

SC08.CTL100

HDMI over IP Network Controller



User Manual

Version 1.1

Scion Tech Limited
Thatcham, Berkshire, United Kingdom
www.scion-tech.co.uk

Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Table of Contents

1. Introduction.....	3
2. Features.....	3
3. Specifications.....	3
4. Panel Description.....	3
5. Connection Diagram.....	4
6. Preparing your PC.....	5
7. Web Browser Login.....	6
8. Searching for Network Devices.....	8
9. Genlock and Seamless Switching.....	8
10. Encoder (Transmitter) Settings.....	9
11. Decoder (Receiver) Settings.....	9
12. Creating Zones.....	10
13. Zone Preset - Matrix Switching.....	11
14. Zone Presets - Video Walls.....	12
15. Zone Presets - Multiviewer.....	13
16. EDID Management.....	14
17. Serial RS232 Settings and Parameters (ALL).....	15
18. Serial RS232 Settings and Parameters (Individual).....	16
19. Infra-Red Settings.....	17
20. USB Settings.....	18
21. Server Settings.....	19
22. Maintenance and Warranty.....	20

1 Introduction

The SC08.CTL100 is designed to be used with Scion SC08.MX series HDMI over IP switching products. It provides easy access to setup and control the network transmitters and receivers.

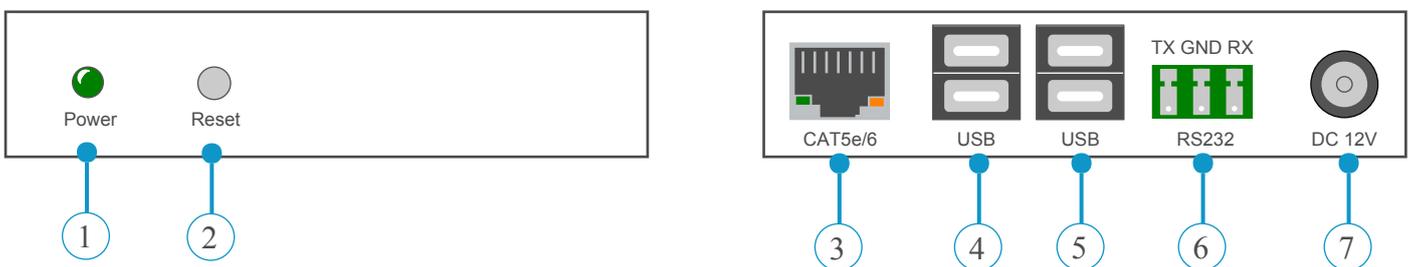
2 Features

- 1.2GHz Quad-Core ARM Cortex-A53 CPU
- Linux based OS
- Web Browser GUI for easy access, setup and control
- 10/100M Ethernet port for TCP/IP Control
- RS232 Port for API Control
- 4 x USB 2.0 Host Ports (Reserved)

3 Specifications

Technical	
Control Ports	1 x RS232 (Phoenix Block) 1 x Ethernet Port (RJ45 Socket) 4 x USB (Type A) Ports Reserved
ESD Protection	Human Body Model +/-8kV (air gap discharge) and +/-4kV (contact discharge)
Housing	Metal Enclosure
Colour	Black
Dimensions	(W) 100 x (D) 130 x (H) 26mm
Weight	370g
Power Supply	Input: AC 100 ~ 240V 50/60Hz, Output DC 12V/1A
Power Consumption	4 watt
Operating Temperature	32 to 104°F / 0 to 40°C
Storage Temperature	-4 to 140°F / -20 to 60°C
Relative Humidity	20 to 90% RH (no condensation)

4 Panel Description



1. Power LED
2. Reset Button - Pressing for 3 seconds will reset to factory defaults including IP 169.254.23.100
3. LAN Port RJ45 - Ethernet 10/100
4. USB Port Type A - Reserved for future design
5. USB Port Type A - Reserved for future design
6. RS232 Terminal - System setup and control. Contact Scion for details API document
7. Power input 12V/1A

5 Connection Diagram

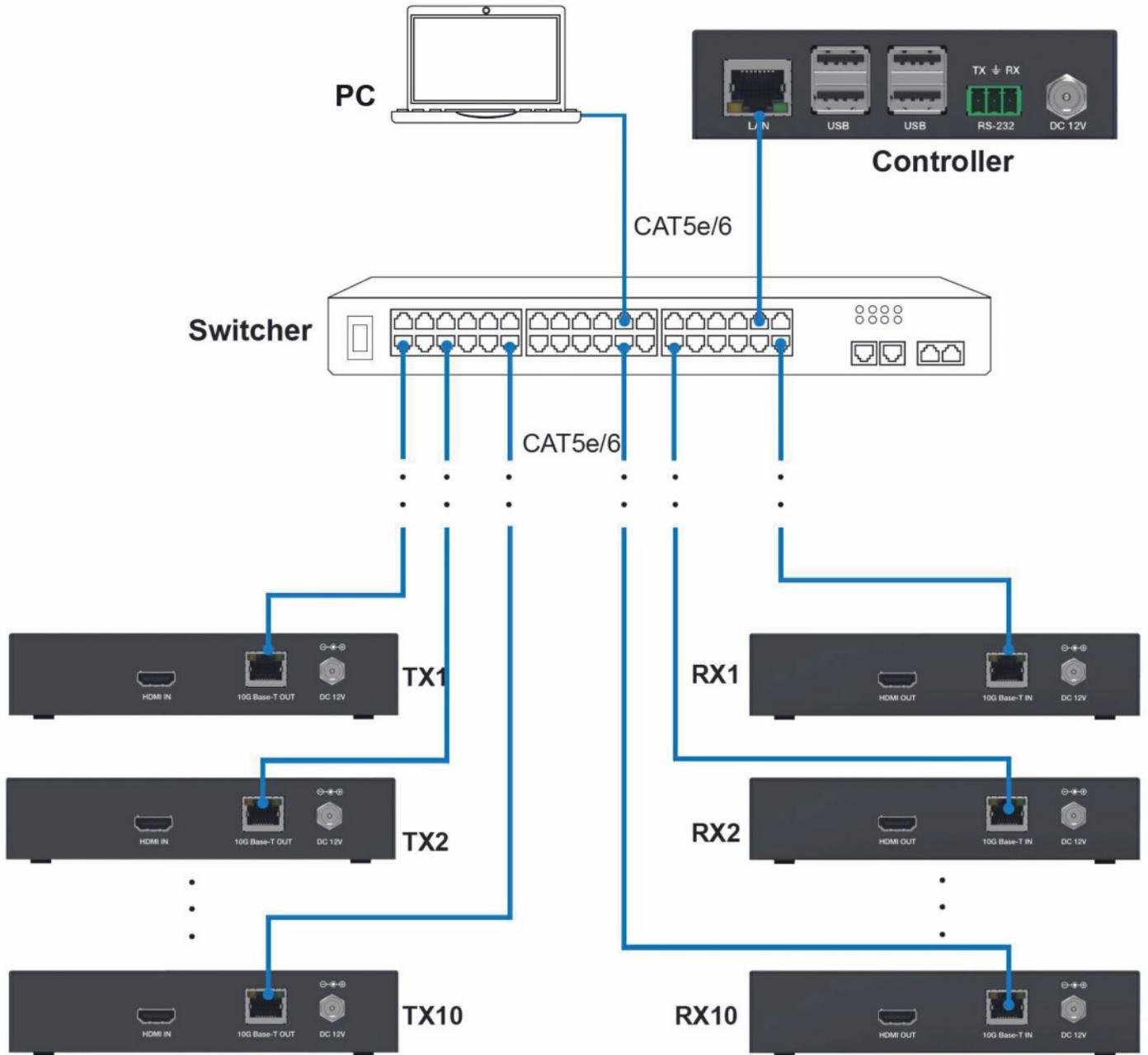
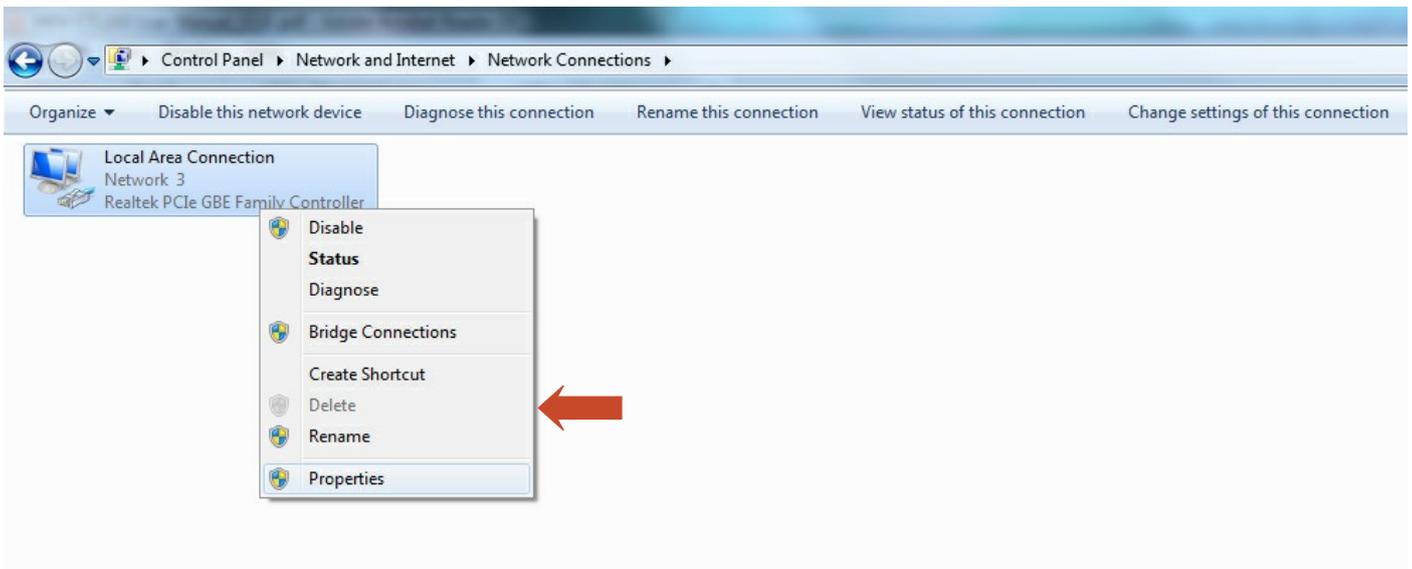


Fig 2

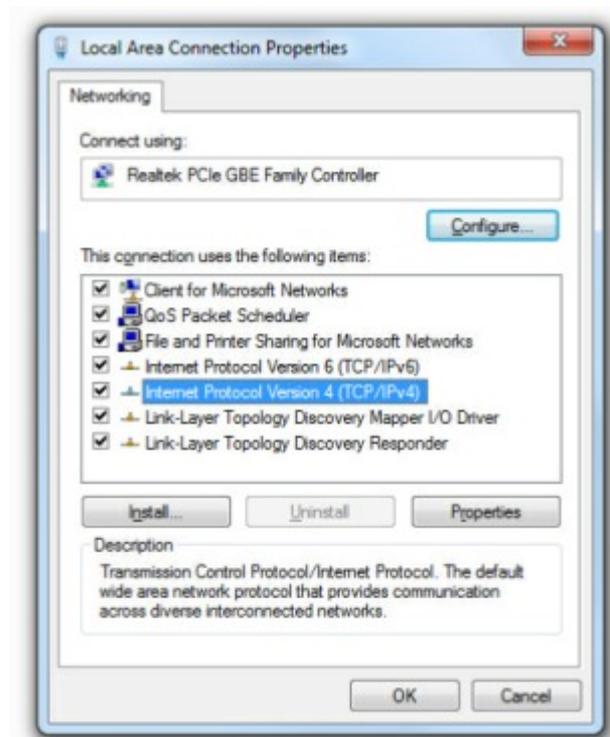
6 Preparing your PC

Step 1: Connect the SC08.CTL100 controller, computer, transmitters and receivers to the Ethernet switch as shown in Fig 2.

Step 2: On your PC, go to **Control Panel > Network and Internet > Network Connections > Local Area Connections**, right click on it and choose **Properties**.

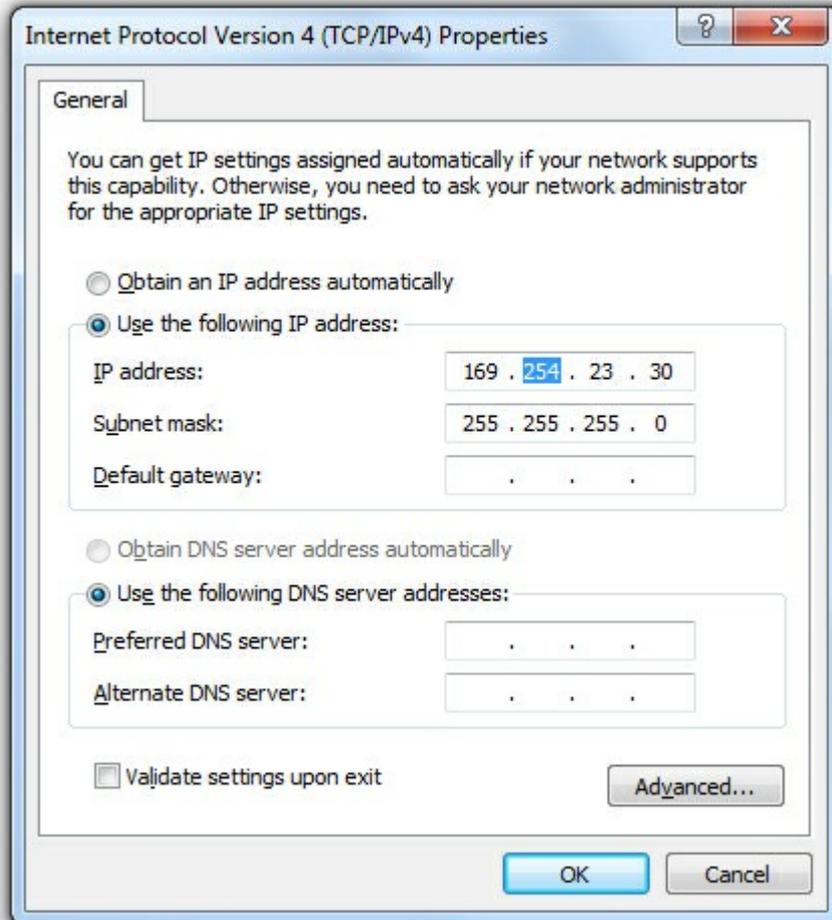


Double click Internet Protocol Version 4 (TCP/Ipv4)



Choose “Use the following IP address”, for example 169.254.23.30 as your PC IP address, 255.255.255.0 as the subnet mask, then click “OK”. Do not use the default IP address of the controller.

Choose “Use the following IP address”, for example 169.254.23.30 as your PC IP address, 255.255.255.0 as the subnet mask, then click “OK”. Do not use the default IP address of the controller.



7 Web Browser Login

The IP address of your PC, controller and other products on the LAN should be in the same network segment. As the controllers IP address is 169.254.23.100, the computers IP address should be set to 169.254.23.XX, whereas “XX” can be a number between 1 ~ 255, except 100.

Open your computers Web Browser and type the controllers IP address in the browsers address bar.



When you first enter the Web GUI you will need to enter the login and password, use “admin” for both. Then select the HDMI encoder/decoder product you will be controlling. Now proceed with login.

Network AV

User

Password

Products

SC08.MX16/21 Encoder/Decoder

SC08.MX2000 Encoder/Decoder

SC08.MX3000 Encoder/Decoder

SC08.MX5000 Encoder/Decoder

8 Devices

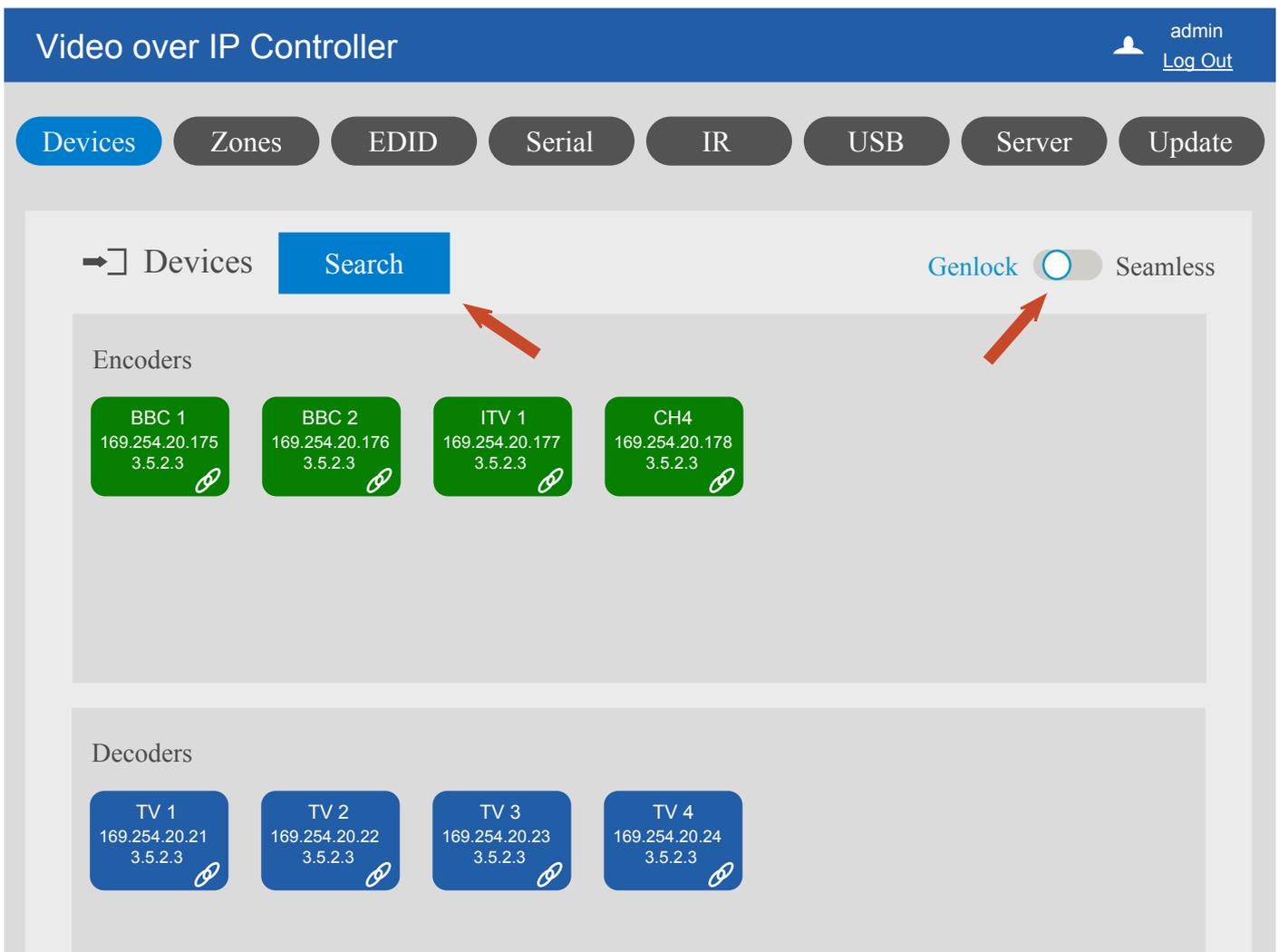
To view all the devices on your network, click “Search” to start searching. The encoders (transmitters) will appear in green and the decoders (receivers in blue.

The device IP address and version are displayed in the boxed area. More detailed information will be displayed if you click on the link icon in the bottom right corner of each box,



9 Genlock and Seamless

- When Genlock is selected the receivers video output will be synced to the transmitters input. In this mode the video will be presented with zero frame rate loss.
- When Seamless is selected the video will be buffered in order for the receiver to switch between inputs without dropping video or showing a black screen. The buffering may cause visual delay from the original source.



10. Encoder (Transmitter) Settings

- L/R In & Out: You can set the devices physical interface to analogue audio input or output.
- HDMI Audio Source: Allows you to select either the native HDMI audio signal or the embedded audio input.
- IP Settings: Select DHCP ON or insert your own static IP address and subnet mask.

11. Decoder (Receiver) Settings

- L/R Out: You can set the the receivers audio to output the native HDMI audio or embedded audio.
- HDMI Audio Source: Select the HDMI audio from selected transmitter or another transmitters HDMI audio.
- Video Format: Set the video output resolution. In seamless mode the resolutions must be the same.

Encoder

Alias Name:

Host Name: DEC4K02-D88039E73AEA
 MAC Address: d88039e73aea
 FW Version: 3.5.2.3
 Group IP: 224.1.1.5
 Video Resolution: 1280x720 60Hz YBCR_444 8bit
 HDCP Version: HDCP 2.2
 Frame Rat/2:
 Start Video:

L/R In & Out:

HDMI Audio:

IP Settings
 DHCP:

IP Address:
 Subnet Mask:
 Gateway:

Reset Device:
 Reboot Device:
 Show Me:

Decoder

Alias Name:

Host Name: DEC4K02-D88039E73D6F
 MAC Address: d88039e73d6f
 IP Address: 169.254.20.21
 FW Version: 3.5.2.3
 Group IP: 224.1.1.7
 Video Resolution: 1920x1080 30Hz RGB 8bit
 HDCP Version: HDCP 2.2

L/R In & Out:

HDMI Audio:

Display Mode: Seamless

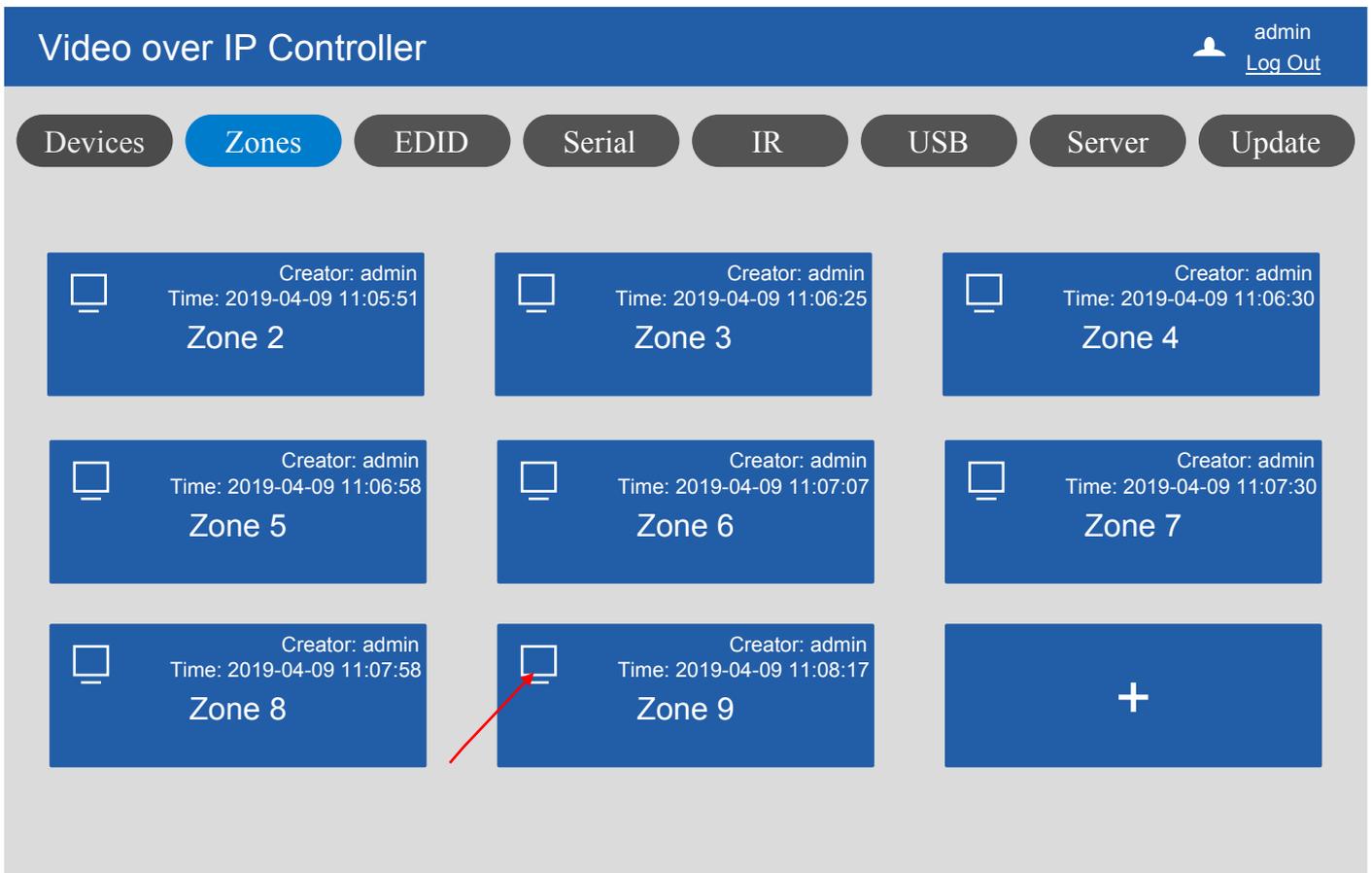
IP Settings
 DHCP:

IP Address:
 Subnet Mask:
 Gateway:

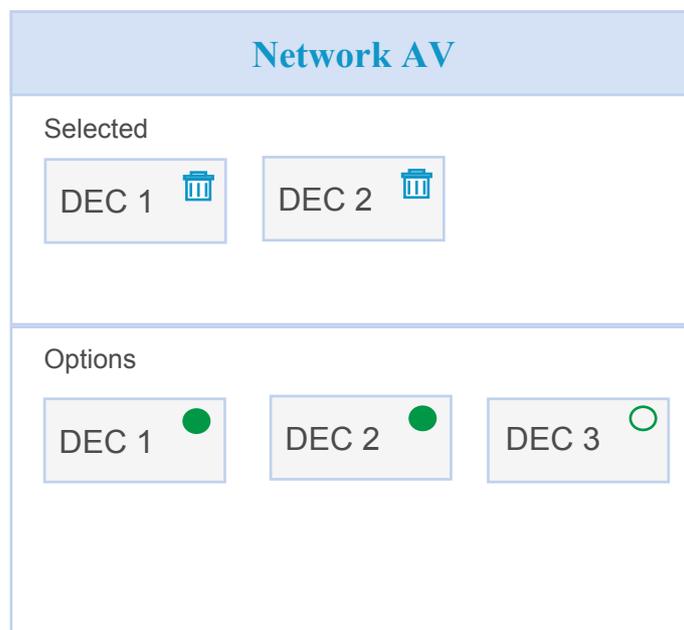
Reset Device:
 Reboot Device:
 Show Me:

12. Zones

Up to 16 zones can be created, each having individual editable alias names. The name can have up to 64 characters (without spaces).



Click the small icon at the top left corner of the dialogue box to select the transmitters/decoders you would like to add to your zone. Receivers must be selected before you can create your zones in this next section.

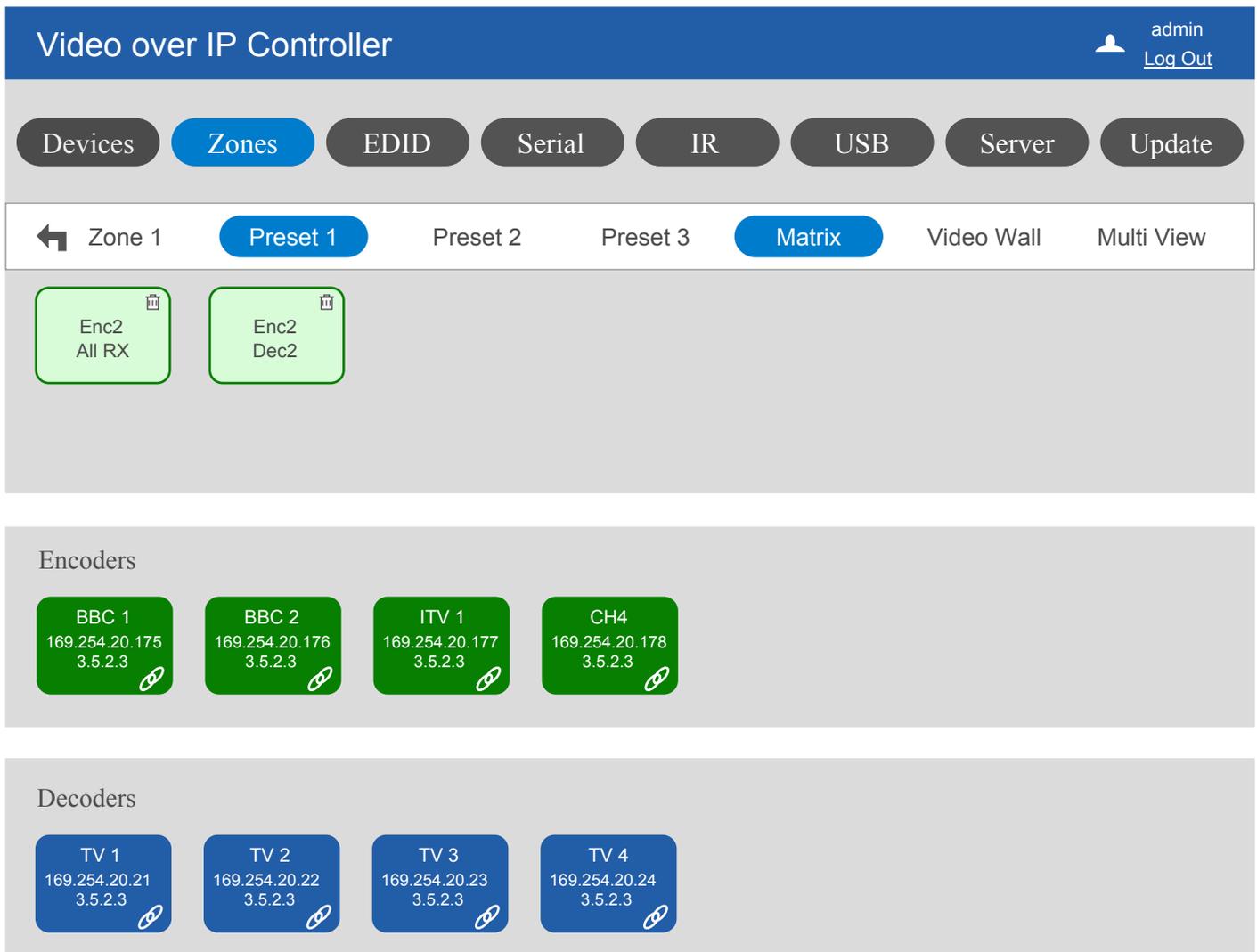


13. Zones Presets - Matrix

Transmitters and receivers can be dragged in to the zone area. A zone supports up to 50 switched cross points and every zone has three presets. Clicking and highlighting the matrix preset button will display the current configuration settings.

To create a preset for all selected receivers, drag a receiver to the “All RX” icon. This will switch all selected receivers to the selected transmitter.

To remove an item click the waste bin located at the top right corner of the dialogue box.



14. Zone Presets - Video Wall

1. Enter a name for your video wall.
2. Enter the number of rows and columns, maximum of 4 x 6.
3. Set the bezel adjustments.
4. Set the output video resolution 1080p or 4K
5. Click “Save”.
6. Drag the receivers and place them in the wall frames.
7. Drag the transmitter to the “Encoder” frame.

admin [Log Out](#)

Video over IP Controller

Devices
Zones
EDID
Serial
IR
USB
Server
Update

← Zone 1
Preset 1
Preset 2
Preset 3
Matrix
Video Wall
Multi View

Name

Rows

Columns

Delete Save

Encoder

BBC 1
 169.254.20.175
 3.5.2.3

Clear Encoder

Clear Decoders

Bezel Adjustment Horizontal

1080p

4K

Bezel Adjustment Vertical

1 <div style="background-color: #0056b3; color: white; border-radius: 10px; padding: 10px; width: 80%; margin: 0 auto;">169.254.20.21</div>	2 <div style="background-color: #0056b3; color: white; border-radius: 10px; padding: 10px; width: 80%; margin: 0 auto;">169.254.20.22</div>
3 <div style="background-color: #0056b3; color: white; border-radius: 10px; padding: 10px; width: 80%; margin: 0 auto;">169.254.20.23</div>	4 <div style="background-color: #0056b3; color: white; border-radius: 10px; padding: 10px; width: 80%; margin: 0 auto;">169.254.20.24</div>

Encoders

BBC 1
 169.254.20.175
 3.5.2.3

BBC 2
 169.254.20.176
 3.5.2.3

ITV 1
 169.254.20.177
 3.5.2.3

CH4
 169.254.20.178
 3.5.2.3

Decoders

TV 1
 169.254.20.21
 3.5.2.3

TV 2
 169.254.20.22
 3.5.2.3

TV 3
 169.254.20.23
 3.5.2.3

TV 4
 169.254.20.24
 3.5.2.3

15. Zone Presets - Multiview

1. Enter a name for your Multiview screen.
2. Enter the number of segments, maximum of 20.
3. Set the output video resolution 1080p or 4K
4. Click “Save”.
5. Drag the encoder and place it in the encoder frame .
6. Drag the transmitters to the multiview screen frame.

admin [Log Out](#)

Video over IP Controller

Devices
Zones
EDID
Serial
IR
USB
Server
Update

← Zone 1
Preset 1
Preset 2
Preset 3
Matrix
Video Wall
Multi View

Name

Windows

Delete
Save

Encoder

TV 1
169.254.20.21
3.5.2.3

Clear Encoder

Clear Decoders

1080p

4K

BBC 1 169.254.20.175 3.5.2.3	BBC 2 169.254.20.176 3.5.2.3
ITV 1 169.254.20.177 3.5.2.3	CH4 169.254.20.178 3.5.2.3

Encoders

BBC 1
169.254.20.175
3.5.2.3

BBC 2
169.254.20.176
3.5.2.3

ITV 1
169.254.20.177
3.5.2.3

CH4
169.254.20.178
3.5.2.3

Decoders

TV 1
169.254.20.21
3.5.2.3

TV 2
169.254.20.22
3.5.2.3

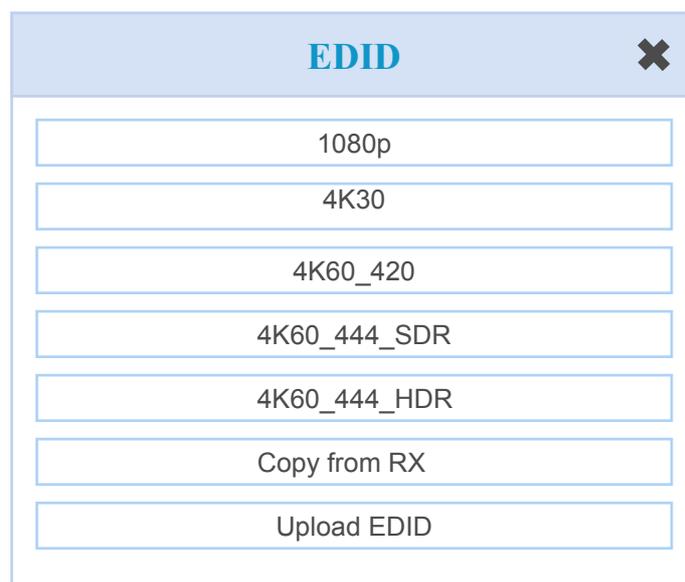
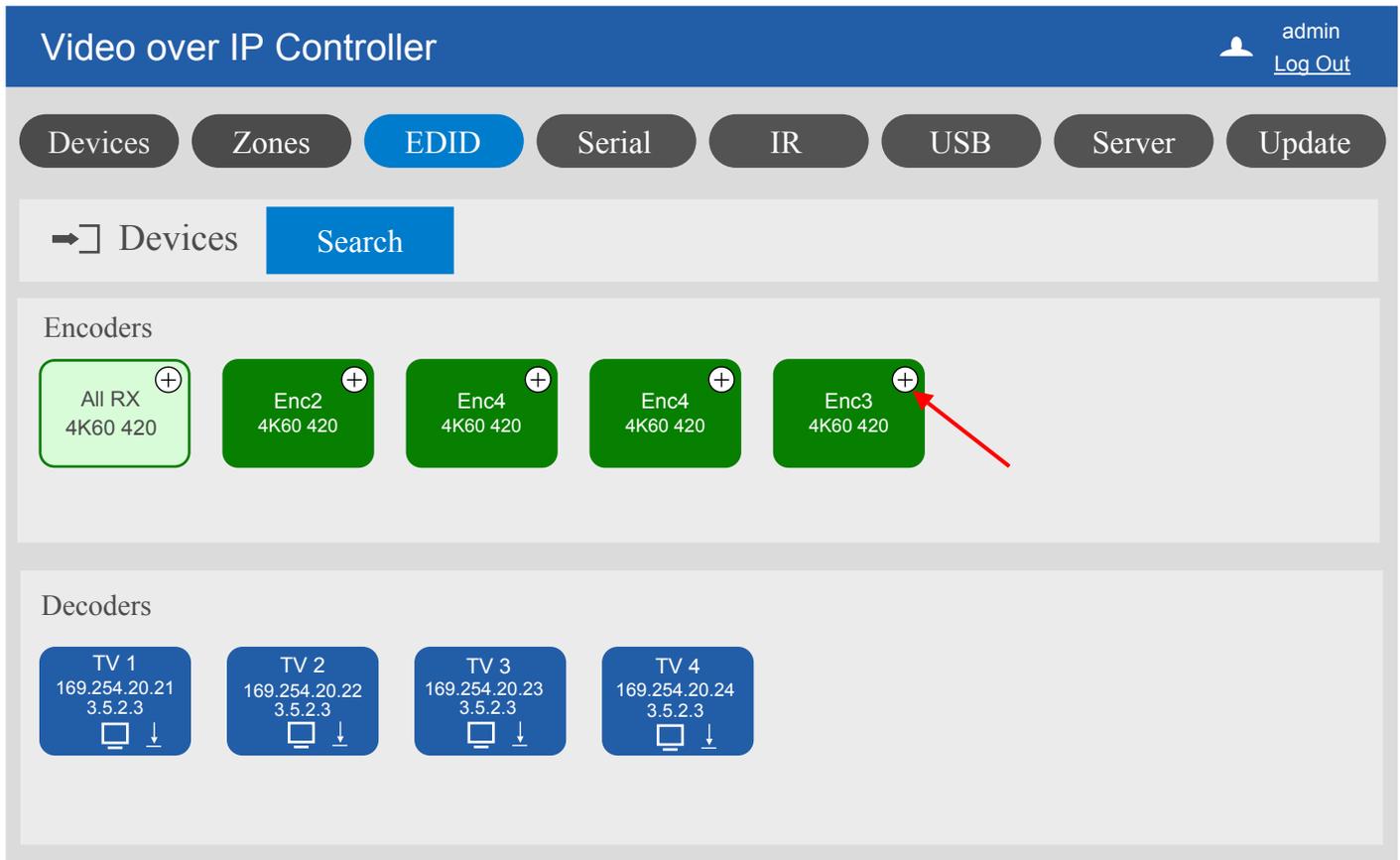
TV 3
169.254.20.23
3.5.2.3

TV 4
169.254.20.24
3.5.2.3

16. EDID

You can set the EDID of each receiver/decoder independently.

1. Click the (+) button at the top of the encoder dialogue box.
2. Select one of the preset options, copy the EDID from the receiver or upload your own.
3. The EDID can be downloaded from the decoder by clicking the download arrow located on the decoder dialogue box, this can then be uploaded to the encoder.



17. Serial RS232 - Setting All Parameters

Note: The serial communication supports unicast and broadcast data transmission.

All Parameters ✕

Baud:	<input type="text" value="115200"/>	▼
Data bit:	<input type="text" value="8"/>	▼
Stop bit:	<input type="text" value="1"/>	▼
Parity:	<input type="text" value="NONE"/>	▼
Clear:	<input type="text" value="Serial all clear"/>	▼

18. Serial RS232 - Setting Individual Parameters

1. Configure the transmitter to correspond with the MAC address of the receiver. You can also select "ALL" to broadcast serial data to all receivers.
2. In addition to supporting external interfaces to send RS232 data, it also supports data in the form of a web page with ASCII or HEX selectable.

The screenshot shows the 'Video over IP Controller' interface. At the top right, there is a user profile for 'admin' and a 'Log Out' link. Below the header is a navigation bar with buttons for 'Devices', 'Zones', 'EDID', 'Serial' (highlighted), 'IR', 'USB', 'Server', and 'Update'. The main content area is divided into two sections: 'Encoders' and 'Decoders'. The 'Encoders' section contains five buttons: 'All Parameters' (with a red arrow pointing to it), 'BBC 1' (IP: 169.254.20.175, Port: 3.5.2.3), 'BBC 2' (IP: 169.254.20.176, Port: 3.5.2.3), 'ITV 1' (IP: 169.254.20.177, Port: 3.5.2.3), and 'CH4' (IP: 169.254.20.178, Port: 3.5.2.3). The 'Decoders' section contains four buttons: 'TV 1' (IP: 169.254.20.21, Port: 3.5.2.3), 'TV 2' (IP: 169.254.20.22, Port: 3.5.2.3), 'TV 3' (IP: 169.254.20.23, Port: 3.5.2.3), and 'TV 4' (IP: 169.254.20.24, Port: 3.5.2.3).

Encoder
✕

Alias Name: ▼

Baud: ▼

Data bit: ▼

Stop bit: ▼

Parity: ▼

RS232 Receiver: ▼

Commands: ▼

Line Feed

ASCII HEX

19. Infra Red

- Configure the transmitter to correspond with the MAC address of the receiver. You can also select “ALL” to broadcast IR to all receivers.
- IR is sent in unicast or broadcast to all receivers.

Encoder [Close]

Alias Name: [Dropdown]

IR Receiver: [Dropdown]

TV 1

TV 2

TV 3

TV 4

TV 5

TV 6

[Save] [Cancel]

20. USB

- USB pairing is supported for a one to one configuration.
- Select an encoder and decoder to pair by clicking the icon in it's dialogue box.

The screenshot shows the 'Video over IP Controller' interface. At the top right, there is a user profile for 'admin' with a 'Log Out' link. Below the header is a navigation bar with buttons for 'Devices', 'Zones', 'EDID', 'Serial', 'IR', 'USB', 'Server', and 'Update'. The 'USB' button is highlighted in blue. The main content area is divided into two sections: 'Encoders' and 'Decoders'. Under 'Encoders', there are four green buttons: 'BBC 1' (IP: 169.254.20.175), 'BBC 2' (IP: 169.254.20.176), 'ITV 1' (IP: 169.254.20.177), and 'CH4' (IP: 169.254.20.178). A red arrow points to the 'BBC 1' button. Under 'Decoders', there are four blue buttons: 'TV 1' (IP: 169.254.20.21), 'TV 2' (IP: 169.254.20.22), 'TV 3' (IP: 169.254.20.23), and 'TV 4' (IP: 169.254.20.24). Each button has a small icon below it.

The 'Encoder' dialog box has a title bar with a close button (X). It contains two dropdown menus: 'Alias Name' set to 'BBC 1' and 'USB Device' with a list of options: '5410ECFE18EA', '5410ECFDE18EA', '5410ECFDFDF2', and 'NONE'. At the bottom, there are 'Save' and 'Cancel' buttons.

The 'Decoder' dialog box has a title bar with a close button (X). It contains two dropdown menus: 'Alias Name' set to 'BBC 1' and 'USB Host' with a list of options: '5410ECFE18EA', '5410ECFDE18EA', '5410ECFDFDF2', and 'NONE'. At the bottom, there are 'Save' and 'Cancel' buttons.

21. Server Settings

The server page displays some basic information about the controllers network and serial settings.

1. RS232 Settings - Here you can set the serial port of the controller including the baud rate, parity, stop bits and data bits.
2. IP Settings - If the controller is set to DHCP status (ON) it will automatically be issued an IP address from the router or DHCP server located on the LAN. If the DHCP is (OFF) you can set your own static IP address and subnet mask. The controller will reboot if the DHCP setting is changed.

admin
[Log Out](#)

Video over IP Controller

Devices
Zones
EDID
Serial
IR
USB
Server
Update

RS232 Settings

Baud Rate: <input style="width: 80%;" type="text" value="115200"/>	Parity: <input style="width: 80%;" type="text" value="None"/>
Stop Bits: <input style="width: 80%;" type="text" value="1"/>	Data Bits: <input style="width: 80%;" type="text" value="8"/>

Apply

IP Settings

IP Address: <input style="width: 80%;" type="text" value="169.254.23.100"/>	MAC Address: <input style="width: 80%;" type="text" value="B8:27:eb:21:c9:e7"/>
Subnet mask: <input style="width: 80%;" type="text" value="255.255.255.0"/>	Gateway: <input style="width: 80%;" type="text" value="169.254.23.1"/>

DHCP:

Apply

Web Controller Password

New Password: (Attention) Password must be 4 to 16 characters or digits

Apply

Web Controller Commands

Reboot
Reset to Factory Default

Commands

Send Commands
Clear Log

Log (only Displays the last 20 records)

```

2018-12-12 09:36: factory reset SUCCESS
2018-12-12 09:45: server set serial SUCCESS
2018-12-12 10:05: server set serial SUCCESS

```

22. Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean these devices.

Servicing

Damage requiring service: This product should be serviced by a qualified service engineer if:

- The DC power cord or AC adaptor has been damaged.
- Objects or liquids have entered the housings.
- The product has been exposed to rain.
- The product has stopped working or shows signs of significant change in operating performance or function.
- The unit has been dropped or severely damaged externally.

Servicing personnel: Do not attempt to service the product beyond that described in these instructions. Refer all other servicing to authorised serving personnel.

Replacement parts: When parts need replacing ensure the service engineer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorised substitutes may result in fire, electric shock or other hazards.

Safety check: After a repair or service, ask the engineer to perform safety checks to confirm the product is in proper working condition.

Warranty

If your product does not work properly because of a defect in materials or workmanship, our Company (referred to as "the warrantor") will , for the length of the period indicated as below, (Parts and labour 2 years) which starts with the date of original purchase ("Limited Warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

During the "Labour" Limited Warranty period there will be no charge for labour. During the "Parts" warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers product purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

Returning a Product

When shipping the unit carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone number and/or email address where you can be reached.

Limited warranty limits and exclusions

This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, maladjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service centre or other authorized service engineer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only).

PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY. This returns policy does not affect your legal rights. Details of your legal rights are available from Trading Standards or Citizens Advice Consumer Service.

Scion Tech Limited
Thatcham, Berkshire, United Kingdom