen.
- ② **No Signal Screen:** Select **On** or **Off**. When enabled, the welcome screen automatically displays if no input signal is detected for 5 seconds. When **HDMI Power Saving** is set to **On** (in Web GUI system page), the **No Signal Screen** output function is no longer available if all input ports are disconnected.
- ③ **Display Image:** Displays the current welcome image for 30 seconds before automatically hiding it.
- ④ **Load New Image:** Click to browse, upload, and save a custom welcome screen image.
- ⑤ **Clear Current Image:** Click to delete the currently stored custom welcome image.



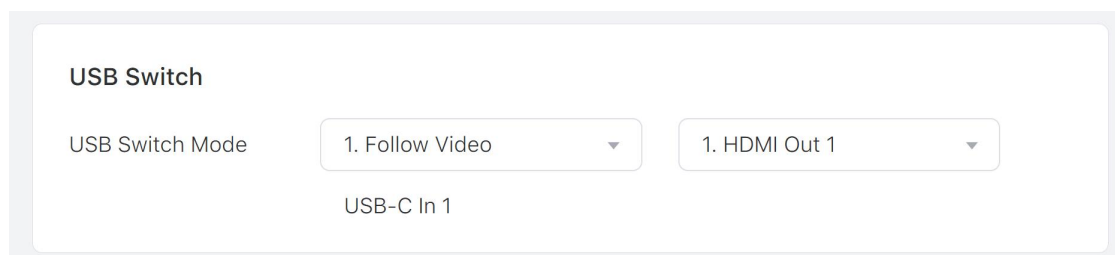
## USB

On the USB page, You can configure USB routing modes and manage power settings for upstream host ports and downstream USB devices.

### USB Switch

In the **USB Switch** section, select a switching mode to determine how USB upstream host ports are routed.

- **Follow Video:** Synchronizes USB switching with video routing. Select **HDMI Out 1** or **HDMI Out 2** from the drop-down menu so the USB host automatically follows the video source routed to that display.
- **Manual Switch:** Allows manual selection of the active USB host. Select **USB-C IN1**, **USB-C IN2**, **USB Host 3**, or **USB Host 4** from the drop-down menu.
- **Auto Switch:** Automatically routes USB data to the most recently connected USB host port.



## USB Power

In the **USB Power** section, you can monitor upstream power detection and manage 5V power modes for each USB device port.

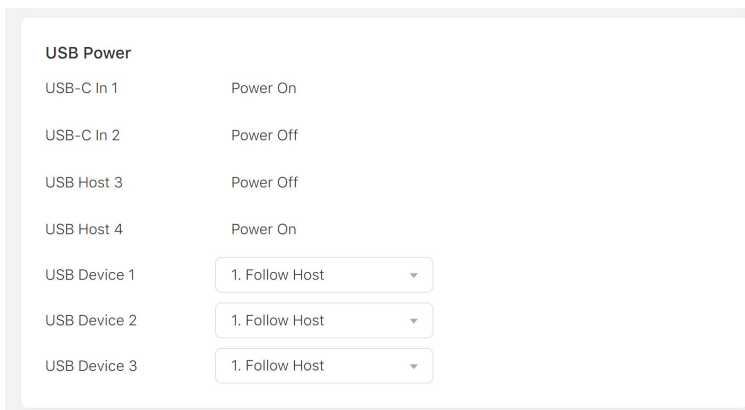
### ① Host Port Power Status (USB-C In 1 / USB-C In 2 / USB Host 3 / USB Host 4):

- **Power On:** Indicates power is detected from the connected upstream host device.
- **Power Off:** Indicates no power is detected from the upstream host device.

### ② USB Device Power Control (USB Device 1 / 2 / 3):

Select the 5V power detection mode for each connected USB device from the drop-down list:

- **Follow Host:** 5V power detection follows the connection status of the active host.
- **Force 5V Always Output:** Forces 5V power output to remain continuously enabled for the device port.
- **Disable 5V Output:** Disables 5V power output for the device port.



| USB Power    |                |
|--------------|----------------|
| USB-C In 1   | Power On       |
| USB-C In 2   | Power Off      |
| USB Host 3   | Power Off      |
| USB Host 4   | Power On       |
| USB Device 1 | 1. Follow Host |
| USB Device 2 | 1. Follow Host |
| USB Device 3 | 1. Follow Host |

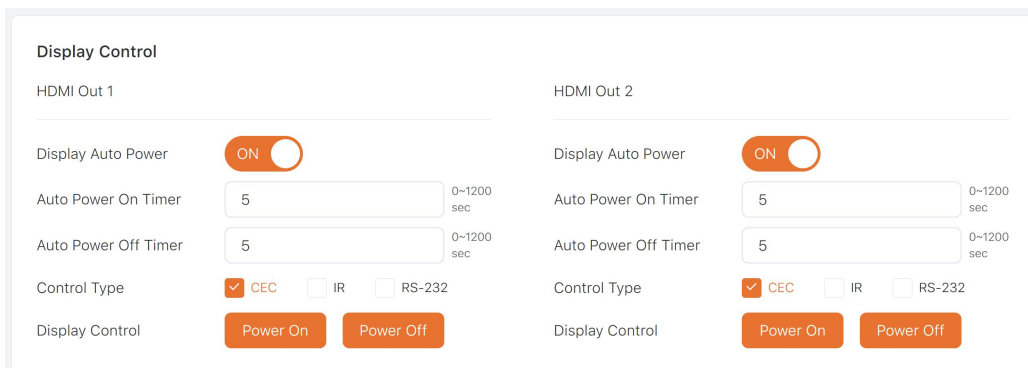
## Display

On the Display page, you can manage display power behavior and configure control interfaces (RS-232, IR, and CEC) for connected display devices and sources.

### Display Control

In the **Display Control** section, configure automated power management and direct switching controls for connected displays:

- ① **Display Auto Power:** Enable or disable automatic power control. When enabled, the display device automatically powers on or off according to the switcher's power status.
- ② **Auto Power On Timer (0–1200 seconds):** Set the delay interval for sending the power-on command to the display when the switcher powers up.
- ③ **Auto Power Off Timer (0–1200 seconds):** Set the delay interval for sending the power-off command to the display when the switcher enters standby mode.
- ④ **Control Type:** Select the control interface used to communicate with the display (**IR**, **CEC**, or **RS-232**).
- ⑤ **Display Control:** Click to manually turn the connected display device **On** or **Off**.



| Display Control                                                                                                   |                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| HDMI Out 1                                                                                                        | HDMI Out 2                                                                                                        |
| Display Auto Power: <input checked="" type="checkbox"/> ON                                                        | Display Auto Power: <input checked="" type="checkbox"/> ON                                                        |
| Auto Power On Timer: 5 (0~1200 sec)                                                                               | Auto Power On Timer: 5 (0~1200 sec)                                                                               |
| Auto Power Off Timer: 5 (0~1200 sec)                                                                              | Auto Power Off Timer: 5 (0~1200 sec)                                                                              |
| Control Type: <input checked="" type="checkbox"/> CEC <input type="checkbox"/> IR <input type="checkbox"/> RS-232 | Control Type: <input checked="" type="checkbox"/> CEC <input type="checkbox"/> IR <input type="checkbox"/> RS-232 |
| Display Control: <input type="button" value="Power On"/> <input type="button" value="Power Off"/>                 | Display Control: <input type="button" value="Power On"/> <input type="button" value="Power Off"/>                 |

## RS-232 Control Settings

In the **RS-232 Control Settings** section, configure serial parameters and custom commands for display and third-party device control:

### ① Power On/Off Display:

- **Format:** Select the command data structure (ASCII or Hex).
- **End Flag:** Select the line termination character (None, \r, \n, or \r\n).
- **Command 1:** Enter the primary control command string.
- **Delay:** Specify the time delay between transmitting Command 1 and Command 2.
- **Command 2:** Enter the secondary control command string.
- **Send / Save:** Click Send to transmit the command string immediately, or click Save to store the command configuration.

### ② Command Settings:

Select the serial port parameters (**Baud Rate**, **Parity Bits**, **Data Bits**, and **Stop Bits**) from the drop-down lists, then click **Save**.

### ③ RS-232 General Command:

Transmit custom serial commands to third-party devices:

- **Format:** Choose between ASCII / HEX.
- **End Flag:** Set the line termination (None, \r, \n, or \r\n).
- **Command:** Enter the target serial string and click **Send** to transmit.

### RS-232 Control Settings

#### Power On Display

Format

ASCII

Hex

End Flag

None

Command 1

Delay

0

0~1200 sec

Command 2

Send

Save

#### Power Off Display

Format

ASCII

Hex

End Flag

None

Command 1

Delay

0

0~1200 sec

Command 2

Send

Save

#### Command Settings

Baud Rate

115200

Parity Bits

None

Data Bits

8 Bit

Stop Bits

1

Save

#### RS-232 General Command

Format

ASCII

Hex

End Flag

Select

Command

Send

## IR Settings

In the **IR Settings** section, capture, manage, and transmit infrared control signals for display power:

- **Learn:** Click Learn, then point the target IR remote at the front-panel IR receiver window of **Nexus42NEO** and press the desired button. Once captured, the learned HEX code appears in the text box.
- **Load:** Click to load a custom .bin file containing CCF codes.
- **Save:** Click Save to retain the learned IR code.
- **Power On/Off:** Click to send the IR command currently loaded in the text box.
- **Save As:** Click Save As to export and save the code as a local .bin file.

IR Settings

Note: Please use the IR capture window on the front panel of switch box to learn the corresponding power on/off IR code from the IR remote Control of the display. Click "Learn" to start IR learning. Click "Save" to save the captured IR code be displayed in Hex code. Click "Load" to download the CCF code file is also supported.

Power On Display

Learn

Load

Save

Power On

Save As

Power Off Display

Learn

Load

Save

Power Off

Save As

In the **CEC** section, pass CEC commands to connected source and display devices:

- CEC

Input Control

HDMI In 3HDMI In 4

⏻

⏹

⏮

⏪

⏩

⏭

⏏

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⏵

⏲

⏳

Custom Command (Hex Format)

Send

Output Control

HDMI Out 1HDMI Out 2

⏻

⏹

⏮

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⏳

Custom Command (Hex Format)

Send

## Network

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

### Network Configuration

In the **Network Configuration** section, you can select the IP Mode (**Static** or **DHCP**), set Telnet and TCP port, and Domain Name of **Nexus42NEO**..

#### ① IP Mode:

**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:

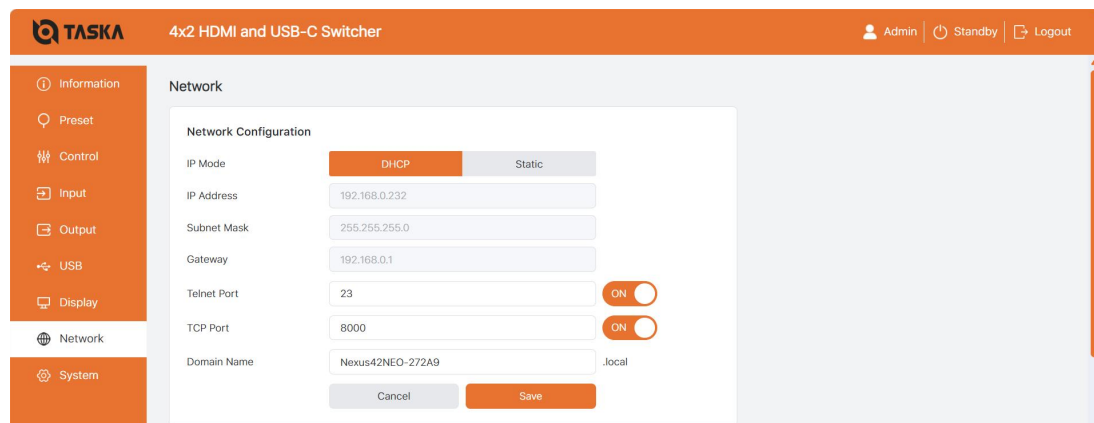
- IP Address
- Subnet Mask
- Gateway

② **Telnet Port:** Telnet ports are enabled by default. You can modify the port numbers or disable the ports as needed.

③ **TCP Port:** TCP ports are enabled by default. You can modify the port numbers or disable the ports as needed.

④ **Domain Name:** You can use it to access Nexus43NEO WebUI by web browser. The default domain name can be customized if needed.

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

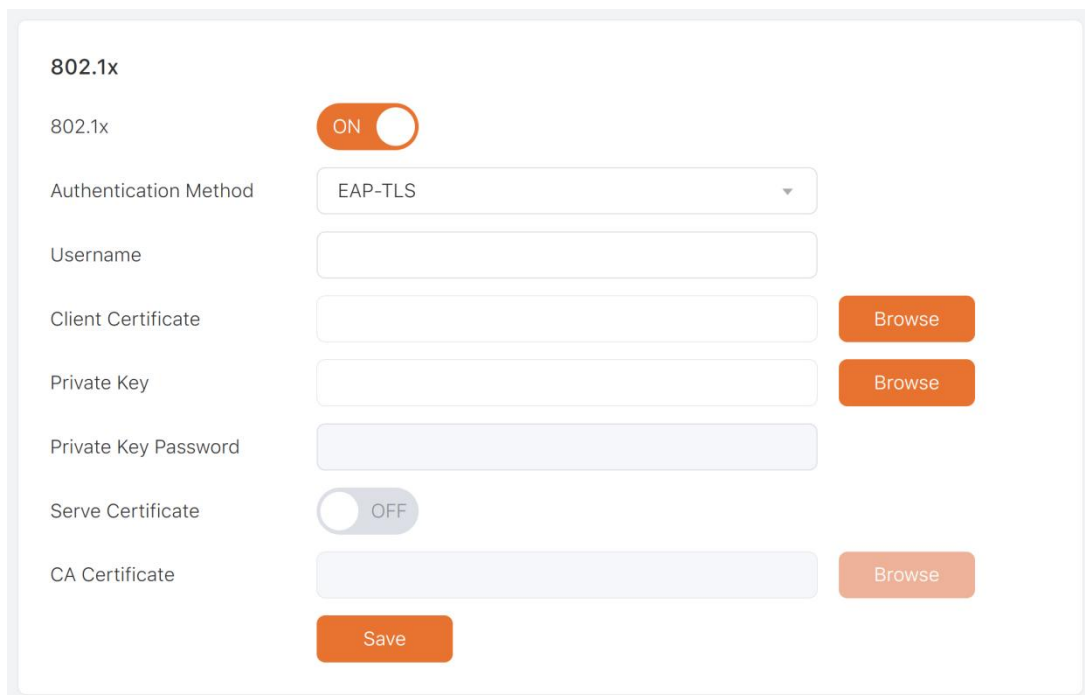


### 802.1x

In the **802.1x** section, you can configure IEEE 802.1X network access control settings for secure network authentication:

- ① **802.1X Status:** Select On or Off to enable or disable 802.1X authentication.
- ② **Authentication Method:** Select the EAP protocol (EAP-TLS or EAP-MSCHAPv2) from the drop-down menu.
- ③ **Username:** Enter the network authentication username.
- ④ **Client Certificate:** Click Browse to select and upload the client certificate file.
- ⑤ **Private Key:** Click Browse to select and upload the private key file.
- ⑥ **Private Key Password:** Enter the password associated with the uploaded private key.
- ⑦ **Server Certificate:** Select On or Off to enable or disable server certificate validation.
- ⑧ **CA Certificate:** Click Browse to select and upload the Certificate Authority (CA) certificate file.

Click **Save** to apply and store the 802.1X configuration settings.



### Network Mode

In the **Network Mode** section, you can select the dual-Ethernet port operation mode.

#### • Mode 1 (Separated Mode):

Isolates control traffic from network passthrough.

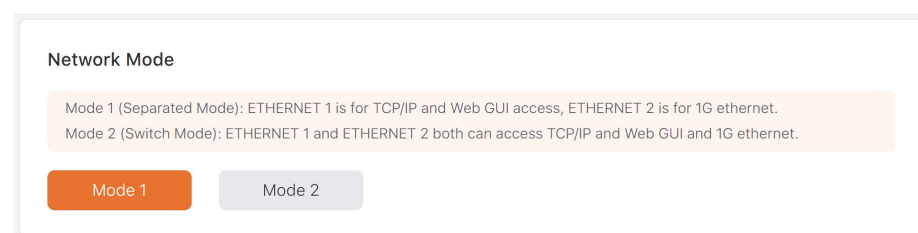
ETHERNET 1: Dedicated to control functions (TCP/IP communication and WebUI access).

ETHERNET 2: Dedicated to 1G Ethernet network passthrough only.

#### • Mode 2 (Switch Mode):

Functions as an integrated network switch.

ETHERNET 1 & ETHERNET 2: Both ports support concurrent TCP/IP control, WebUI access, and 1G Ethernet network passthrough.



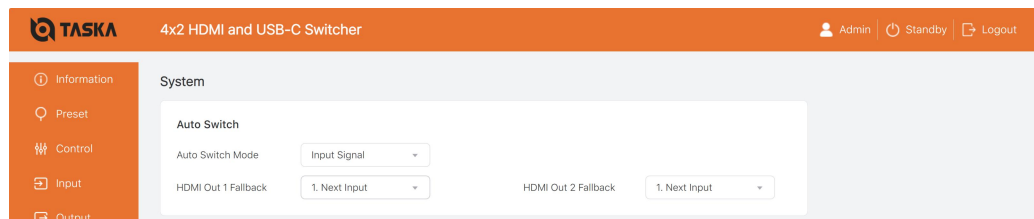
## System

On the System page, you can configure automatic input switching, manage GPIO pin behaviors, adjust system utilities, update firmware, and manage account passwords.

### Auto Switch

In the **Auto Switch** section, configure the automated input switching parameters for the switcher:

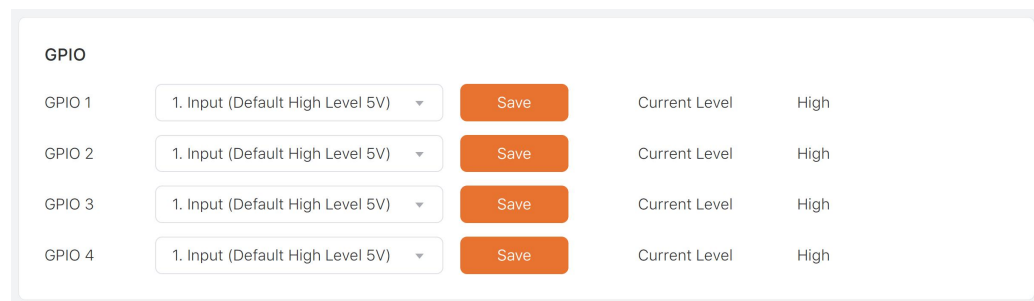
- ① **Auto Switch Mode:** Select the triggering mechanism for auto-switching:
  - **Input Signal:** Switches automatically when a valid video signal is detected.
  - **Source 5V:** Switches automatically based on 5V power detection from the connected source.
- ② **HDMI Out 1 / 2 Fallback:** Select the target input channel (**Next Input**, **Previous Input**, **USB-C In 1**, **USB-C In 2**, **HDMI In 3**, or **HDMI In 4**) to switch to if the active video signal is disconnected.



### GPIO

In the **GPIO** section, view the status of the GPIO ports and configure their operating mode and baseline voltage level:

- Input (default High Level 5V)
- Input (default Low Level 0V)
- Output High Level (5V)
- Output Low Level (0V)

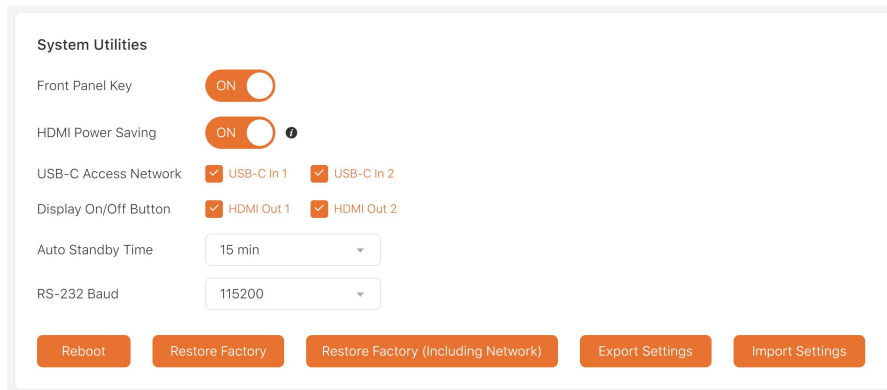


### System Utilities

In the **System Utilities** section, manage general operational settings and maintenance functions:

- ① **Front Panel Key:** A switch to lock ("ON") or unlock ("OFF") the physical buttons on the device's front panel.
- ② **HDMI Power Saving:** Enable or disable HDMI output 5V power management:
  - **On:** 5V power to the HDMI output ports turns off when no active inputs are connected.
  - Note:** When enabled, the **No Signal Screen will not display** if all input ports are disconnected.
  - **Off:** Maintains continuous 5V power on the HDMI output ports regardless of input signal status.
- ③ **USB-C Access Network:** Select the checkbox to enable 1G Ethernet network passthrough for the **USB-C In 1** and **USB-C In 2** ports.
- ④ **Display On/Off Button:** Select the checkbox to enable display power control commands for **HDMI Out 1** or **HDMI Out 2**.
- ⑤ **Auto Standby Time:** Select the timeout duration from the drop-down menu before the switcher enters standby mode upon signal loss.
- ⑥ **RS-232 Baud:** Select the baud rate for the device's system RS-232 control port.

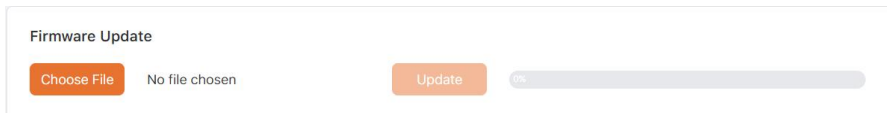
- ⑦ **Reboot:** A button to restart the device.
- ⑧ **Restore Factory:** A button to reset all device configurations (except network settings) to their original factory defaults.  
**Note:** Both reboot and restore actions will redirect you to the login interface.
- ⑨ **Restore Factory (Including Network):** A button to reset all device configurations (include network settings) to their original factory defaults.
- ⑩ **Export Settings:** A button to save the current device configuration to a .json file.
- ⑪ **Import Settings:** A button to load a device configuration from a .json file.



## Firmware Update

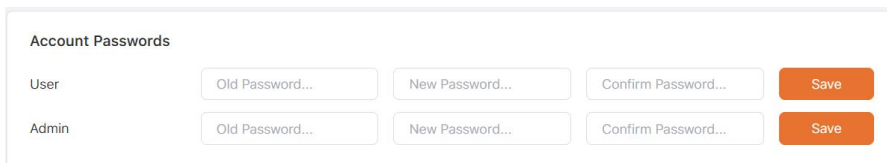
In the **Firmware Update** section, perform system firmware updates for system modules:

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.



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 **Nexus42NEO** using simple API commands via two methods:

**Telnet:** Connect your PC to the same network subnet as the **Nexus42NEO**. 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 **Nexus42NEO**'s service port. 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                          |
| DP Compliance                     | DP 1.4a (USB-C input)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                          |
| USB Compliance                    | USB 3.2 Gen1 (5Gbps)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                          |
| Video Bandwidth                   | 18Gbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                          |
| Network Bandwidth                 | 1Gbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                          |
| Input Video Resolutions           | 4096x2160p60Hz, 4096x2160p59.94Hz, 4096x2160p50Hz, 4096x2160p30Hz,<br>4096x2160p29.97Hz, 4096x2160p25Hz, 4096x2160p24Hz, 4096x2160p23.98Hz,<br>3840x2160p60Hz, 3840x2160p59.94Hz, 3840x2160p50Hz, 3840x2160p30Hz,<br>3840x2160p29.97Hz, 3840x2160p25Hz, 3840x2160p24Hz, 3840x2160p23.98Hz,<br>1920x1080p60Hz, 1920x1080p59.94Hz, 1920x1080p50Hz, 1920x1080p30Hz,<br>1920x1080p29.97Hz, 1920x1080p25Hz, 1920x1080p24Hz, 1920x1080p23.98Hz,<br>1920x1080i60Hz, 1920x1080i59.94Hz, 1920x1080i50Hz,<br>1280x720p60Hz, 1280x720p59.94Hz, 1280x720p50Hz,<br>720x480p59.94Hz, 720x576p50Hz, 720x480i59.94Hz, 720x576i50Hz,<br>1600x1200p60Hz, 1440x1050p60Hz, 1440x900p60Hz, 1366x768p60Hz,<br>1280x1024p60Hz, 1024x768p60Hz, 800x600p60Hz, 640x480p60Hz |                                                                          |
| Color Space                       | RGB 4:4:4, YCbCr 4:4:4/4:2:2/4:2:0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                          |
| Color Depth                       | 8/10/12-bit, 8-bit (4K@60Hz, 4:4:4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                          |
| HDR                               | HDR, HDR10, HDR10+, Dolby Vision, HLG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                          |
| Audio Formats                     | <b>HDMI IN/OUT, USB-C IN:</b><br>LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS,<br>DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD<br><b>Analog Audio IN/OUT:</b><br>LPCM 2CH (sample rate 32~192kHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                          |
| Analog Input<br>Audio Parameters  | Input Impedance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 20K Ohm balanced<br>10K Ohm unbalanced                                   |
|                                   | Input Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Max 8.2dBu (2Vrms) balanced audio                                        |
|                                   | Frequency Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20Hz to 20kHz (-/+0.5dB)                                                 |
|                                   | Audio Input Sync Delay                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <1ms                                                                     |
|                                   | Audio S/N Ratio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | >90dB@ HDMI 0dB, 1kHz A-weighted                                         |
|                                   | Audio THD+N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | < 0.01% at +4dBu, 1KHz                                                   |
| Analog Output<br>Audio Parameters | Output Impedance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 600 Ohm balanced<br>300 Ohm unbalanced                                   |
|                                   | Output Level (Max)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Max 8.2dBu (2Vrms) balanced audio<br>Max 2.2dBu (1Vrms) unbalanced audio |
|                                   | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | < 0.067% @ +4dBu, 1KHz                                                   |

## Technical Specifications

| Technical             |                                                                                                                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Transmission          | USB 3.2 Passive Cable: 1.5m/4.9ft<br>HDMI Passive Cable: 3m/9.8ft                                                                                                                              |
| IR Frequency          | 20K-60KHz                                                                                                                                                                                      |
| IR Level              | 5Vp-p                                                                                                                                                                                          |
| Connection            |                                                                                                                                                                                                |
| Input                 | 2× IN [HDMI Type A, 19-pin female]<br>2× USB-C IN [USB-C, 24-pin female]<br>1× HOST [USB-C, 24-pin female]<br>1× HOST [USB-B, 9-pin female]<br>1× L/R AUDIO IN [5-pin 3.5mm phoenix connector] |
| Output                | 2× OUT [HDMI Type A, 19-pin female]<br>1× USB DEVICE [USB-C, 24-pin female]<br>2× USB DEVICE [USB-A, 9-pin female]<br>1× L/R AUDIO OUT [5-pin 3.5mm phoenix connector]                         |
| Control               | 1× RS-232 [3-pin 3.5mm phoenix connector]<br>1× IR OUT [3.5mm stereo audio jack]<br>2× LAN [RJ45 connector]<br>1× GPIO [6-pin 3.5mm phoenix connector]<br>1× SERVICE [USB-C, FW update port]   |
| Mechanical            |                                                                                                                                                                                                |
| Color                 | Black                                                                                                                                                                                          |
| Dimensions            | 270mm [W] × 130mm [D] × 23mm [H]                                                                                                                                                               |
| Weight                | 890g                                                                                                                                                                                           |
| Electrical            |                                                                                                                                                                                                |
| Power Consumption     | 41W (without USB-C charging);<br>149W (with 100W USB-C charging)                                                                                                                               |
| Power Supply          | DIN 4-pin: DC 24V/7.5A                                                                                                                                                                         |
| 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 **Nexus42NEO** 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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