



User Manual

TDHI 4H-IP HD IP Streaming Server

Article				Article no.
TDHI 4H-IP	HD IP Streaming Server			492081
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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 instructions. However, the warranty may be void in the following cases:

- Repair, product modification or alteration have been performed by unauthorized service personnel
- Damage caused by accidents, including but not limited to, lightning, water, fire, or moisture ingress
- 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 device meets the EU **EMC, RoHS** and **LVD (Safety)** directives as follows:
 - **EMC directive 2014/30/EU**
EN 55032 : 2015 + A11:2020
EN 55035 : 2017 + A11:2020
EN 61000-3-2 : 2014
EN 61000-3-3 : 2013
 - **RoHS2 directive 2011/65/EU**
EN 63000 : 2018
 - **LVD directive 2014/35/EU.**
EN IEC 62368-1 : 2020 + A11:2020
- The safety requirements are according to the standards EN 62368-1 and must be observed, especially concerning equipotential bonding and earthing.
- Observe the relevant country-specific standards, regulations and guidelines on the installation and operation of antenna systems.
- 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 connectors are tightly mounted, and that cables and connectors are of the right quality / screening.
- 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 paneling, wooden beams, plastic covered panels and plastic panels are all examples of combustible bases.

**Back up battery:**

The unit includes a pre-installed Lithium battery (CR 2032 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 or 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.
- Do not expose the unit to rain or moisture.
- Install the unit in a dry location without infiltration or condensation of water. In case of the formation of condensation wait until the system is completely dried.
- Do not expose it to dripping or splashing.
- If any liquid should accidentally fall into the cabinet, disconnect the power plug.
- Install the unit where it is protected from direct exposure to sunlight.
- Do not install the unit within the immediate vicinity of heat sources.
- Do not install the unit in cabinets or recesses which are not ventilated.
- Do not place any vessels containing liquids on the unit.
- Do not place anything on the unit which could initiate fires.
- Place the unit on a flat, hard and stable surface.

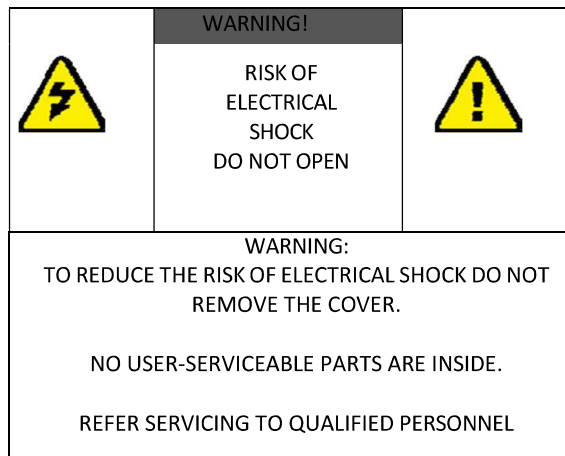
**To avoid any risk of overheating**

- Install the unit in a well aired location and keep a minimum distance around the apparatus for sufficient ventilation.
- Do not place anything on the unit that might cover the ventilation holes.
- Do not install the product in a dusty place.
- Use the apparatus only in moderate climates (not in tropical climates).
- Respect the minimum and maximum temperature specifications.
- Ensure that the unit is adequately ventilated.
- Put the Streamer in a properly ventilated area, away from direct sunlight or any source of heat.



To avoid any risk of electrical shocks

- The Streamer must be correctly grounded according to applicable national regulations.
- For a complete disconnection from the mains, the mains plug must be pulled out of the mains socket. Ensure that the mains plug can be pulled out without difficulties.
- Be sure the power cord is routed so that it will not be stepped on or pinched by heavy items.
- Pull out the power plug when making connections of cables, such as any Media player device connection.
- Always disconnect the power cord from the power outlet if it is left unattended for a long period of time and when you are not using your Streamer kit. This reduces the risk of electric shocks or fire and will help protect the product from lightning.
- To avoid electrical shock, do not open the housing.



WEEE disposal



Electronic devices should never be disposed of in the household rubbish. In accordance with directive 2011/65/EU of the European Parliament and the European Council from June 8, 2011 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.

2 Declaration of Conformity

Declaration of Conformity

The manufacturer: TRIAX UK | Treorchy | RCT | CF42 6DL | UK

declares that the product: 492081 TDHI 4H-IP (HD IP Streaming Server)

is compliant to the directives: LVD – 2014/35/EU
RoHS – 2011/65/EU,
EMC – 2014/30/EU

by meeting the following harmonized standards:

EMC directive 2014/30/EU

EN 55032 : 2015 + A11:2020

EN 55035 : 2017 + A11:2020

EN 61000-3-2 : 2014

EN 61000-3-3 : 2013

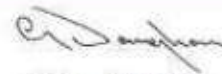
RoHS2 directive 2011/65/ EU

EN 63000 : 2018

LVD directive 2014/35/ EU

EN IEC 62368-1 : 2020 + A11:2020

 TRIAX TRIAX UK


Glenn Vaughan
CEO

2023-12-13

3 Revision history

Version 1.0	user manual - First release	05/2022
Version 1.1	update with new pictures	05/2023
Version 1.2	document update	08/2023
Version 1.3	document update	05/2024
Version 1.4	document update	07/2025

4 TDHI 4H-IP STREAMING SERVER Overview

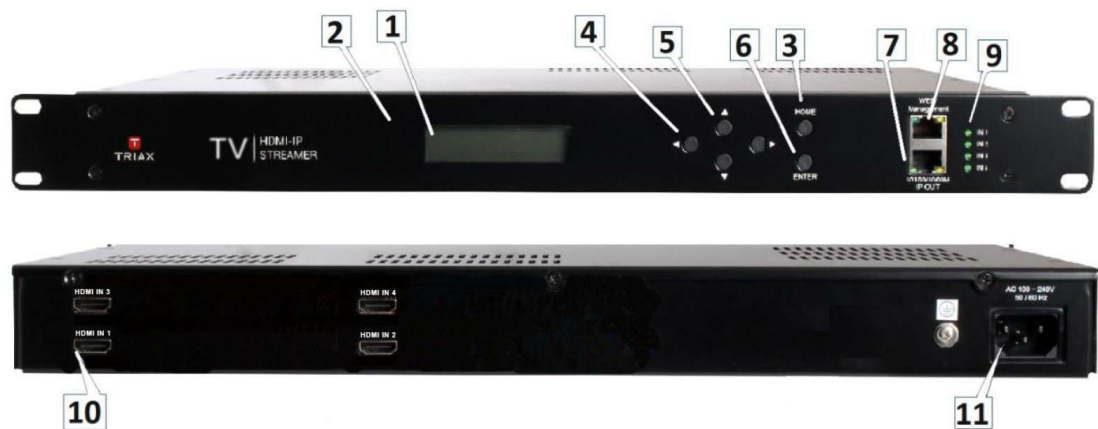
4.1 Product description

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

4.1.1 Description of controls and components

1	TDHI 4H-IP	Model name
2	LCD Display	Configuration and system status
3	Keypad / Home	Return to previous or Start menu
4	Keypad / Left & Right	Move Right / Left between menu / characters
5	Keypad / Up & Down	Increase / Decrease the field value Increase / Decrease value of the password
6	Keypad / 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
11	AC input	AC 100~240V / 50~60Hz

Front and rear panels



4.2 Technical data

INTERFACES	
Ethernet (output)	1Gbps, RJ-45
Video Input	HDMI
Audio Input	HDMI
ENCODING	
Video Format	HD:H.264 AVC/HP@L4.0 SD:MPEG-2/MP@ML
Audio Format	MPEG2/AAC
Resolution	HD: 1080P25, 1080P30, 1080i50/60 Max SD 480i,576i
Video bitrate	13 Mbps MAX
Audio bitrate	384Kbps
INPUT	
Video Input	HDMI: 1080P 25/30, 1080i 50/60 Max
Streaming Protocols	UDP/RTP multicasting UDP/RTP unicasting
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

5 TDHI 4H-IP STREAMING SERVER Mounting

5.1 Installing the device in a rack

The TDHI 4H-IP Streaming Server must be 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!

5.2 Packaging content

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

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

5.3 Connecting the device

Potential equalization:

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

6 TDHI 4H-IP STREAMING SERVER Installation

6.1 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. 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'.

6.1.1 Static IP address

Set a static IP address on your computer in the range 192.168.1.###

The IP streaming server will use an assigned Web IP management address of: "192.168.1.99 "and an IP out address of: "192.168.2.100" as default. The IP Settings are Static mode.

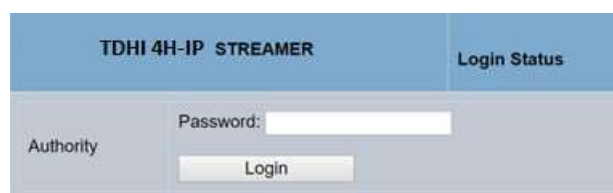
6.1.2 Status LED

LED: Indicates device is encoding (HDMI Only).

6.2 Interface (GUI)

6.2.1 Login

Login Password:
Default Password: 0000



When setting up the unit for the first time the Installer MUST change the password to an individual and unique

6.2.2 Admin menu overview

Display the current status and settings for Encoder & Streaming.

TDHI 4H-IP STREAMER

Overview

Encoder Setup

Streaming Setup

Network Setup

Administration

Overview

Model Name

TDHI_4H_IP_STREAMER

MAC Address

B8:87:1E:31:43:35

Serial Number

2024020001

Firmware Version

K001B022.16.5

Streaming

Multicast=4, Unicast=4

UBoot Version

L001B006

Encoder	Video Input Source	Video Output Format	Video Output Bitrate	Audio Input Source	Audio Output Format
CH1	1920X1080_60I	H.264	4Mbps	HDMI	AAC
CH2	1920X1080_60I	H.264	4Mbps	HDMI	AAC
CH3	1920X1080_60I	H.264	4Mbps	HDMI	AAC
CH4	1920X1080_60I	H.264	4Mbps	HDMI	AAC

6.3 Settings

6.3.1 Encoder setup

TDHI 4H-IP STREAMER

Up Time up 0 day 00:03:35

TRIAX

Logout

Overview

Encoder Setup

Streaming Setup

Network Setup

Administration

Encoder Setup

This page allows the user to configure the encoder's settings. After changes are made use the Save and Confirm button. The encoder will reboot and apply the new settings.

Encoder	Program Name	Video Input	Video Input Type	Video Encode	Video Bitrate (4~13 Mbps)	Audio Encode	Audio Bitrate	Audio Volume	PMT PID	Video PID	Audio PID
1	CH1	HDMI	AUTO	H.264	4	AAC	128 Kbps	50	52	53	54
2	CH2	HDMI	AUTO	H.264	4	AAC	128 Kbps	50	55	56	57
3	CH3	HDMI	AUTO	H.264	4	AAC	128 Kbps	50	58	59	60
4	CH4	HDMI	AUTO	H.264	4	AAC	128 Kbps	50	61	62	63

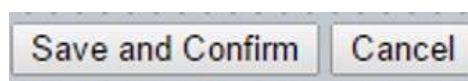
Save and Confirm

Cancel

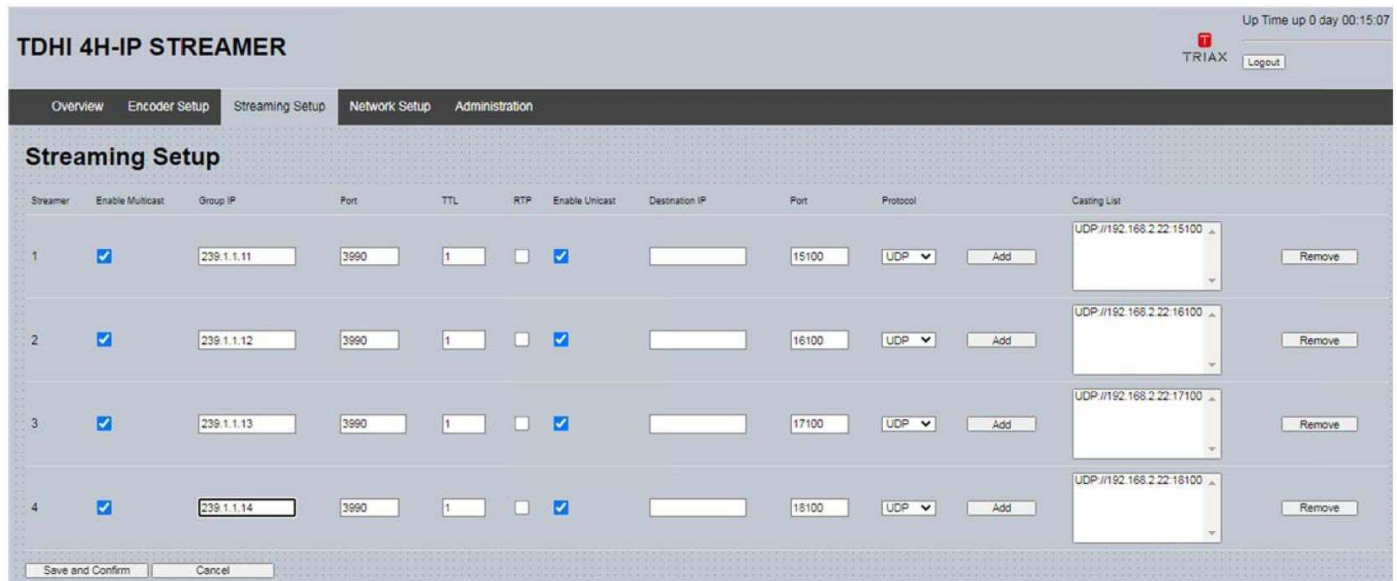
6.3.2 Local save

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

Changes made to an individual setup tab may require the Installer to perform an ‘apply’ to the device if only making changes to one parameter of the IP Streamer.



6.3.3 Streaming setup



Streamer	Enable Multicast	Group IP	Port	TTL	RTP	Enable Unicast	Destination IP	Port	Protocol	Casting List
1	☒	239.1.1.11	3990	1	☐	☒		15100	UDP	UDP://192.168.2.22:15100
2	☒	239.1.1.12	3990	1	☐	☒		16100	UDP	UDP://192.168.2.22:16100
3	☒	239.1.1.13	3990	1	☐	☒		17100	UDP	UDP://192.168.2.22:17100
4	☒	239.1.1.14	3990	1	☐	☒		18100	UDP	UDP://192.168.2.22:18100

Save and Confirm Cancel

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 the Streamer.

6.3.4 Network configuration

This page allows the user to configure the encoder's network settings.

Use the ‘Network Setup’ Tab to configure the device’s IP address, Mask, Gateway for IP Out and Web Management.

Click ‘Save’ once all parameters, including the IP/Timezone, are set.

CAUTION: Incorrect settings may cause the encoder to lose network connectivity. Recovery options will be provided on the next page.

TDHI 4H-IP HD IP STREAMER

Overview
Encoder Setup
Streaming Setup
Network Setup
Administration

Network Configuration

This page allows the user to configure the encoder's network settings.

CAUTION: Incorrect settings may cause the encoder to lose network connectivity. Recovery options will be provided on the next page

IP Out

Mode Static ▼

IP Address

Subnet Mask

Default Gateway

DNS Server

Web Management

Mode Static ▼

IP Address

Subnet Mask

Default Gateway

Time Setting

NTP Server

Time Zone (GMT+08:00) Taipei ▼

IP/Timezone Save

6.3.5 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 the configuration to factory default.
Configuration	User can upload a file with a pre-saved configuration to device.
Firmware Upgrade	Upload a new firmware file
Change Password	Create and save a new password for the 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.

TDHI 4H-IP STREAMER

Up Time up 14 days
04:29:11



Logout

Overview

Encoder Setup

Streaming Setup

Network Setup

Administration

Administration

Reboot Device

Reset to default

Reset configuration to factory default.

Backup and Restore Configuration

Config File:

Backup

Config File:

Choose File

No file chosen

Upload setting

Backup and download current configuration settings to a local file.

Firmware Upgrade

Model Name:

TDHI_4H_IP_STREAMER

Serial No.:

23124001

Firmware Ver.:

K001B022.16.8

To upgrade the device's firmware, select the required firmware image file then upload it to the device.

Choose File

No file chosen

Firmware Image

Upload image

To upgrade the device's firmware of the encoders, select the required firmware image file then upload it to the device.

Encoder 1

Encoder 2

Encoder 3

Encoder 4

Version:0d 02

Version:0d 02

Version:0d 02

Version:0d 02

Choose File

No file chosen

Upload image

Current Time

2025-07-08 15:01:55

Sync Time

Change Password

CAUTION: The new password must contain:

- 6~8 characters
- At least one digit
- At least one uppercase character
- At least one lowercase character

Old Password

New Password

Retype New Password

Save and Confirm

After changing the password use the Save and Confirm button. The encoder will reopen to the Welcome page allowing the user to use the new password.

Software License

You can download all of the petalinux open source code & license files from [Xilinx](#).

Download

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 Setting” to install the configuration files.

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

We highly recommend saving the configuration settings of your Streamer.

A “backup_ param. config” file will be created.

6.4 The menu tree

6.4.1 Streamer Web-UI

MAIN	Layer 1 (ITEM)		Layer 2 (DEFAULT)	Layer 2 (VALUE)
Encoder setup	1	Program Name	CH 1	
	2	Video Input	HDMI	HDMI
	3	Video Input Type	AUTO	HDMI AUTO
	4	Video Encode	H.264	H.264, MPEG-2
	5	Video Bitrate (4~13 Mbps)	4	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	52	50~8190
	9	Video PID	53	50~8190
	10	Audio PID	54	50~8190
	11	Save and Confirm /Cancel		
Streaming Setup	1	MultiCasting	Enable MultiCast	
	2		Group IP	235.0.0.0
	3		MultiCast Port	5301
	4		MultiCast TTL	1
	5		Enable RTP	
	6	UniCasting	Enable UniCast	
	7		Destination IP	
	8		Destination Port	15100
	9		Protocol	UDP
	10	Casting List	15100	UDP, RTP
	11	Save and Confirm /Cancel		
Network Configuration	1	IP Out	Mode	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	8.8.8.8
	6	Web Management	Mode	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	

6.4.2 Streamer Configuration via Front Panel LCD

MAIN		Layer 1 (ITEM)	Layer 2(DEFAULT)	Layer 2 (VALUE)
System	1	NTP Server	time.stdtime.gov	
	2	Time Zone	Pls. use local NTP server	
	3	Change Password		
	4	Firmware Version	K001B022.16.5	
	5	Loader Version	L001B006	
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)	8.8.8.8	
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	
Encoder 1	1	PROG. name	CH1	
	2	Video Input	HDMI	HDMI
	3	Input Type	AUTO	HDMI: AUTO
	4	Video Encode	H.264	H.264, MPEG-2
	5	Video Bitrate	4	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 IP 1,2,3,4	000.000.000.000	
	9	Uni-IP 1,2,3,4 UDP	UDP	UDP/RTP
	10	Uni-IP 1,2,3,4 Port	00001	
Factory Default	1	Restore Default?	Yes	
	2	Save Config?	no	no, yes

6.4.3 Product specification

Interfaces	
Ethernet (output)	1Gbps, RJ-45
Video Input	HDMI
Audio Input	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,
Streaming Protocols	UDP/RTP multicasting UDP/RTP unicast
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

7 TDHI 4H-IP STREAMING SERVER connected to TRIAX headend

The TDHI 4H-IP STREAMING SERVER connects to the TRIAX headend systems via a FREE of charge 4 IP-IN license. Please contact your TRIAX support team for further information and for receiving the headend license.

8 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 streamer/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

