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User Manual

TDHI 4H-IP
HD IP Streaming Server

Article				Article no.
TDHI 4H-IP	HD IP Streaming Server			492081
Version	V1.0	Date	2022/5	EN

triax.com

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1 Safety regulations and notes

ATTENTION

Please read this user manual before using the streamer. It contains important information about operating your streamer kit.

Our limited warranty applies when the product is handled properly for intended use, in accordance with its operating instruction. However, the warranty may be void in the following cases:

Repair, product modification or alteration have been performed by unauthorized service personnel

Damages caused by accidents, including but not limited to, lightning, water, fire, or moisture

Use of an AC adapter not compatible with the product and its voltage rating

The model number on the product has been altered, deleted, removed or made illegible.

CAUTION

The devices meets the EU directives as

EMC
EN 50083-2:2012 +/A1:2015
EN 55032:2012 +/AC:2013
EN 55035:2017
EN 55024:2010
EN 300 386 V1.6.1
DS/IEC 60728-2: 2018

RoHS:
EN 63000:2018

Safety:

DS/EN 62368-1:2020

The safety requirements are according to the standards EN/DIN EN 50083 (deals with cable networks including equipment and associated methods of measurement for headend reception, processing and distribution of television signals, sound signals and their associated data signals and for processing, interfacing and transmitting all kinds of signals for interactive services using all applicable transmission media) resp. IEC/EN/DIN EN 60728 (which is applicable to in-building optical transmission systems for broadcast signal transmissions) and must be observed, especially concerning equipotential bonding and earthing.

Before starting installation or service work disconnect the receiving system from mains.

Installation or service work should NEVER be undertaken during electrical / thunderstorms.

Avoid short circuits!

To ensure electromagnetic compatibility, make sure all connections are tight and that the covers are screwed on securely.

Take action to prevent static discharge when working on the device!

Due to the risk of fires caused by lightning strikes, we recommend that all mechanical parts (e.g. distributor, equipotential bonding rail, etc.) be mounted on a non-combustible base. Wood panelling, wooden beams, plastic covered panels and plastic panels are all examples of combustible bases.

Back up battery:

The unit includes a preinstalled Lithium battery (CR type) as backup power source for the clock.

Do not attempt to replace the non-rechargeable coin-cell battery. Replacement of the battery must only be done by a special trained technician.

There is a danger of an explosion if the coin-cell battery is incorrectly placed. The lithium battery contains lithium and can explode if it is not properly handled, or disposed of. Replace only with a battery of the same type. To avoid possible injury or death, do not: (1) Throw or immerse into water, (2) allow it to heat more than 100°C (212°F) or (3) attempt to repair of disassemble it. Dispose of it as required by local ordinance or regulations and your company's safety standards

To prevent fire, short circuit or shock hazard

The HD IP streamer is an indoor product.

To reduce the risk of fire or electric shock, do not expose the streamer to rain or moisture.

This product should not be exposed to dripping or splashing.

No object filled with liquids, such as vases, should be placed on the product

To avoid electric shock, never stick anything in the slots on the case or remove the cover.

Place streamer on a flat, hard and stable surface

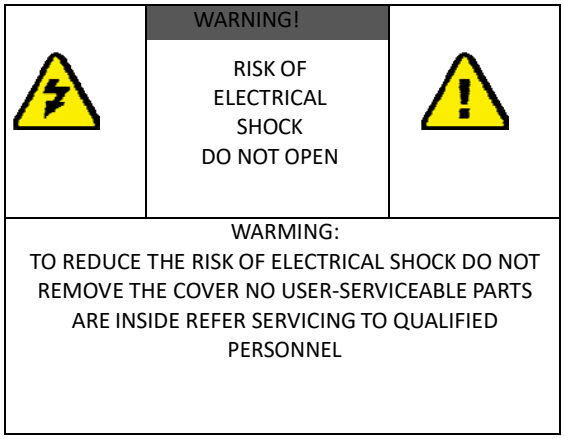
To avoid any risk of overheating

Ventilation: Do not block the ventilation slots on the streamer or place any heavy object on the top cover. Blocking the air flow could damage the streamer. Arrange components so that air can flow freely around the streamer.

Ensure that there is adequate ventilation if the receiver is placed in a stand.

Put the streamer in a property ventilated area, away from direct sunlight or any source of heat.

To avoid any risk of electrical shocks



Be careful with electricity.

Power to the units must be switched off before any work is undertaken, such as any Media player device connection.

Power outlet: To prevent electric shock, make sure to use the appropriate AC adapters as power supply to the transmitter and the receiver.

Power cord: Be sure the power cord is routed so that it will not be stepped on or pinched by heavy items.

Power overloading: Avoid overloading electrical outlets or extension cords which otherwise could result in electric shock or fire.

Lightning: Disconnect the product from the power source if it is left unattended for a long period of time, and to protect the product from lightning.

Always disconnect the power cord from the power outlet when you are not using your streamer kit. This reduces the risk of electric shocks or fire

WEEE disposal

Electronic devices should never be disposed of in the household rubbish. In accordance with directive 2002/96/EC of the European Parliament and the European Council from January 27, 2003 which addresses old electronic and electrical devices, such devices must be disposed of at a designated collection facility. At the end of its service life, please take your device to one of these public collection facilities for proper disposal.

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2 Revision history

Version 1.0 user manual - First release 05/2022

3 TDHI 4H-IP STREAMING SERVER Overview

3.1 Product description

TDHI 4H-IP Streaming Server allows users to stream CVBS / Component / HDMI source over Network to IP Box or computers within Network

3.1.1 Description of controls and components

1	TDHI 4H-IP	Model name
2	LCD Display	Configuration and system status
3	Key PAD / Home	Return to previous or Start menu
4	Key PAD / Left & Right	Move Right / Left between menu / characters
5	Key PAD / Upper & Down	Increase / Decrease the field value Increase / Decrease value of the password
6	Key PAD / Enter	Select parameter / menu
7	IP output	RJ-45,GbE / 10M, 100M, 1000M
8	Ethernet Port	RJ-45,GbE / Chrome
9	LED	Indicates device is encoding (HDMI Only)
10	Audio/Video Input * 4	HDMI/ Component YPrPb(RCA) / Composite CVBS(RCA)
11	USB Port	USB Media player (DLNA Streaming Mode)
12	AC input	AC 100~240V / 50~60Hz

Front and rear panels

3.2 Technical data

INTERFACES	
Ethernet (output)	1Gbps, RJ-45
Video Input	HDMI, YPbPr, CVBS
Audio Input	Analog or HDMI
ENCODING	
Video Format	HD:H.264 AVC/HP@L4.0 SD:MPEG-2/MP@ML
Audio Format	MPEG2/AAC
Resolution	HD: 1080P25,1080P30, 1080i 50/60 Max SD 480i,576i
Video bitrate	13 Mbps MAX
Audio bitrate	384Kbps
INPUT	
Video Input	HDMI:1080P 25/30, 1080i 50/60 Max, YPbPr (1080i, 720P, 576i/P , 480i/P), CVBS: NTSC, PAL
Y Input Level	1V±0.2Vp-p
Pb/Pr Input Level	0.7V±0.1Vp-p
CVBS Input Level	1V±0.2Vp-p
Streaming Protocols	UDP/RTP multicasting UDP/RTP unicasting DLNA
MANAGEMENT / CONTROL	
Web Management	RJ-45 Ethernet port
GENERAL	
Power Supply	AC 100~240V 50/60Hz
Consumption	18 W
Languages	English
Dimensions	19” * 12.5” * 1.75”
Weight	2800g

4 TDHI 4H-IP STREAMING SERVER Mounting

4.1 Installing the device in rack

The TDHI 4H-IP Streaming Server grounded, according to applicable national regulations.

Ensure that min. 4 cm ventilation space is available on both sides of the equipment, so that the fans and ventilation holes are not covered!

4.2 Packaging content

Please check whether the following items are present in the package. If any items is missed or damaged, please call your dealer.

Part Description	Quantity
TDHI 4H-IP Streaming Server	1 EA
Power cord	1 EA
User Manual	1 EA

4.3 Connecting the device

Potential equalisation:

Equalise the potential (PE) in accordance with IEC/EN/DIN EN 60728.

Connect the PE connection terminal to a PE rail (supplied by customer) using the PE wire (Cu 4 mm² - 9 mm²).

5 TDHI 4H-IP STREAMING SERVER Installation

5.1 Start setup

DEVICE Programming and Setup

1. Apply power.
2. Connect Audio / Video source

Connecting to the GUI Interface:

1.Connect an Ethernet cable directly to the Web Management Ethernet port on the rear panel of the HD IP streaming server or connect the Ethernet cable to an Ethernet switch /router. Connect an Ethernet Cable to your PC.

2. Using a Windows-based PC Select Windows Icon

3. Check Streamer IP address can be configured by using the LCD screen on the front of the unit using the right button.

4. After selecting Network- the IP streamer Icon will show up on the right side under Media Devices. Each device found will be displayed by the Device Address.

5. Right Click on the device icon, Select 'View Device Webpage

5.1.1 Static IP address

A static on the computer you for assistance on using static IP addresses. (triax sentence)

The IP streaming server will use an assigned Web IP address “192.168.1.99 “ and IP out address “192.168.2.100” for first sample. the IP Setting is Static mode

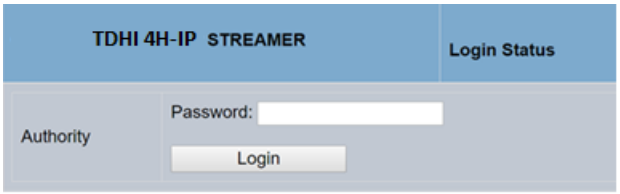
5.1.2 Status LED

LED : Indicates device is encoding (HDMI Only)

5.2 Interface (GUI)

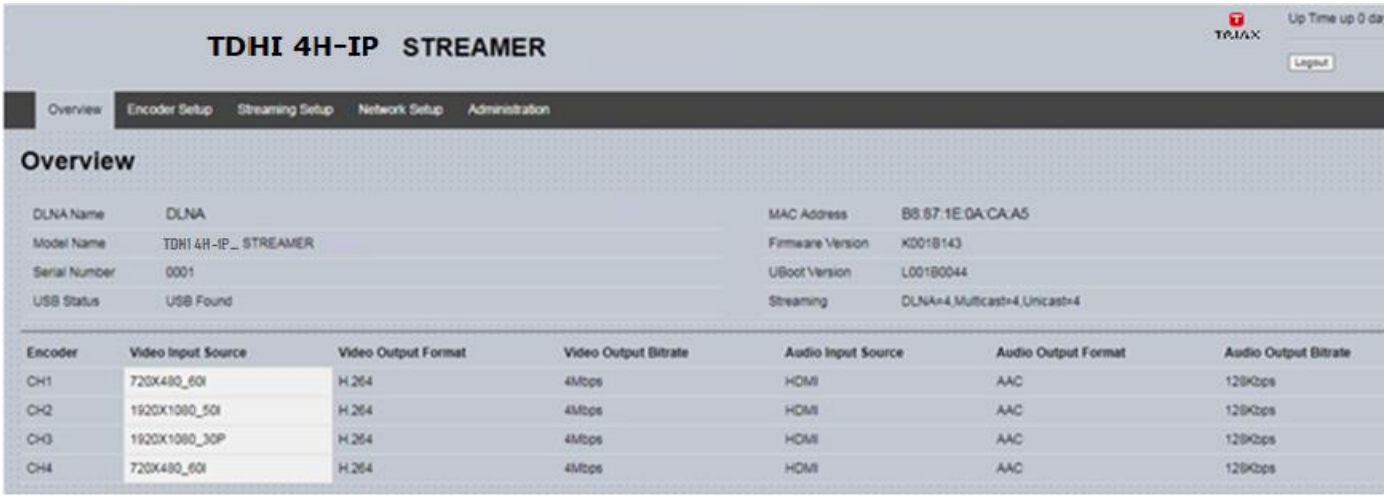
5.2.1 Login

Login Password:
Default Password: 0000



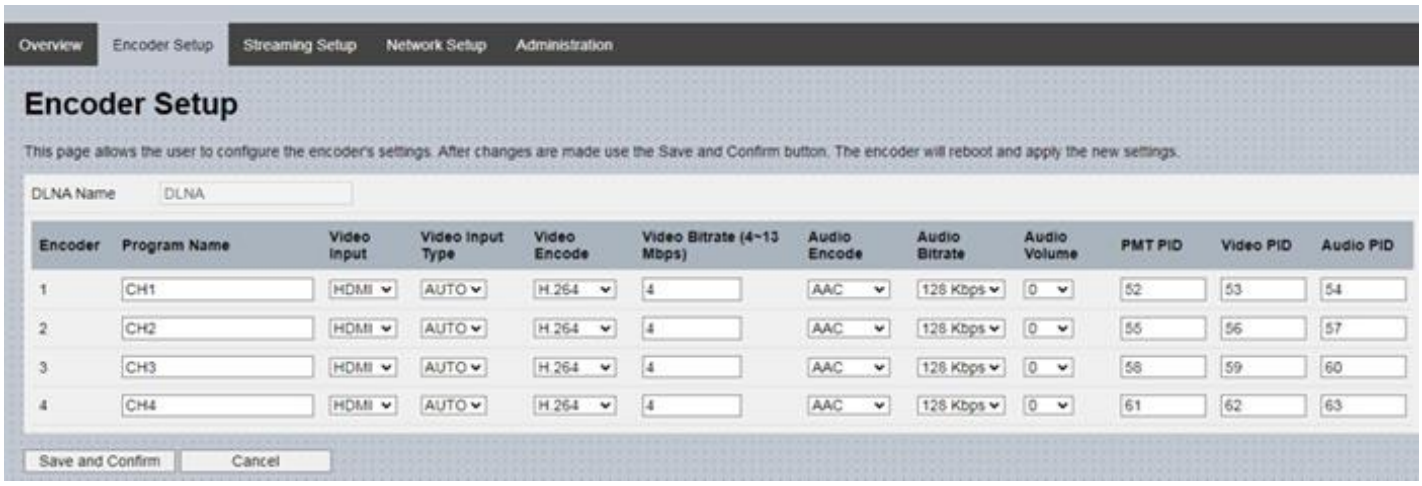
5.2.2 Admin menu overview

Display the current status and settings for Encoder & Streaming



5.3 Settings

5.3.1 Encoder setup

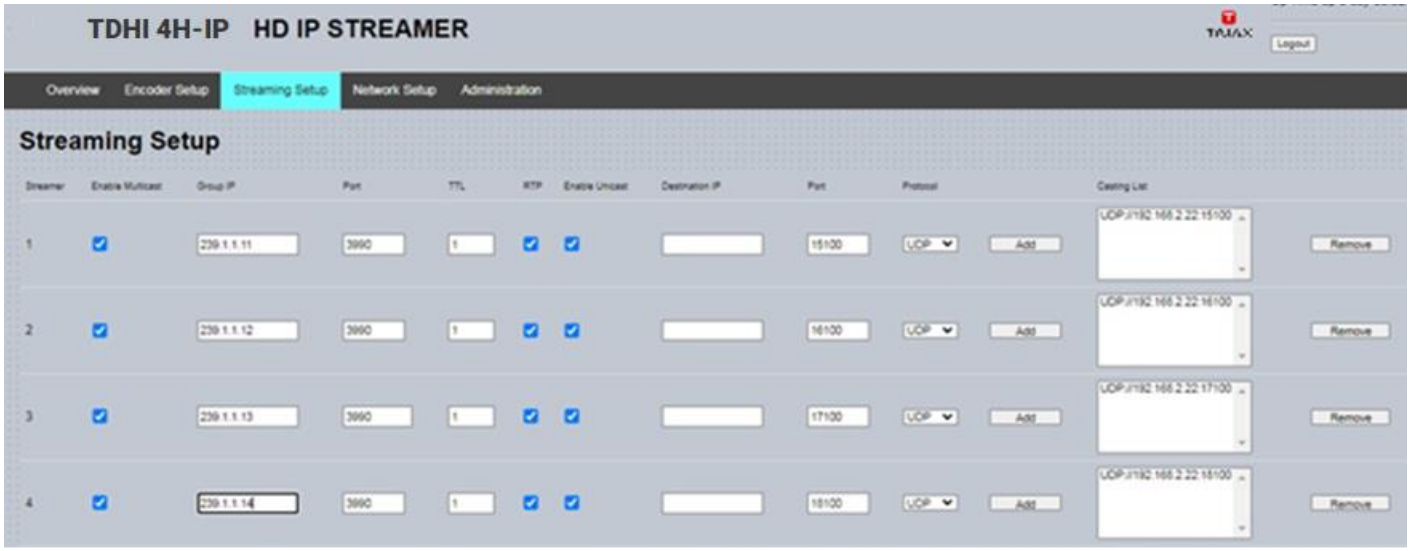


5.3.2 Local save

Perform “Save and Confirm” once all parameters are set.

Changes made to an individual setup tab may require the installer to perform a apply to the device if you are only making changes to one parameter of the IP streamer

5.3.3 Streaming setup



Use the Streaming Setup Page to setup your required streaming method.

To stream using Multicast and Unicast enabling function.

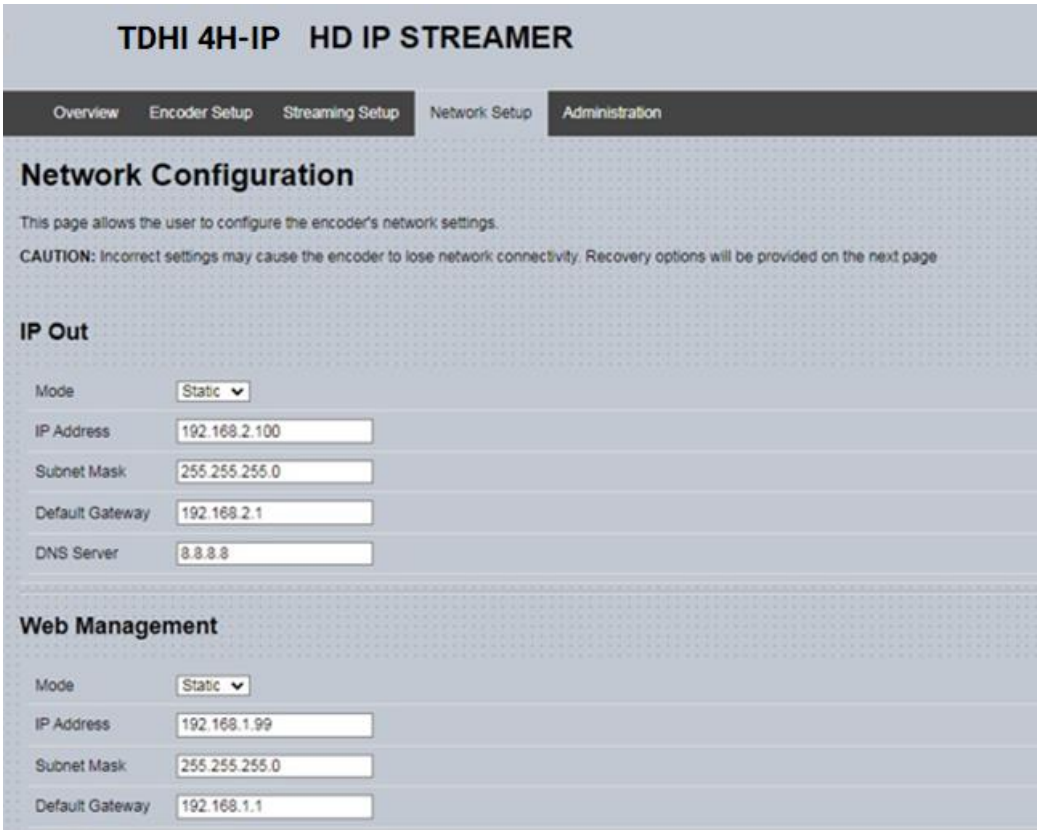
“Save and Confirm” all changes/settings.

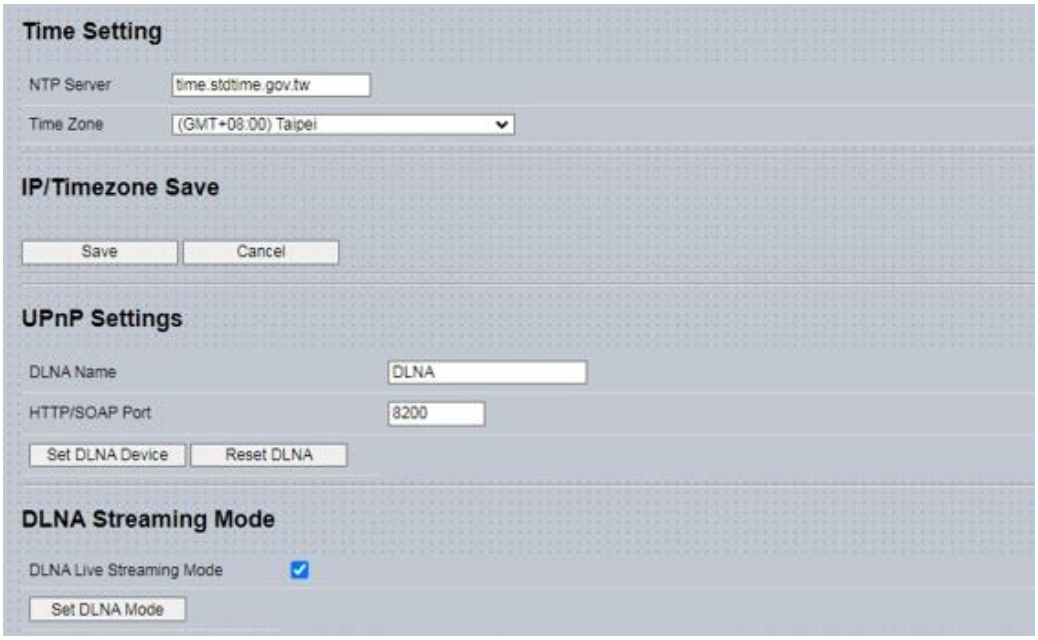
Note: Default IP address (Multicast UDP) is 235.0.0.0 for streamers. Ensure when setting up the streamers that a unique Multicast UDP address is used for streamer.

5.3.4 Network configuration

Use the IP Setup Tab to configure the device's IP address, Mask, Gateway,

Perform apply once all parameters are set.





5.3.5 Administration

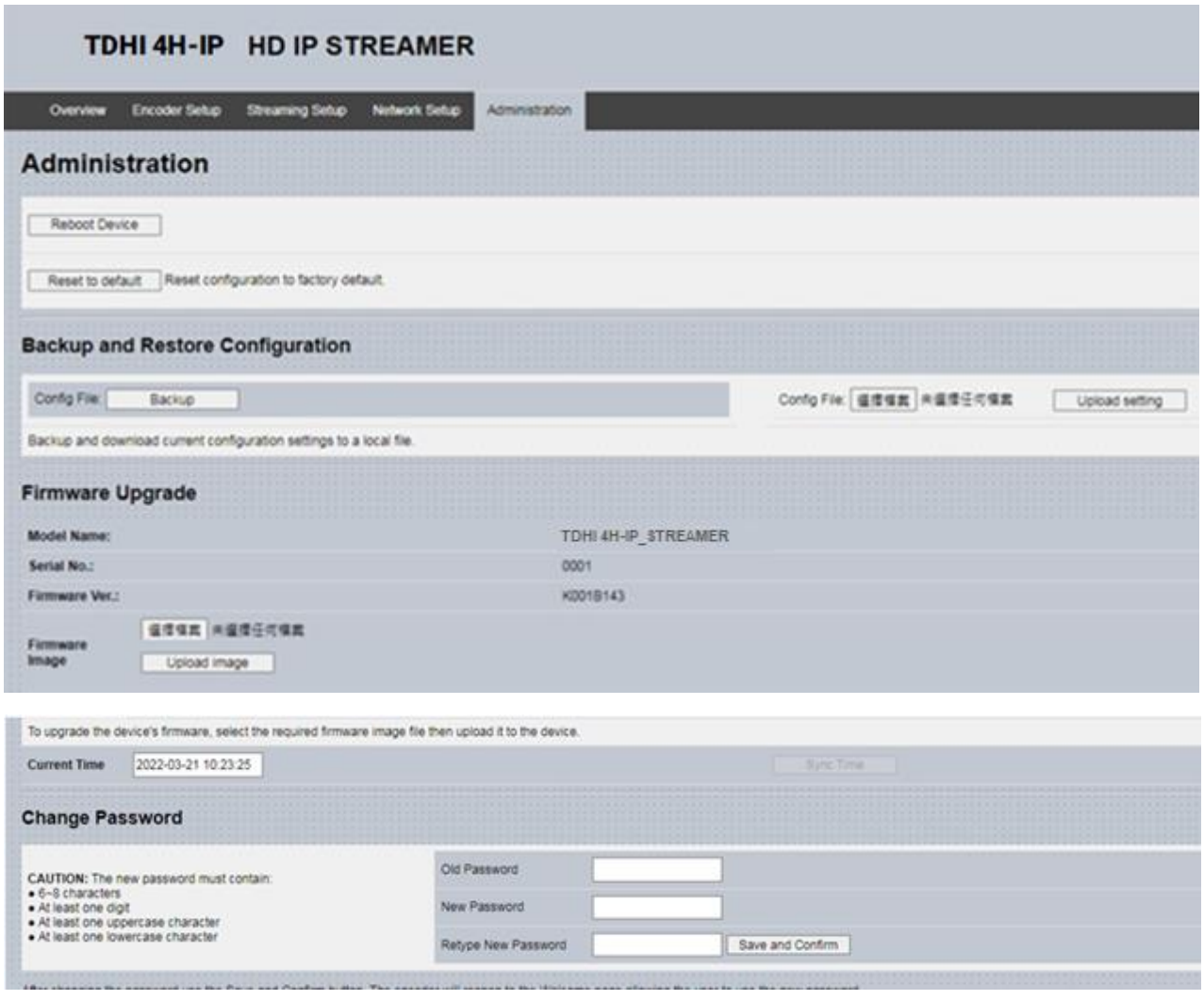
Selecting “Reset to default” will automatically reset all saved settings back to factory default settings.

All saved settings will be lost.

Use the Admin Setup Tab to set the device’s reboot, configuration, software update, password change,

Administration Page Functions	Actions
Reboot Device	Reboot device.
Reset to Default	Reset configuration to factory default.
Configuration	User can upload the file with pre-saved configuration settings to device.
Firmware Upgrade	Upload a saved firmware file
Change Password	Create and save new password for GUI

To upload a configuration file- simply click “Choose File” then locate the file you want to upload. Click “Upload” to install the configuration files. This function is helpful to the installer when installing a large number of encoders in a single system.



Saving your configuration files:

We highly recommend you save your configuration files.

Simply Click the “Backup” button and the config files will be saved to your computer.

To upload a configuration file- simply click “Choose File” then locate the file you want to upload.

Click “Upload Settings” to install the configuration files.

This function is helpful to the installer when installing a large number of streamer in a single system.

We highly recommend saving the settings of your streamer.

A “ backup_ param. config” file will be created. Locate the file follow up browser settings.

5.4 The menu tree

5.4.1 Streamer Web-UI

MAIN		Layer 1 (ITEM)		Layer 2(DEFAULT)	Layer 2 (VALUE)
Encoder setup	1	Device Name		TRIAX DLNA	
	2	Program Name		CH1	
	3	Video Input		HDMI	YPbPr, CVBS , HDMI
	4	Video Input Type		AUTO	HDMI: AUTO YPbPr:NTSC1080i, PAL 1080i, NTSC 720P, PAL 720P ,NTSC 480P , PAL 576P, NTSC 480i, PAL 576i CVBS:NTSC 480i, PAL 576i
	5	Video Encode		H.264	H.264, MPEG-2
	6	Video Bitrate(4~13 Mbps)		10	4~13 Mbps
	7	Audio Encode		AAC	MPEG-2, AAC
	8	Audio Bitrate		128 Kbps	384,320,256,224,192,160,128, 112,96,64
	9	PMT PID		52	50~8190
	10	Video PID		53	50~8190
	11	Audio PID		54	50~8190
	12	Save and Confirm /Cancel			
Streaming Setup	1	MultiCasting	Enable MultiCast		
	2		Group IP	235.0.0.0	
	3		MultiCast Port	5301	1~65535
	4		MultiCast TTL	1	1~255
	5		Enable RTP		
	6	UniCasting	Enable UniCast		
	7		Destination IP		
	8		Destination Port	15100	
	9		Protocol	UDP	UDP/RTP
	10	Casting List		15100	
	12	Save and Confirm /Cance			
Network Configuration	1	IP Out	Mode	Static	DHCP, Static
	2		IP Address	192.168.2.100	
	3		Subnet Mask	255.255.255.0	
	4		Default Gateway	192.168.2.1	
	5		DNS Server	0.0.0.0	
	6	Web Management	Mode	Static	DHCP, Static
	7		IP Address	192.168.1.99	
	8		Subnet Mask	255.255.255.0	
	9		Default Gateway	192.168.1.1	
	10	Time Setting	NTP Server	time.stdtime.gov.tw	
	11		Time Zone	Pls. use local NTP server	
	12	IP/Timezone	Save /Cancel		
	13	UPnP Settings	Device Name	TRIAX DLNA	
	14		HTTP/SOAP Port	8200	
	15		Set DLNA Device /Reset DLNA		
	16	DLNA Streaming Mode	DLNA Live Streaming Mode	Enable	Enable(HDMI,YPbPr,CVBS Input) Disable(USB Storage)
	17		Set DLNA Mode		

5.4.2 Streamer Configuration via Front Panel LCD

MAIN		Layer 1 (ITEM)	Layer 2(DEFAULT)	Layer 2 (VALUE)
System	1	Device Name	TRIAX DLNA	
	2	NTP Server	time.stdtime.gov	
	3	Time Zone	Pls. use local NTP server	
	4	HTTP/SOAP Port	08200	
	5	Change Password		
	6	Firmware Version	K001B1129	
	7	Loader Version	L001B004	
	8	Encoder Version	E001B005	
IP Out	1	DHCP(eth0)	no	
	2	IP(eth0)	192.168.002.100	
	3	Sub Mask(eth0)	255.255.255.000	
	4	Getway(eth0)	192.168.002.001	
	5	DNS(eth0)	0.0.0.0	
Web Management	1	DHCP(eth1)	no	no, yes
	2	IP(eth1)	192.168.001.099	
	3	Sub Mask(eth1)	255.255.255.000	
	4	Getway(eth1)	192.168.001.001	
	5	DNS(eth1)	0.0.0.0	
Encoder 1	1	PROG. name	CH1	
	2	Video Input	HDMI	YPbPr, CVBS, HDMI
	3	Input Type	AUTO	HDMI: AUTO YPbPr:NTSC 1080i, PAL 1080i, NTSC 720P, PAL 720P,NTSC 480P, PAL 576P, NTSC 480i, PAL 576i CVBS:NTSC 480i, PAL 576i
	4	Video Encode	H.264	H.264, MPEG-2
	5	Video Bitrate	10	4~13 Mbps
	6	Audio Encode	AAC	MPEG-2, AAC
	7	Audio Bitrate	128 Kbps	384,320,256,224,192,160,128, 112,96,64
	8	PMT PID	0052	50~8190
	9	Video PID	0053	50~8190
	10	Audio PID	0054	50~8190
Streamer 1	1	Multicast	no	no, yes
	2	Multicast TTL	001	
	3	Multicast GRP	235.000.000.000	
	4	Multicast RTP	no	no, yes
	5	Multicast Port	05301	
	6	Unicast Enable	no	no, yes
	7	Unicast Protocol	UDP	UDP/RTP
	8	Unicast IP1,2,3,4	000.000.000.000	
	9	Uni-IP1,2,3,4 UDP	UDP	UDP/RTP
	10	Uni-IP1,2,3,4 Port	00001	
Factory Default	1	Restore Default ?	Yes	
	2	Save Config?	no	no, yes

5.4.3 Product specification

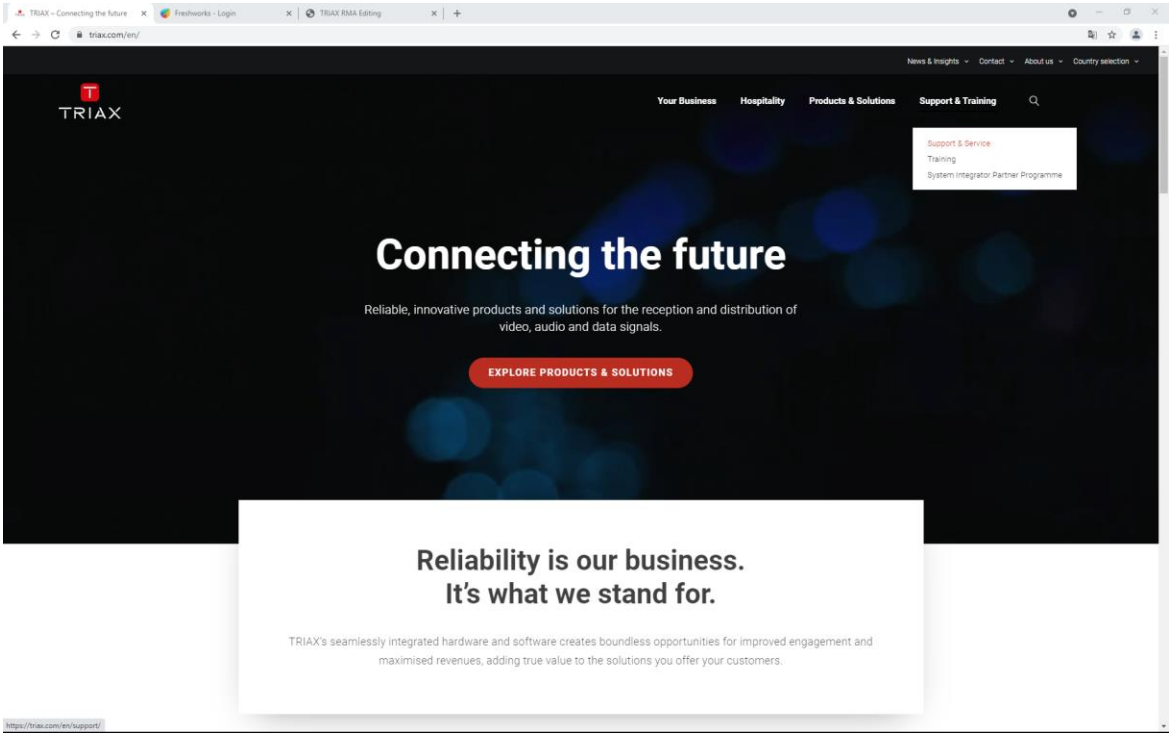
Interfaces	
Ethernet (output)	1Gbps, RJ-45
Video Input	HDMI, YPbPr, CVBS
Audio Input	Analog or HDMI
Encoding	
Video Format	HD:H.264 AVC/HP@L4.0 SD:MPEG-2/MP@ML
Audio Format	MPEG2/AAC
Resolution	HD: 1080P25,1080P30, 1080i 50/60 Max SD 480i,576i
Video bitrate	13 Mbps MAX
Audio bitrate	384Kbps
Input	
Video Input	HDMI:1080P 25/30, 1080i 50/60 Max, YPbPr(1080i, 720P, 576i/P , 480i/P), CVBS: NTSC, PAL
Y Input Level	1V±0.2Vp-p
Pb/Pr Input Level	0.7V±0.1Vp-p
CVBS Input Level	1V±0.2Vp-p
Streaming Protocols	UDP/RTP multicasting UDP/RTP unicasting DLNA
Management / Control	
Web Management	RJ-45 Ethernet port
GENERAL	
Power Supply	AC 100~240V 50/60Hz
Consumption	18 W
Languages	English
Dimensions	19” * 12.5” * 1.75”
Weight	2800g

6 Support

Support information in your language will be found on our country sites.

Go to www.triax.com and select your country.

Below the Support & Training menu you will find additional help and support information.



7 Terms and Abbreviations

Term	Explanation
TBA	To Be Added
TBD	To Be Determined
PID	Packet Identification; According to standard ISO 13818-1
SID	Service Identification; According to standard ISO 13818-1
TSID	Transport Stream Identification
NIT	Network Identification Table; According to standard ETSI EN 300 468
NID	Network Identification used in NIT; According to standard ETSI EN 300 468
ONID	Original Network Identification used in NIT; According to standard ETSI EN 300 468
end-user	A person that uses a TV or receiver.
Installer	A person that installs, deploys and maintains the headend system
i/f	Interface
TS	Transport Stream; According to standard ISO 13818-1
ES	Elementary Stream; According to standard ISO 13818-1
Service	According to ETSI EN 300 468