

# DaisyNET II 4K Scaling Receiver (SRX)



## DaisyNET II SRX

### User Manual

Version: V1.0.1



# Important Safety Instructions



**1.** Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.



**6.** Clean this apparatus only with dry cloth.



**2.** Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.



**7.** Unplug this apparatus during lightning storms or when unused for long periods of time.



**3.** To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.



**8.** Protect the power cord from being walked on or pinched particularly at plugs.



**4.** Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



**9.** Only use attachments / accessories specified by the manufacturer.



**5.** Do not place sources of naked flames, such as lighted candles, on the unit.



**10.** Refer all servicing to qualified service personnel.

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# Introduction

## Overview

The DaisyNET II Scaling Receiver (SRX) is a 100m 4K / UltraHD Scaling Receiver with HDBaseT in and HDBaseT out, and utilize HDBaseT technology as daisy-chain medium to cascade multiple A/V sources, displays or any device with HDBaseT connection, together in a chain to set up an Inline A/V distribution system.

It supports one HDBaseT input and one HDBaseT output for cascading. A local HDMI out which can support up to 4k@60Hz scalar with audio extraction is provided in the rear side to connect local monitor or zone displays. It has a 2-Port Ethernet Switch built-in so that Ethernet could pass through over HDBaseT for LAN control or LAN access to sources or displays. RS232 port is used to connect the display and control through LAN to RS232 protocol converter, instead of controlling local device. USB charger is also provided to charge mobile devices. It support scaling function to meet the best output resolution according to the sink device and It also offers a rotary switch to control different output resolution.

The SRX offers a future-ready UltraHD A/V distribution solution and cutting-edge HDMI 2.0 and HDCP 2.2 compatibility. With its user-friendly WEB GUI and Telnet API to configure advanced functionality including CEC controller, RS232 controller and Daisy-chain Grouping, it is perfectly suitable for collaboration presentation in conference and education application.

# Features

- HDMI out built in up to 4K@60Hz 4:4:4 Scaler and audio extraction
- HDBaseT input and output to cascade multiple A/V sources and displays
- HDMI 2.0 and HDCP 2.2 compliant
- Support 4K@60Hz 4:2:0 up to 70m over Cat5e/Cat6, or up to 100m over Cat6a/Cat7
- Built in CEC controller and RS232 controller for smart control
- Automatic CEC and RS232 command to Power ON/Standby Display, by detecting input signal status
- Daisy-chain Grouping mode offered to match flexible application
- LAN control with user-friendly WEB GUI and Telnet API
- Built in 2-Port Ethernet Switch for LAN control or LAN access
- Built in USB Charger up to 5V/1.5A to charge mobile devices
- Independent rotary switch to control different output resolutions
- Advanced signal re-locking and cable equalization for multiple daisy-chains.
- Audio supports up to 5.1 channels.

# Package Contents

- 1 x DaisyNET II SRX
- 1 x Power Supply (DC 12V 3A)
- 1 x AC cable (EU standard)
- 1 x Phoenix Male Connector (2 Pin 3.5mm)
- 2 x Phoenix Male Connector (3 Pin 3.5mm)
- 1 x HDMI Dust Plug
- 2 x Mounting Brackets

# Specifications

Video	
Input	1 x HDBaseT IN
Input Signal Type	HDBaseT
Input Resolution Supported	<p>HDBaseT:  VESA: 800x600<sup>8</sup>, 1024x768<sup>8</sup>, 1280x768<sup>8</sup>,  1280x800<sup>8</sup>, 1280x960<sup>8</sup>, 1280x1024<sup>8</sup>,  1360x768<sup>8</sup>,  1366x768<sup>8</sup>, 1400x1050<sup>8</sup>,1440x900<sup>8</sup>,  1600x900<sup>8</sup>, 1600x1200<sup>8</sup>, 1680x1050<sup>8</sup>,  1920x1200<sup>8</sup></p> <p>SMPTE:720x480P<sup>7,8</sup>,720x576P<sup>8</sup>,1280x720P<sup>6,8</sup>,  1920x1080I<sup>6,8</sup>,1920x1080P<sup>2,3,5,6,8</sup>,3840x2160P<sup>2,3,5,6,8</sup>,  4096x2160P<sup>2,3,5,6,8</sup></p> <p><b>Note1:</b> 1 = at 23.98 Hz, 2 = at 24 Hz, 3 = at 25 Hz, 4 = at 29.97 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = 60 Hz;  <b>Note2:</b> HDMI 1.4 with 4k@50Hz/60Hz( chroma sub-sampling 4:2:0 8-bit only) for HDBaseT input.</p>
Output	1 x HDMI OUT, 1x HDBaseT OUT,
Output Signal Type	HDMI 2.0 with 4k / HDCP 2.2 , HDBaseT;
Output Resolution Supported	<p>HDMI Output:  3840x2160P<sup>5,8</sup>,1920x1200<sup>8</sup>,1920x1080P<sup>8</sup>,1280x1024<sup>8</sup>, 1280x800<sup>8</sup>, 1280x720P<sup>8</sup>, 1024x768<sup>8</sup>,  Auto Scaler:  HDBaseT Output:</p>

	<p>VESA: 800x600<sup>8</sup>, 1024x768<sup>8</sup>, 1280x768<sup>8</sup>, 1280x800<sup>8</sup>, 1280x960<sup>8</sup>, 1280x1024<sup>8</sup>, 1360x768<sup>8</sup>, 1366x768<sup>8</sup>, 1400x1050<sup>8</sup>, 1440x900<sup>8</sup>, 1600x900<sup>8</sup>, 1600x1200<sup>8</sup>, 1680x1050<sup>8</sup>, 1920x1200<sup>8</sup></p> <p>SMPTE: 720x480P<sup>7,8</sup>, 720x576P<sup>8</sup>, 1280x720P<sup>6,8</sup>, 1920x1080I<sup>6,8</sup>, 1920x1080P<sup>2,3,5,6,8</sup>, 3840x2160P<sup>2,3,5,6,8</sup>, 4096x2160P<sup>2,3,5,6,8</sup></p> <p><b>Note1</b> :1 = at 23.98 Hz, 2 = at 24 Hz, 3 = at 25 Hz, 4 = at 29.97 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = 60 Hz;</p> <p><b>Note2:</b> HDMI 1.4 with 4k@50Hz/60Hz( chroma sub-sampling 4:2:0 8-bit only) for HDBaseT input.</p>
<b>Audio</b>	
Input	HDBT embedding audio
Output	HDMI audio de-embedded, Stereo
<b>Control</b>	
Control Method	Telnet, Web GUI
<b>General</b>	
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	10% to 90%, non-condensing
ESD Protection	Human-body Model: ±8kV(Air-gap discharge)/ ±4kV(Contact discharge)
Power Supply	DC 12V 3A



Power Consumption	20.6W (Maximum)
Device Dimension (W x H x D)	223mm x 27mm x 196mm / 8.78" x 1.06" x 7.75"
Product Weight	1.2kg
Certification	CE, RoHS

# Panel Layout

## Front Panel



No.	Name	Description
1	LocateMe LED	Located a device in the chain, LED flashes 2 times when click “LocateME” on WEB
2	Power LED	Indicate power status
3	DIP Switch	<b>SCALER UPDATE:</b> Switch to this position before updating SCALER. <b>USB CHARGER:</b> Charge USB device
4	USB port	Attach the USB flash drive
5	RESET	Use a pointed stylus to press this button for five or more seconds to reset the DaisyNET II RX

## Rear Panel

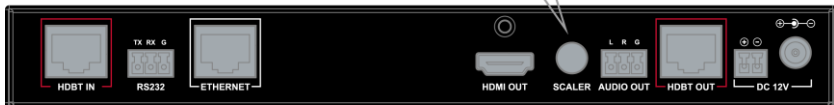
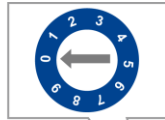


No.	Name	Description
1	HDBT IN	Connects to HDBT output port of any HDBT device or the other DaisyNET II RX.
2	RS232	Connects to a controllable device such as projector for RS232 pass-through
3	Ethernet	Connects to a LAN device such as IP-based touch panel for LAN control

No.	Name	Description
4	HDMI OUT	Connects to a HDMI display device
5	SCALER	Toggles the switch to manage HDMI output scaler
6	AUDIO OUT	Connects to audio system such as an amplifier
7	HDBT OUT	Connects to HDBT input port of any HDBT device or the other DaisyNET II RX.
8	Power	Connects to power supply with 2-pin phoenix connector
9	Power	DC 12V power input

# SCALER

HDMI output supports scaling output.

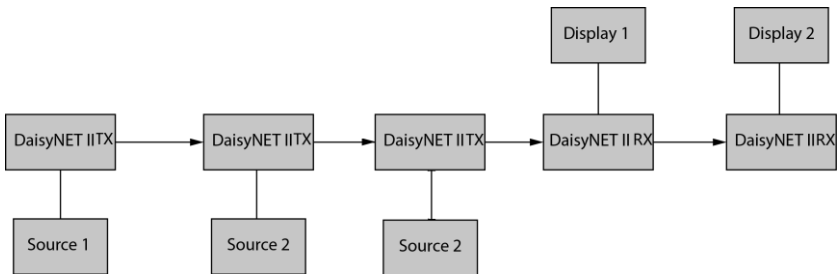


Position	Functions
0	Auto Scaler
1	Fix 1024 x 768 @60Hz as native video
2	Fix 1280 x 720 @60Hz as native video
3	Fix 1280 x 800 @60Hz as native video
4	Fix 1280 x 1024 @60Hz as native video
5	Fix 1920 x 1080 @60Hz as native video
6	Fix 1920 x 1200 @60Hz as native video
7	Fix 3840 x 2160 @30Hz as native video
8	Fix 3840 x 2160 @60Hz as native video
9	Web or API Control

# Quick Start

## Typical Application

DaisyNET II RX is designed to work together with DaisyNET II TX. It supports cascade connection for multiple DaisyNET II TX and RX, offering scaler HDMI output setting.



## Connections and Installation

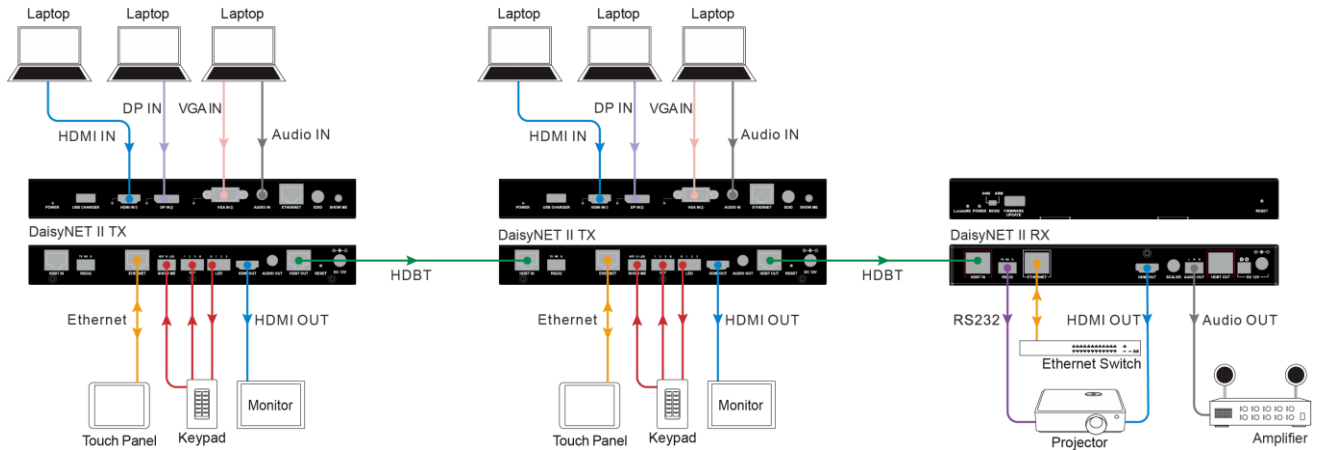
1. Connect the HDBT OUT port of DaisyNET II TX 1 to the HDBT IN port of DaisyNET II TX 2, connect the HDBT OUT port of DaisyNET II TX 2 to the HDBT IN port of DaisyNET II TX 3, connect the HDBT OUT port of DaisyNET II TX 3 to the HDBT IN port of DaisyNET II RX 1, connect the HDBT OUT port of DaisyNET II RX 1 to the HDBT IN port of DaisyNET II RX 2 to finish a Daisy-type connection.
2. Using quality HDMI/DP/VGA cables, connect an HDMI/DP/VGA source (such as Blu-ray, games console, satellite/cable TV, media server etc.) to HDMI IN/DP IN/VGA IN port of the DaisyNET II TX.

3. Connect the HDMI display device (LED/LCD display or monitor) to the HDMI OUT of the DaisyNET II RX.
4. Power on all devices.
5. Hold press the ShowME button on the first DaisyNET II TX for 10s to start the Daisy-chain sequence. All DaisyNET devices in the link will obtain a new IP address in sequence.

**Note:**

1. Once all devices are powered on after connection, users must sort the DaisyNET devices firstly according to the above step 5, otherwise it will cause IP conflicts when operates on multiple devices cascaded.
2. Any reset, removed or newly added DaisyNET device in cascaded connection would also cause IP conflicts, please re-sort the Daisy-chain link according to step 5.
3. Enable the CEC function of the display device allows users to control the CEC-enabled display via CEC commands.

# Application Diagram



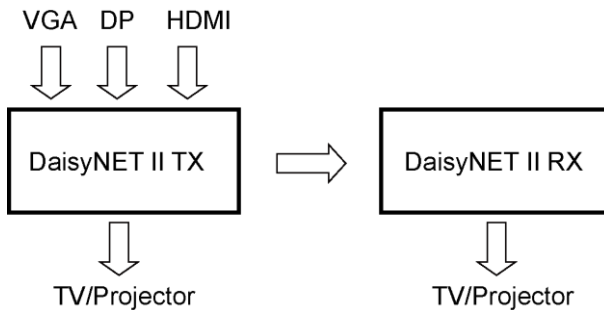
# Auto CEC

DaisyNET II RX supports auto CEC to automatically power on or off the connected display such as a TV or projector.

When detecting the HDBT signal change from efficient to null, the shutdown timer of the device is starting. Once time is up, the device will automatically send out CEC shutdown commands to shut the display down. Contrarily, once the HDBT signal change from null to efficient is detected, the device will automatically power on the display immediately.

Here takes 3 applications for examples.

**Example 1** (DaisyNET II TX and RX for Chain-Type connection):



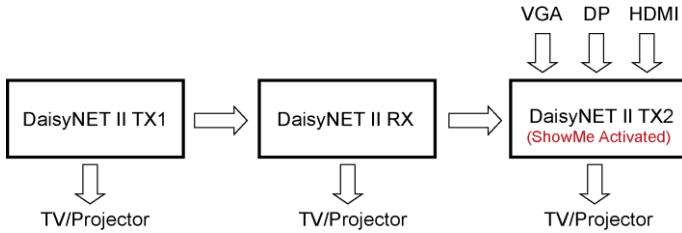
If the front DaisyNET II TX with source(s) inserted is in ShowMe activated status, remove the source(s) from it until no source remains; the HDBT signal status for RX will change from efficient to null, then a timer for shutdown will start.

Situation 1: When time is up, the connected displays will be off automatically. Input any source again, the displays will be turned on immediately.

Situation 2: Before time is up, input any source, the timer will be off.

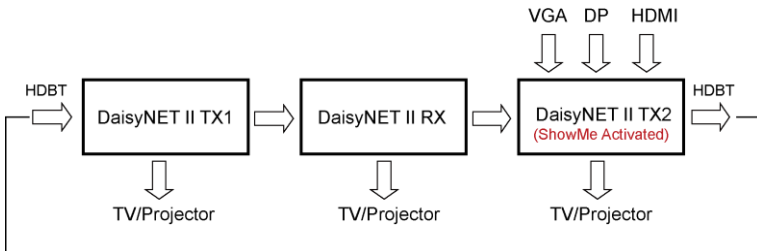


**Example 2** (DaisyNET II RX and TX for Chain-Type connection):



If DaisyNET II TX2 is ShowMe activated, the DaisyNET II RX will not detect any HDBT signal change under this connection. That's to say, the RX will not send Auto CEC command to power off the display, the display will maintain current state.

**Example 3** (DaisyNET II RX and TX for Ring-Type connection):



If the DaisyNET II TX2 is ShowMe activated, the DaisyNET II RX HDBT input is the DaisyNET II TX2 HDBT output. When remove the source(s) from TX2 until no source remains, a shutdown timer will start, and all of the DaisyNET II devices will send Auto CEC commands to power off the displays once the timer times out.

# Web Control

DaisyNET II offers a Web GUI for product configuration.

Before access the Web GUI, please sort the devices via ShowMe button of the first DaisyNET II TX firstly.

## Access the WEB GUI

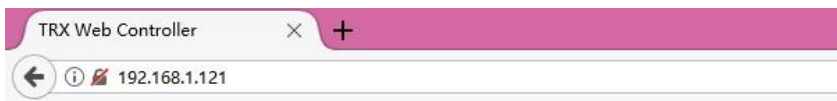
### Step 1.

Make sure that your computer and the DaisyNET II devices are on the same subnet. The default IP address for the DaisyNET II TX is 192.168.1.121, and for the DaisyNET II RX is 192.168.1.122.

Set the computer's IP address as 192.168.1.X (X is suggested to range from 2 to 253). Connect DaisyNET II to your computer using a Cat cable.

### Step 2.

Input the IP address into a web browser (as seen below).

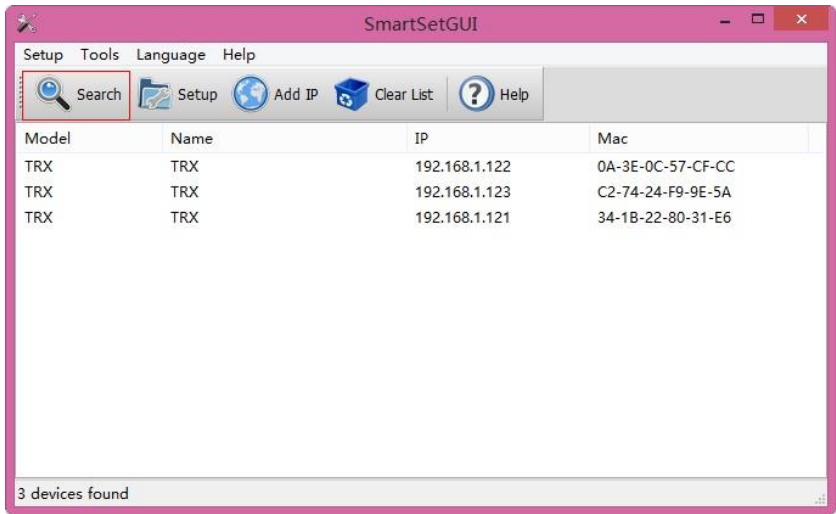


A login screen will appear, enter the default password “admin” and click **Login**.



**Note:** If the IP address of DaisyNET II has been changed, users can search the new IP address by using SmartSetGUI tool or pressing the reset button to restore the DaisyNET II to its default settings.

Run SmartSetGUI tool to obtain IP address. Click **Search**, it will display the new IP address.

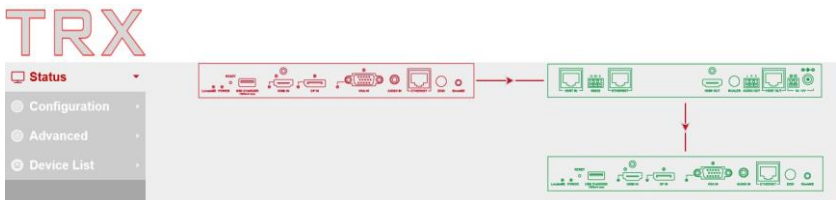


## WEB GUI Introduction

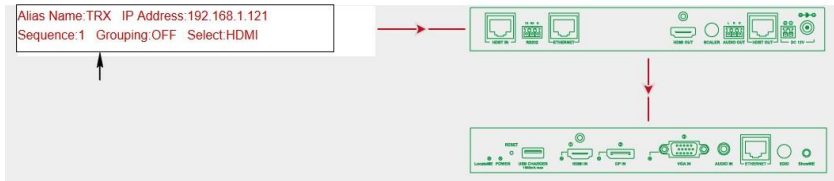
The WEB GUI contains four sub-menus: Status, Configuration, Advanced and Device List.

## Status

This sub-menu displays the current status of DaisyNET II.



Device in red represents DaisyNET II TX is working in ShowMe mode.  
Device in green represents DaisyNET II TX and RX are connected in the chain but not working in Show Me mode.  
Click the device icon, it will display the alias name, IP address, sequence, grouping mode status and input source of the DaisyNET II.



**Note:**

- Grouping OFF means the device is not working in grouping mode.
- Grouping ON means the device is working in grouping mode.

# Configuration

There are three sub-menus: Device, Video and Control.



## Device

This sub-menu is used to perform the following tasks:

- Locate ME
- Alias Name
- TRX-chain Grouping
- Network

## Locate Me



Click the button “ON” on the left, the prompt box will pop up indicating the successful setting. The LocateME LED on DaisyNET II RX will be on, which enables users to locate which DaisyNET II RX’s WEB GUI is logging in. Contrarily, click button “OFF” on the right, the LocateME LED on DaisyNET II RX will be off.

LocateME

OFF

## Alias Name

Alias Name

Alias Name:

Apply

**Note:** The Alias name must be 1~20 characters in length (letters , numbers , space , '\_' or '-').

You can modify DaisyNET II RX name in case of installation issues when multiple DaisyNET II devices are cascaded.

Enter the new name and then click **Apply** button to save modifications. A prompt box will pop up to indicate the successful setting.

**Note:** The Alias name must be 1~20 characters in length, which could be letters, numbers, space, underscore " \_ " or dash "-".

## TRX-chain Grouping

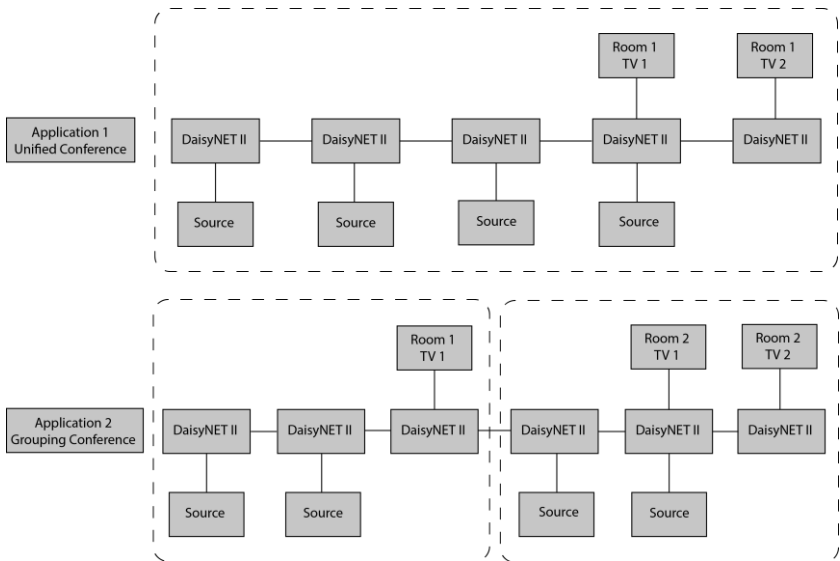
TRX-chain Grouping

TRX-chain Grouping:

**Note:** After apply this option, TRX units will split separate grouping, this and backward units will not receive the video signal from front units.

To set DaisyNET II devices to work in grouping mode, you can check the option next to "TRX-chain Grouping". For example, if there're three DaisyNET II devices cascaded, to split up the 3<sup>rd</sup> device from others for two different groups, you should login the WEB UI of the 2<sup>nd</sup> device to perform this setting.

A cascaded chain is able to be divided into multiple groups. The Grouping mode is designed to meet requirements for grouping conferences so that different conference groups could be set up and working independently in cascaded connection. Each group could only allow their local sources to be selected and displayed, but cannot be shared to other groups.



Apart from setting on WEB UI, Telnet API is also available to set devices to grouping mode, and cancel it. After applying, backward devices cannot select or display sources forward, nor can they be selected or displayed by forward devices.

## Network

There are two IP Modes to choose: Static and DHCP. By default, the IP address to access the DaisyNET II RX is Static.

Under Static IP mode, set to a new IP address per required and click “Apply” button, a window will pop up as follows, then the web will refresh and return to the login page after 20s. You need to re-login the web.

**Network**

IP Mode:

IP Address:

Netmask:

Gateway:

**Note:** After pressing Apply, please reboot the device for settings to take effect.



If you select DHCP, after pressing **Apply**, please reboot the device for settings to take effect.

**Network**

IP Mode:

IP Address:

Netmask:

Gateway:

**Note:** After pressing Apply, please reboot the device for settings to take effect.



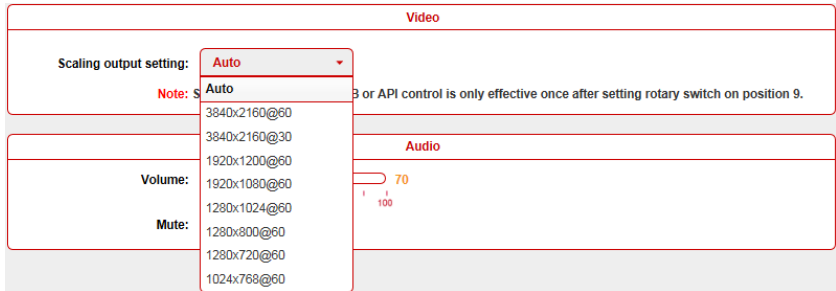


## Video&Audio

This sub-menu is used to perform the following tasks:

- Video
- Audio

### Video

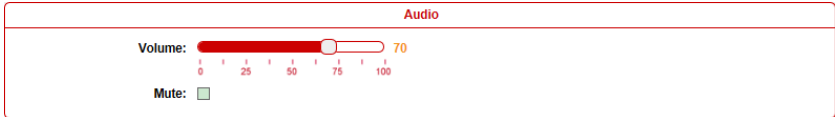


DaisyNet II receiver supports scaling HDMI output setting with different resolutions. For details, please see the **Scaler Section**.

On Web UI, the default position is Auto.

**Note:** Scaler configuration by WEB or API control is only effective when setting rotary switch to position 9.

# Audio



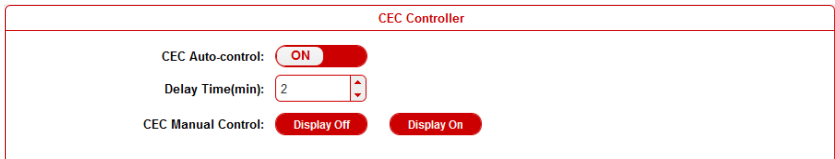
You can use the red scrolling bar to adjust the volume value or select **Mute** to switch to mute status.

# Control

This sub-menu is used to perform the following tasks:

- CEC Controller
- RS232 Controller
- RS232 Pass-through

# CEC Controller



DaisyNET II is built in CEC controller, and able to turn on/off display by sending CEC commands to display via HDMI output port automatically.

**Note:** This function is only effective for CEC-enabled displays.

**CEC Auto-control:** Enable/disable CEC Auto-control

**Delay Time:** Set the delay time to turn off display after receiving CEC command. The range is 0~30 minutes.

**CEC Manual Control:** Turn on/off display immediately by sending CEC command manually.

# RS232 Controller

RS232 Controller

Baud Rate:

Parity Bits:

Data Bits:

Stop Bits:

Hex String:

End Flag:  NONE  \r  \n  \r\n

RS232 Auto-control:  ON

Delay Time(min):

RS232 Wakeup Command:  Save

RS232 Standby Command:  Save

RS232 Manual Control: Display Off Display On

DaisyNET II RX is built in RS232 controller, and able to save RS232 Wakeup and Standby Commands of display and turn on/standby the display through connected RS232 port by auto-detecting input signal status.

**Baud Rate:** Set the Baud Rate of connected projector.

**Parity Bits:** Set the Parity Bits of connected projector.

**Data Bits:** Set the Data Bits of connected projector.

**Stop Bits:** Set the Stop Bits of connected projector.

**Hex String:** Check this option to set the command to Hexadecimal format.

**End Flag:** Choose the end flag for the command among "none", "\r", "\n" or "\r\n".

**RS232 Auto Control:** Enable/disable RS232 Auto-control.

**Delay Time (min):** Set the delay time to turn off display after receiving RS232 command. The range is 0~30 minutes.

**RS232 Wakeup Command:** Input the RS232 Wakeup Command of the connected projector and click **Save** button.

**RS232 Standby Command:** Input the RS232 Standby Command of the

connected projector and click **Save** button.

**RS232 Manual Control:** Turn on/off display immediately by manual RS232 command.

## RS232 Pass-through

**RS232 Pass-through**

Baud Rate:

Parity Bits:

Data Bits:

Stop Bits:

Hex String:

End Flag:  NONE  \r  \n  \r\n

Command:

RS232 pass through allows for sending RS232 command manually by Web to control connected display. Telnet API also features this function.

## Advanced

This sub-menu is used to perform the following tasks:

- Welcome Menu
- Password
- System
- Firmware

## Welcome Menu

**Welcome Menu - Custom Web UI LOGO**

File:

**Note:** You must upload an image in PNG format with a resolution of 234x80 pixels.

User can change the WEB GUI logo as required. Click **Browse** button to

browse the Logo file, and then click **Upload** button.

**Note:** You must upload an image in PNG format with a resolution of 234x80 pixels.

## Password

Change Password

New Password:

**Note:** Password must be 4 to 16 characters in length, alphanumeric only.

Input a new login password, click **Apply** button to save the change.

**Note:** Password must be 4 to 16 characters in length, alphanumeric only.

## System

This sub-menu includes two sections: System and Automatic Logout.

### System

System

**Factory Default:** click this button to reset the DaisyNET II to factory default settings.

**Reboot:** click this button to reboot the DaisyNET II.

### Automatic Logout

Automatic Logout

Enable:  ON

Delay Time(min):

- 5
- 10
- 15
- 20
- 25
- 30

**Enable:** Click to enable or disable the Automatic Logout.

**Delay Time (min):** Set the delay time for Automatic Logout when there's no operation on the web in a period of time. There're six options to choose: 5, 10,15, 20, 25 and 30.

## Firmware

**Note:** During firmware update process, please DO NOT cut off the device's power, otherwise it may cause device malfunction or damage.

Version	
MCU: v2.9	<a href="#">Update</a>
ARM: v2.0	<a href="#">Update</a>
Scaler: v1.7	<a href="#">Update</a>

## Update MCU

**Step 1.** Click **Update** on the web. Then Click **Browse** to upload update file.

Update MCU --> Upload File

BANK 0(h00):

BANK 1(h01):

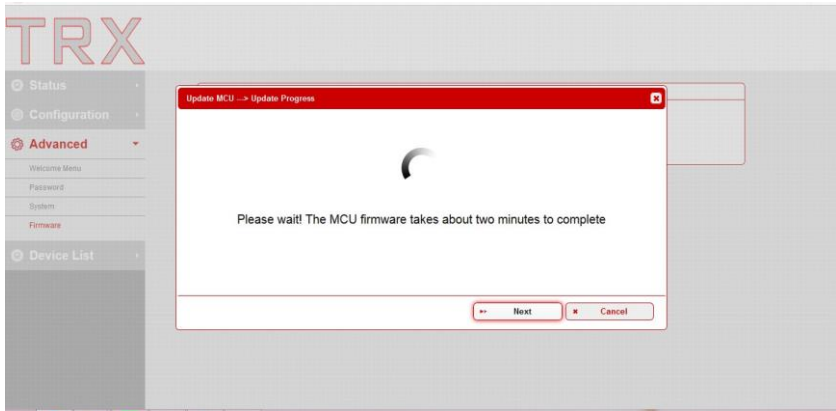
BANK 2(h02):

**Note:** Please upload the required file

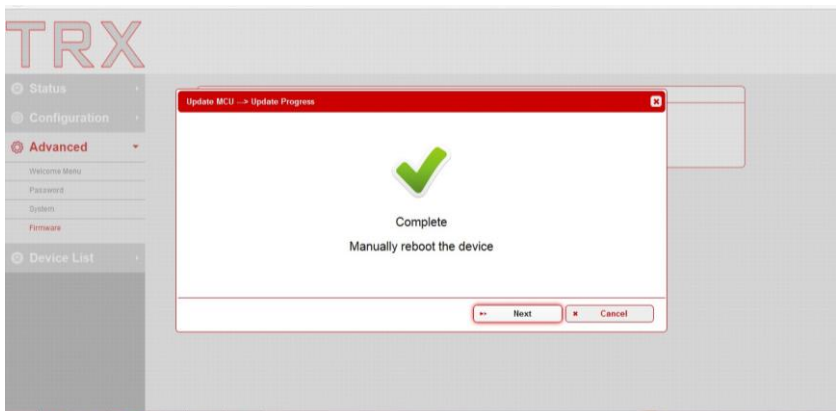
**Step 2.** File is uploaded, click **Next**.

Update MCU --> Upload File

Upload file OK



**Step 3.** It will take about two minutes to update. Once completed, close this window and reboot the device manually.



## Update ARM

**Step 1.** Click **Update** on the page. Then click **Browse** to upload update file.

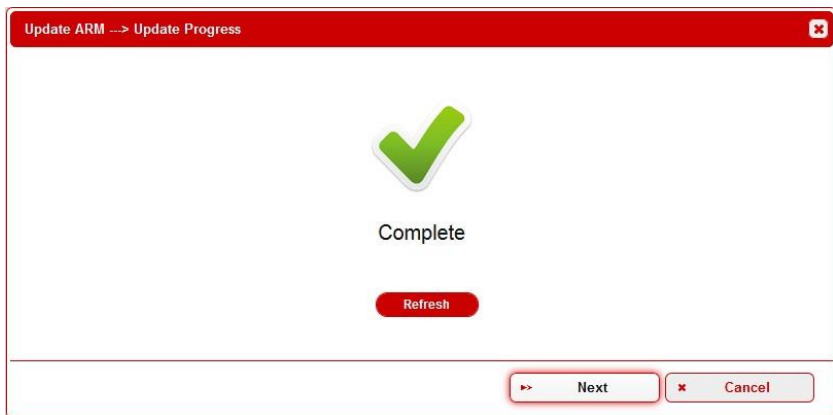




**Step 2.** The file is uploaded. Click **Next**.



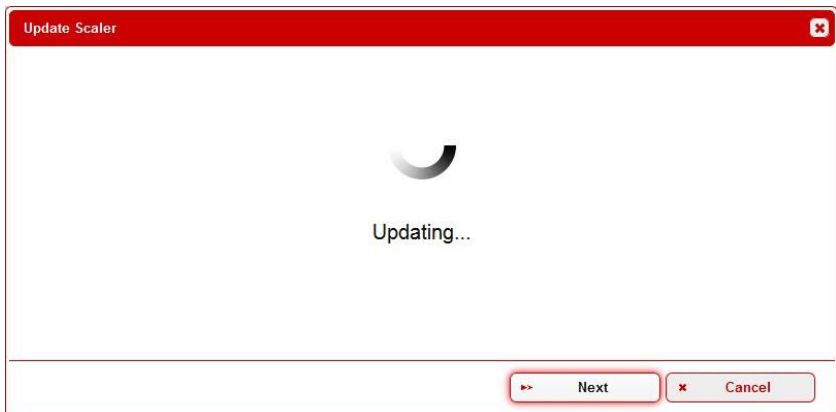
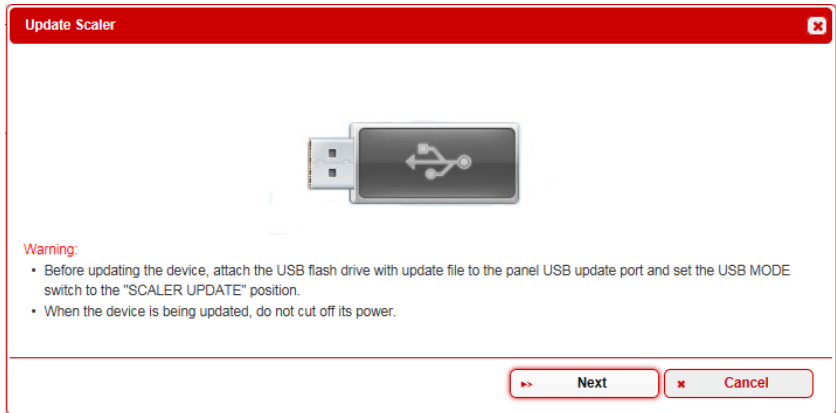
**Step 4.** Complete. Close this window and refresh the page.



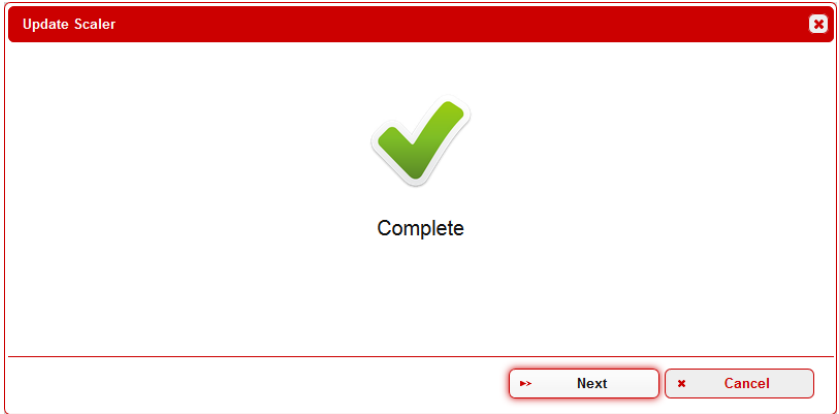
## Update Scaler

**Step 1.** Set the USB MODE switch to the "SCALER UPDATE" position and then attach a USB flash drive with update file to the USB update port on DaisyNET II RX.

**Step 2:** Click **Update** on the web. Here pops up a window, click **Next**.



**Step 3.** Complete. Click **Cancel** to close the window.



# Device List Window



This window displays the name and IP address of current devices.

Click the device, it will lead user to the WEB GUI of this device.

Click the Refresh to refresh the device list and WEB UI.

# Warranty Terms and Conditions

Products are backed by Limited 2-year Parts and Labor warranty. For the following cases shall charge for the service(s) claimed for the products if the product is still remediable and the warranty card becomes unenforceable or inapplicable.

1. The original serial number (specified by ) labeled on the product has been removed, erased, replaced, defaced or is illegible.
2. The warranty has expired.
3. The defects are caused by the fact that the product is repaired, dismantled or altered by anyone that is not from a authorized service partner. The defects are caused by the fact that the product is used or handled improperly, roughly or not as instructed in the applicable User Guide.
4. The defects are caused by any force majeure including but not limited to accidents, fire, earthquake, lightning, tsunami and war.
5. The service, configuration and gifts promised by salesman only but not covered by normal contract.
6. preserves the right for interpretation of these cases above and to make changes to them at any time without notice.



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We reserve the right to change specification or product dimensions at any time.