User Manual

HD-H265-1P

H.265 / H.264 HDMI Streaming Encoder with PoE

Version: HD-H265-1P_2020V1.0

Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated till September, 2020. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

All product function is valid till 2020-09-01.

Trademarks

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FCC Statement

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. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.

SAFETY PRECAUTIONS

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- To prevent fire or shock hazard, do not expose this equipment to an environment of high humidity and/or dust. Do not use in an unprotected outdoor installation or any area classified as overly damp or wet.
- The temperature for installation should be kept between 0°C - 60°C. Avoid direct sunlight exposure or extreme changes of temperature over a short period of time.
- Do not disassemble the unit or put it on an unstable base.
- Do not drop it and avoid heavy impact.
- Ventilation: Any openings in the enclosure are provided for ventilation and to ensure reliable operation of the unit and to protect it from overheating. These openings, if any, must not be blocked or covered. This unit should not be placed in a built-in installation unless proper ventilation is provided.
- Cleaning: Unplug the unit from the mains outlet before cleaning. Do not use liquid cleaners or aerosol cleaners, only use a damp cloth.
- Do not overload outlets and extension cords as this may result in a risk of fire or electric shock.
- Enclosure Entry of any kind is dangerous. Never push objects of any kind, including liquids, into this unit through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock.
- Service: Do not attempt to open or service this unit yourself as opening or removing covers may expose you to dangerous voltage of other hazards.
- There are no user-serviceable parts inside the unit. If the unit requires service please contact your authorized dealer, or an authorized repair service company.

Table of Content

1. Product Introduction

1.1 Introduction to H.264 / H.265 HDMI Video Encoder

The H.264 / H.265 HDMI Streaming Encoder HD-H265-1P is a hardware device used for high-definition video signal up to 1080P@60Hz encoding and network transmission powered by PoE. Using the latest and high-efficient HD digital video compression technology H.264 / H.265, with the characteristics of reliable, high-definition, low bitrate and low latency.

The launch of this product, using a hardware DSP encoder, fills the gap in the industry, which is a direct replacement for the traditional capture card or software coding method. Input the HDMI high-definition video signal to conduct the encoding process, after compression processing of the DSP chip, output the standard TS network stream.

The system is more stable and image quality is more perfect, which can be used in a wide variety of needs for high-definition video and high-resolution and high frame rate acquisition-based IP network transmission. Its powerful scalability makes it more easily to respond to the needs of different industries and can be used as live video encoder too.

Industrial controlled, precision design, small size, easy installation, the power consumption is less than 5W, offers an easy and energy efficient installation.

1.2 Package List

- 1x HD-H265-1P H.265 / H.264 IP Encoder with HDMI input
- 1x Power Supply (12V DC 1A) [100 V - 240 V AC 50/60 Hz input range]
- 1x User Manual

Notes:

- Please confirm if the product and the accessories are all included, if not, please contact with the dealers.
- Please contact your dealer immediately if any damage or defect in the components is found.

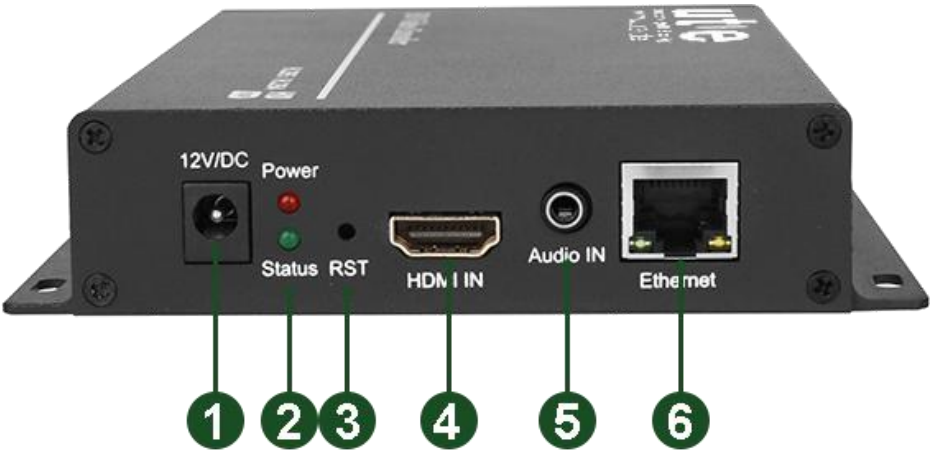
1.3 Features

- High-performance, high stability and high efficiency hardware encoding for audio & video - adopts professional encoding chip, embedded HiLinux System
- Save bandwidth up to 33% when choose H.265 codec, i.e 1.5 MBps bandwidth will be workable to transport 1080P video
- Hardware encoder with H.265 / H.264 video coding efficiency
- Works with online live broadcast platform, such as YouTube, Facebook, Ustream, Twitter, etc
- Works with IPTV (Wowza, Nginx Media Server, etc.)
- Support standard H.265 / H.264 HDMI Encoding
- Support H.264 BP / MP / HP
- Support AAC / g.711 advanced audio coding format quality
- One channel H.265 & H.264 HDMI input
- CBR / VBR rate: 16kbps ~ 32mbps
- Network interface full duplex mode with 1000M speed
- Mainstream and secondary stream can be pushed to different servers
- Support resolutions up to 1080p @60Hz
- Support resolution customized settings and main stream preset resolutions
- Support image parameter settings
- Support HTTP / HLS / FLV / RTSP / RTMP / RTMPS / UDP/RTP (Unicast/Multicast) Stream Protocols and ONVIF, SRT
- Support output Multi RTMP(S) (Main stream & Sub stream) to different Media Streaming Server
  The mainstream and side stream use the different network protocols for transmission
- Support Text and image insert as Stream Logo for Main stream & Sub stream
- Automatic detect the input video signals, output stream will show no signals when input signals interrupted
- Output Stream bitrate adjustable
- Support HDMI embedded audio or external analog audio input
- Web interface management authority
- Support firmware upgrade
- Support remote control via router port forward

1.4 Applications

- IPTV (Wowza, Nginx Media Server, etc.)
- Online Live Broadcast (YouTube, Facebook, Ustream, Twitter, etc.)
- NVR (Network Video Recorder)
- Recording System / Software
- Digital Signage
- Teaching / Campus Broadcast
- Hotel TV system
- Video Conference

2. Panel Description



① **12V/DC:** Power input.

② **Power LED:** The LED illuminates red when the device is powered on.
Status LED:

- The LED will flash while holding on the reset button. It means reset successfully when the lights off.
- Slow Flashing means the video input, image capturing and compression is normally working.
- If the indicator light keeps on, it means the image acquisition and compression is with some problem.
- If the indicator flashes slowly but the stream cannot be played, it means maybe there's problem with the streaming server.

③ **RST:** Reset button
It is used to reset the device. After power on, hold it on for about 15 seconds to reset the device to default IP (192.168.1.168)

④ **HDMI IN:** Video input

⑤ **Audio IN:** External analog audio input, use to combine analog audio sources with HDMI signals

⑥ **ETHERNET:** 10/1000M Ethernet/ network port with PoE

🕮 **Note:** Pictures shown in this manual are for reference only, different model and specifications are subject to real product.

3. WEB Settings

The H.265/ H.264 HDMI Streaming Encoder HD-H265-1P can be configurated and controlled by the WEB GUI interface.
It allows users to interact with the Streaming Encoder through graphical icons and visual indicators.

3.1 Initialization

Input the power supply to turn on encoder and hold a pin to press RST on the encoder for 15 seconds, it will be restarted and initialized.
The default Route IP of dash board is 192.168.1.168 after initialization.

3.2 PC Network Settings

Change the administrator's computer IP address as: 192.168.1.* to avoid IP conflicting with dashboard IP. (mark "*" numbers range will be 0-254 except 168)

3.3 Reset to factory default

Input the power supply to turn on encoder and press reset button (RST) on the encoder's front constantly for about 15 seconds.
The system will be reset and restarted.
The default IP of the encoder is 192.168.1.168 after reset.

4. System Connection

4.1 Usage Precautions

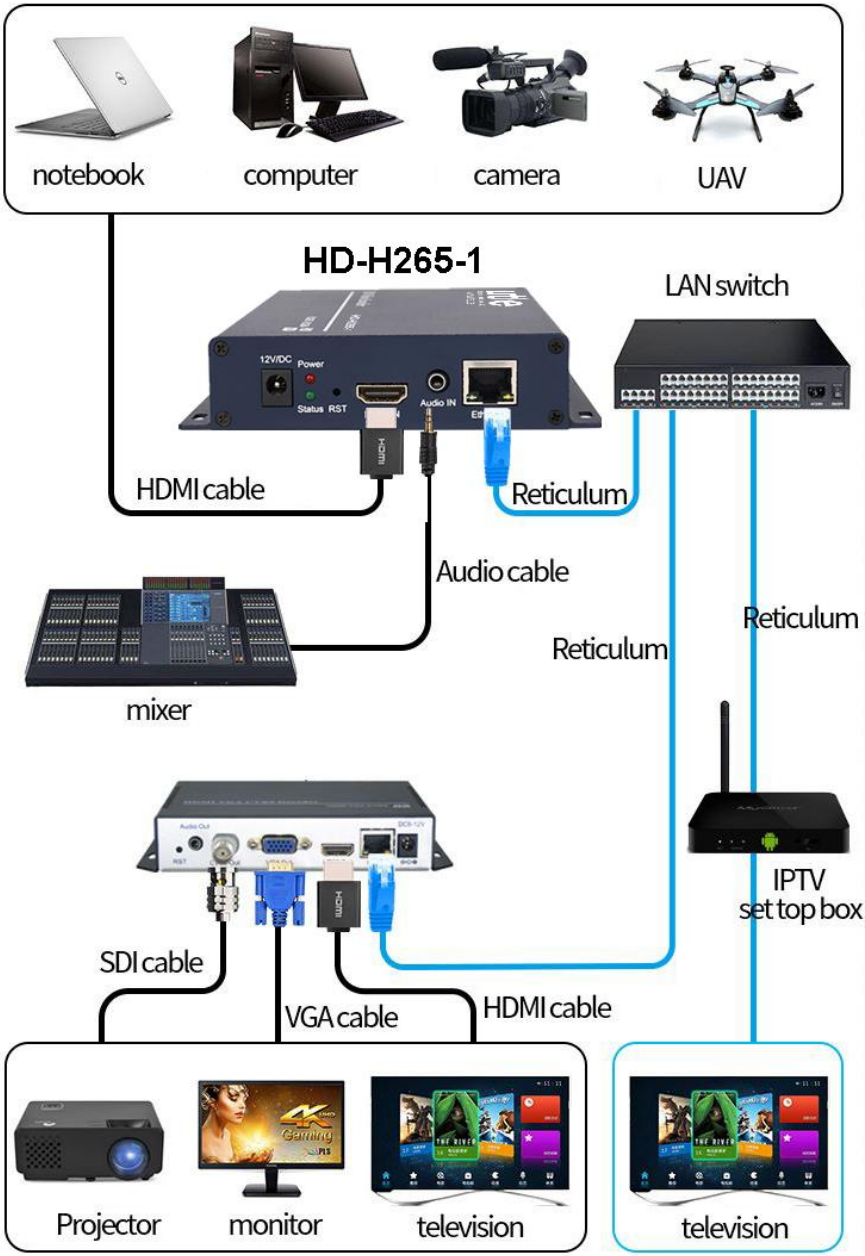
- System should be installed in a clean environment and has a prop temperature and humidity.
- All of the power switches, plugs, sockets and power cords should be insulated and safe.
- After initialization all devices should be connected before power on.

4.2 System Diagram HD-H265-1P

The following figures show typical applications that can be realized with HDMI Streaming Encoder HD-H265-1P.

4.2.1 WAN Connection

4.2.2 LAN Connection



5. Web-based GUI Access

The H.265/ H.264 HDMI Streaming Encoder HD-H265-1P can be configurated and controlled via web-based GUI.
It allows users to interact with the Streaming Encoder through graphical icons and visual indicators.

Connect the LAN port of HD-H265-1P with a straight-through CAT cable with the PC that you prepared as described in chapter 3.2.

5.1 Log-In to the System

To access a standard WEB browser is best.

5.1.1 Default Settings

The System comes with default user and password.

- Default address after initialization: 192.168.1.168
- Default User: admin
- Default Password: admin

5.1.2 Standard Log-In

Type ***192.168.1.168*** in your browser, it will enter the log-in interface shown as below (in case of Windows 7):

Type the user name and password.

- Default User: admin
- Default Password: admin

Note: Pictures shown in this manual are for reference only, different model and specifications are subject to real product.

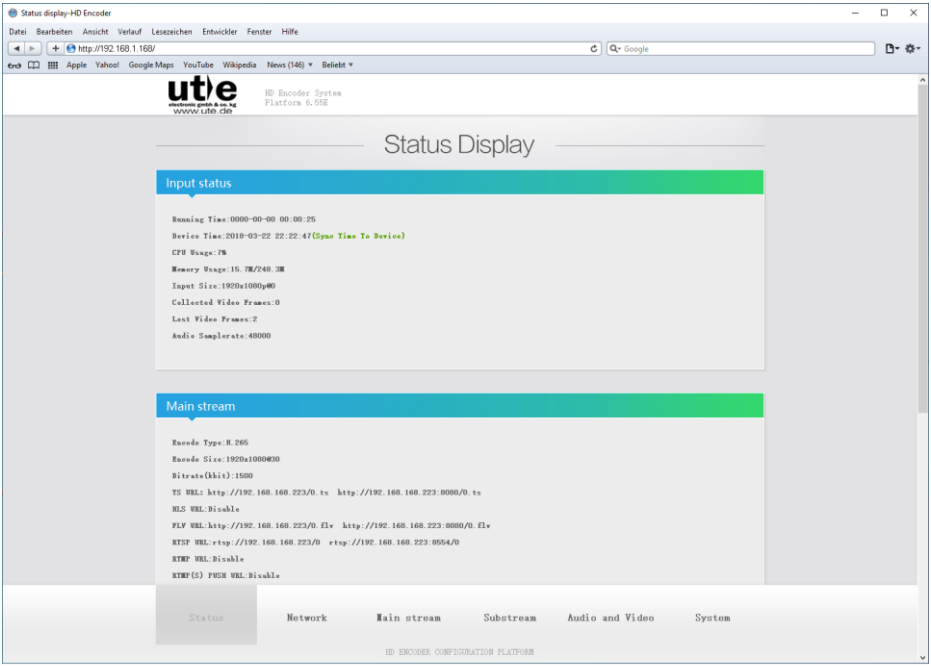
6. Web-based GUI Control

The H.265/ H.264 HDMI Streaming Encoder HD-H265-1P can be configurated and controlled via web-based GUI.
It allows users to interact with the Streaming Encoder through graphical icons and visual indicators.

After logging in as described in chapter 5, you can control the HD-H265-1P from the web-based GUI.

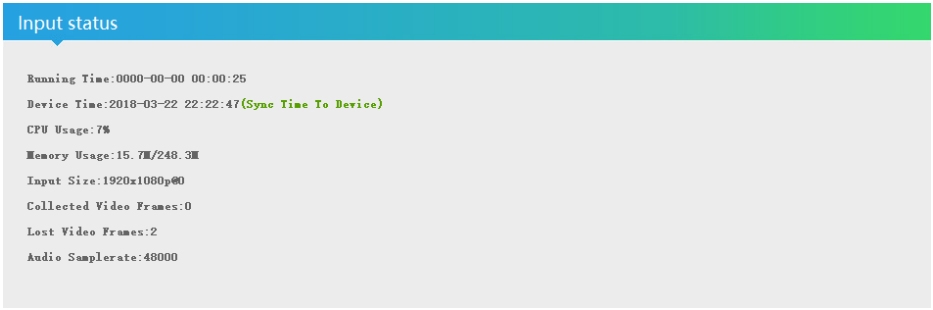
6.1 Status Display

Directly after the login you will get to the status overview page.



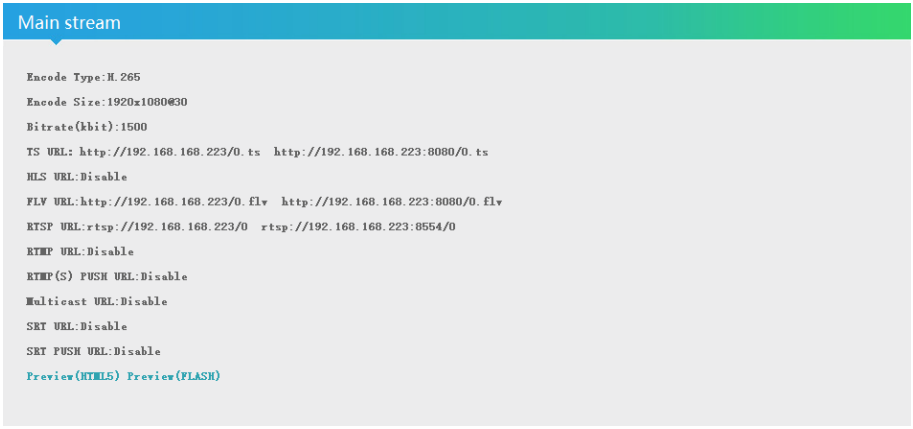
6.1.1 Input status

When you input the HD signal source, it will show resolution of video input, if it's blank here, it means there no video input.



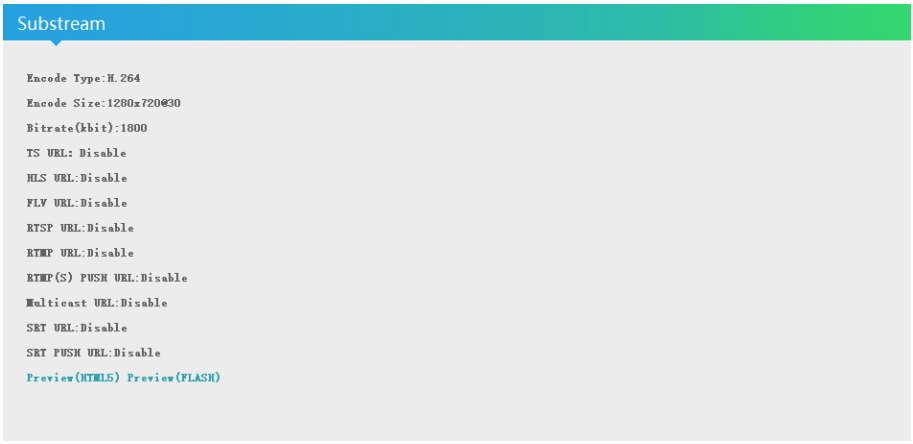
6.1.2 Mainstream Status

The Main stream window shows an overview about the device Main stream settings. It will show the resolution of the mainstream you set and multicast address.
You can stream the multicast address by VLC or other streaming software.



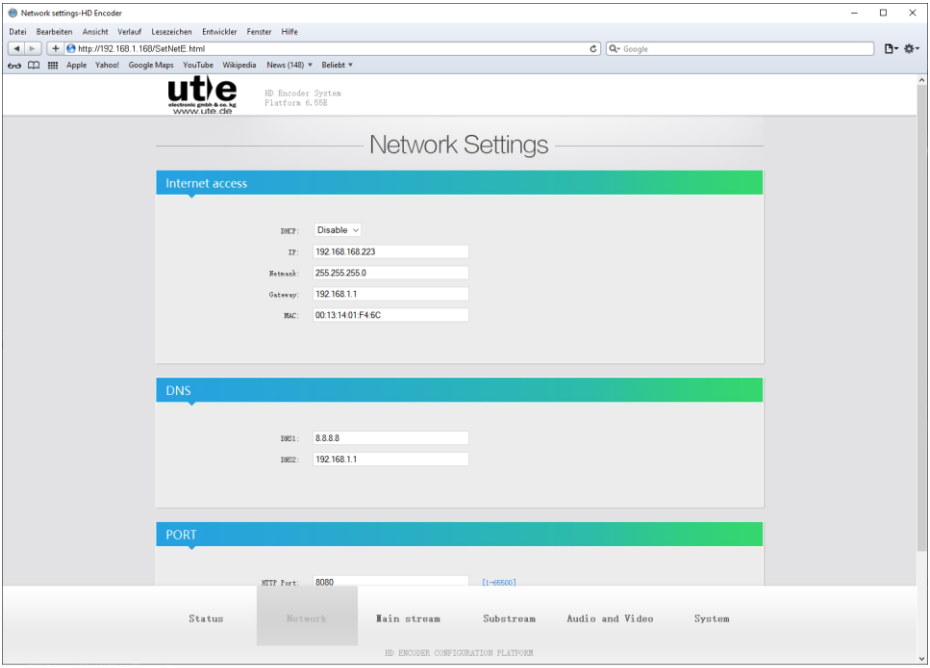
6.1.3 Substream/ Second stream Status

The Substream window shows an overview about the device Substream settings. It will show the resolution of the substream you set and multicast address. You can stream the multicast address by VLC or other streaming software.

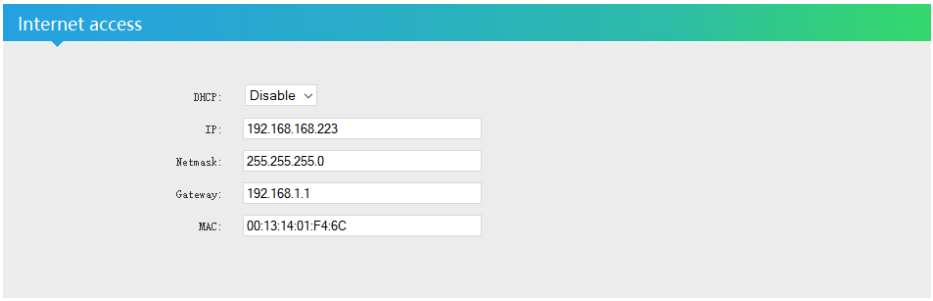


6.2 Network Settings

In this section the network settings are accessible.



6.2.1 Internet access

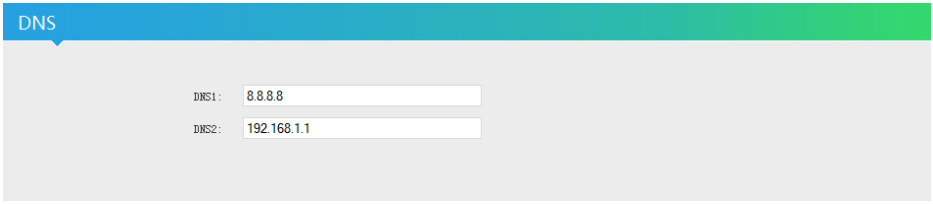


Item	Function	Value
DHCP	Enables DHCP Mode	Enable | Disable
IP	Enter your individual IP address	192.168.1.168 (default)
Netmask	Enter your individual netmask	255.255.255.0
Gateway	Enter your individual gateway address	192.168.1.1
MAC	The device physical address. After you reset this, it will change	00:12:14:15:5D:68

Confirm your individual settings for internet access, DNS and ports by clicking the ***Set up*** button at the bottom of the page once.

Note: The Default IP of the device is 192.168.1.168.
If IP setting is forgotten after changing you can reset it to default IP follow steps in chapter 3.3.

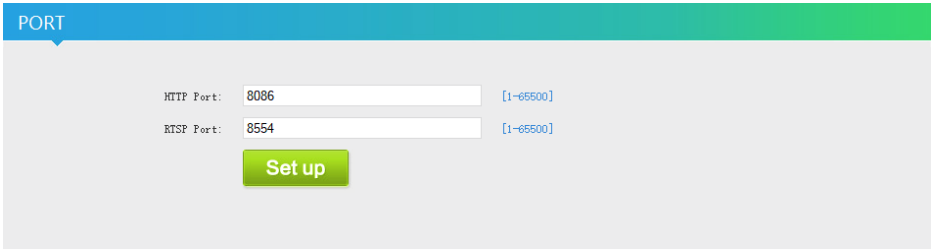
6.2.2 DNS



Item	Function	Value
DNS1	Enter your individual DNS address	8.8.8.8
DNS2	Enter your individual DNS address	192.168.1.1 (default)

Confirm your individual settings for internet access, DNS and ports by clicking the ***Set up*** button at the bottom of the page once.

6.2.3 Port

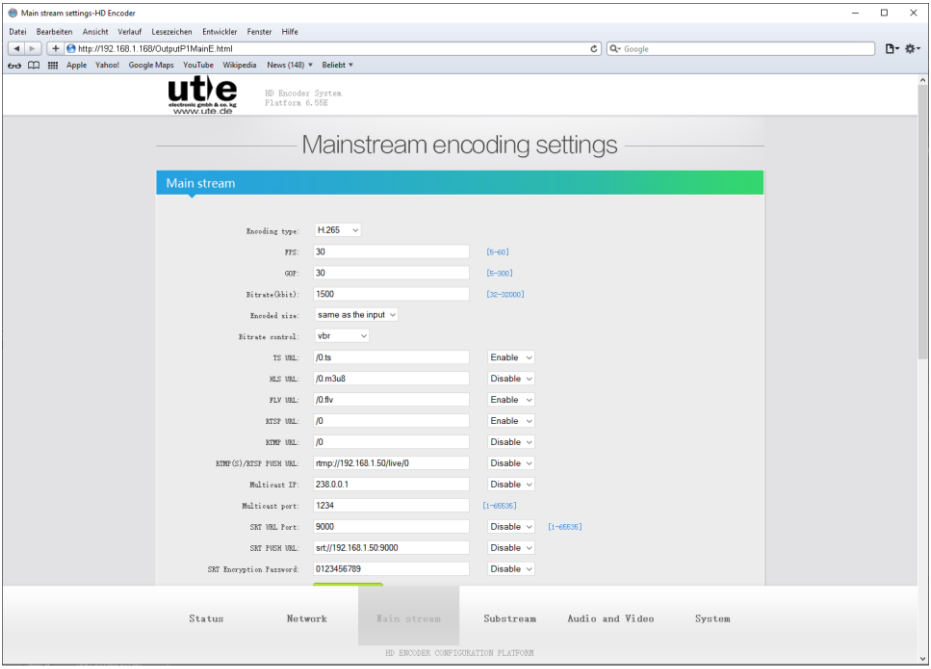


Item	Function	Value
HTTP Port	Enter your individual HTTP port	1 ~ 65500
RSTP Port	Enter your individual RSTP port	1 ~ 65500

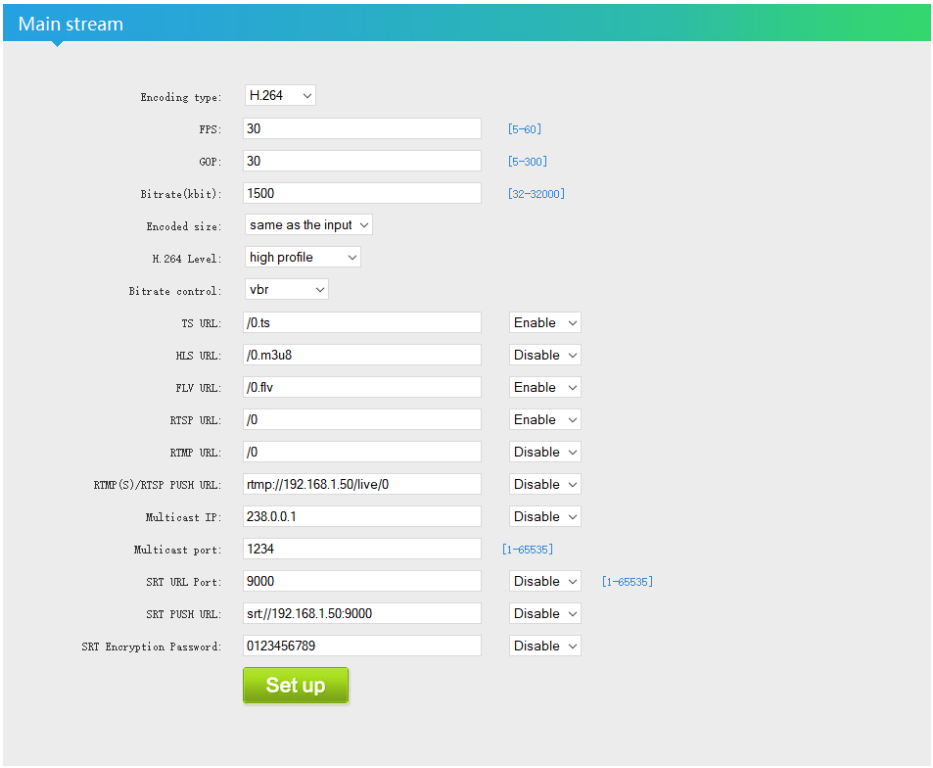
Confirm your individual settings for internet access, DNS and ports by clicking the ***Set up*** button once.

6.3 Mainstream encoding settings

In this section the mainstream and main stream OSD settings are accessible.



6.3.1 Main stream settings



Item	Function	Value
Encoding type	Selector for the type of compression	H.265 | H.264 | MJPEG
FPS	Selector for frame rate [frames per second]	5 ~ 60
GOP	Selector for Group of Picture (GOP) size [frames as GOP]	5 ~ 300
Bitrate (kbit)	Selector for bit rate (Network bandwidth setting) in kbit	32 ~ 32000
Encoded Size	Selector for the encoded image size	same as input | 1920x1080 | … |

		1280x720 | … | 720x576 | … | 176x144
H.264 Level	Selector for H.264 profile	baseline | main | high profile
Bitrate Control	Selector for type of bitrate mode	CBR | VBR | Strong CBR
TS URL	Enter your TS URL You can enable or disable TS by selecting Enable/ Disable	/0.ts
HLS URL	Enter your HLS URL You can enable or disable HLS by selecting Enable/ Disable	/0.m3u8
FLV URL	Enter your FLV URL You can enable or disable FLV by selecting Enable/ Disable	/0.flv
RTSP URL	Enter your RTSP URL You can enable or disable RTPS by selecting Enable/ Disable	/0
RTMP URL	Enter your RTMP URL You can enable or disable RTMP by selecting Enable/ Disable	/0
RTMP(S)/ RTMP PUSH URL	Enter your RTMP(S) /RTSP URL You can enable or disable RTMP(S)/ RTMP PUSH by selecting Enable/ Disable	rtmp://192.168.1.169/live/0
Multicast IP	Enter your IP address for MultiCast You can enable or disable MultiCast by selecting Enable/ Disable	238.0.0.1
Multicast port	Enter your port address for MultiCast	1 ~ 65535
SRT URL Port	Enter your SRT URL Port You can enable or disable SRT Prt by selecting Enable/ Disable	1 ~ 65535
SRT PUSH URL	Enter your SRT URL You can enable or disable SRT PUSH by selecting Enable/ Disable	srt://192.168.1.169:9000

SRT Encryption Password	Enter your individual password for encryption You can enable or disable SRT Encryption by selecting Enable/ Disable	

Confirm your individual main stream settings by clicking the ***Set up*** button at the bottom of the page once.

📖 **Notes**:

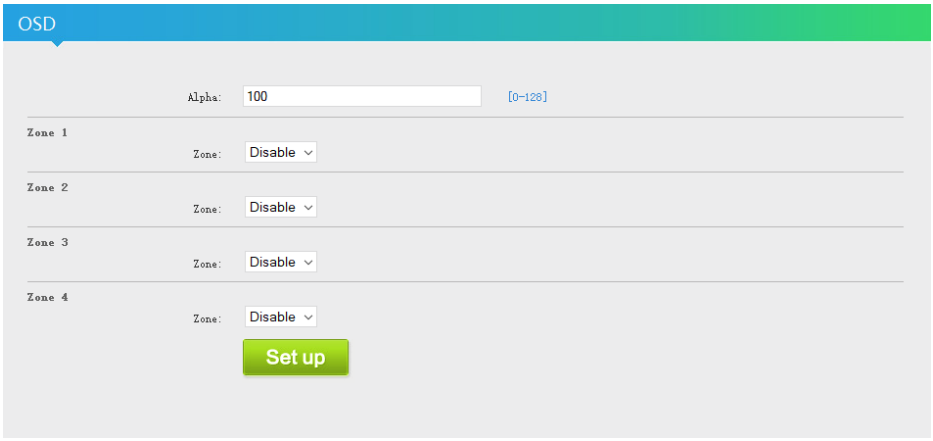
- FPS/ Frame rate: When the input resolution is 720i/50,1080i50, the frame rate will choose 25
- GOP: not available if selected Encoding type is MJEPG
- H.264 Level/ Profile: Not available if selected Encoding type is MJEPG or H.265. H.265 only supports main profile
- HTTP port: 1-65535 optional
- RTSP port: 1-65535 optional
- Multicast IP: 232.255.42.42 disable/RTP/UDP optional
- RTMP server IP: can set by stream media server
- RTMP server port: 1-65535 optional
- RTMP app name: can set by yourself
- RTMP stream name: can set by yourself

6.3.2 Main steam OSD Settings

The HD-H265-1P Streaming Encoder allows to insert individual watermarks or logos.

Four different overlays, named Zone, can be made in the mainstream video signal.
There is a choice between logos, freely selectable text, ticker or time.
Use the OSD menu to arrange setting for type, content, colors and position.

Confirm your individual settings mainstream by clicking the ***Set up*** button once.

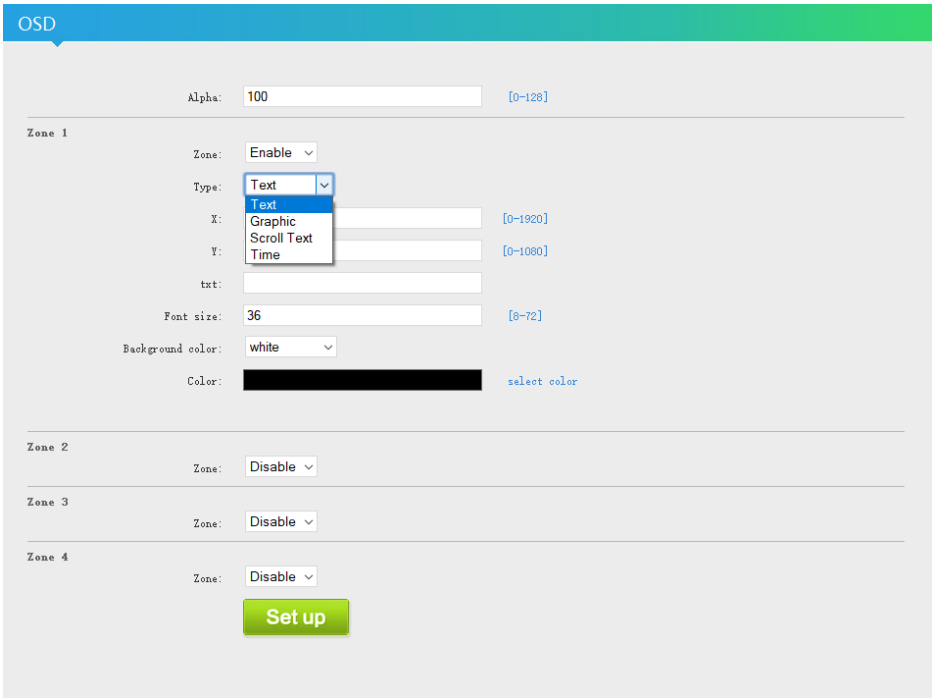


Alpha Key Level

As a general setting, valid for all four zones, the alpha key level is adjustable.

Item	Function	Value
Alpha	Set the level of opacity	0~128

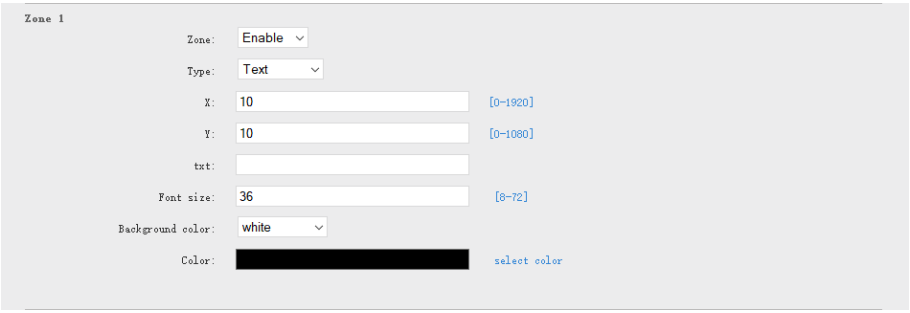
6.3.2.1. Zone 1~4



The OSD capability for Zone 1 is different to Zone 2-4. Zone 1 is the most featured one. To overlay time stamps or scroll text use Zone 1.

Item	Function	Value
Zone	Enable OSD for Zone 1~4	Enable | disable
Type	Select the type of OSD	text (txt) | graphic (bmp) | scroll text | time

6.3.2.1.1. **Type Text**



Item	Function	Value
X	Defines the left position of the text	0 ~ 1920
Y	Defines the up position of the text	0 ~ 1080
Text	Enter your individual text	
Font size	Select the size of text characters	8~72 (default 36)
Background color	Select the background color for text, scroll text and time on the video	transparent | black | white
Color	Select the font color for text, scroll text and time	Open the color map and select one of 216 colors

6.3.2.1.2. **Type Graphic**

In each Zone a graphic file can be placed as a logo. The logo data are upload to the device internal memory.
Therefore size and data volume is limited.

Item	Function	Value
X	Defines the left position of the picture	0 ~ 1920
Y	Defines the up position of the picture	0 ~ 1080
Logo	Select one of your uploaded pictures	Open the explorer to search for your logo file and upload

Note: Please upload PNG or 24-bit BMP(0xF1F1F1 is transparent) pictures less than 500 kByte.

- The file name is logo1.bmp or logo1.png for Zone 1.
- The file name is logo2.bmp or logo2.png for Zone 2.
- The file name is logo3.bmp or logo1.png for Zone 3.
- The file name is logo4.bmp or logo1.png for Zone 4.

6.3.2.1.3. **Type Scroll Text**

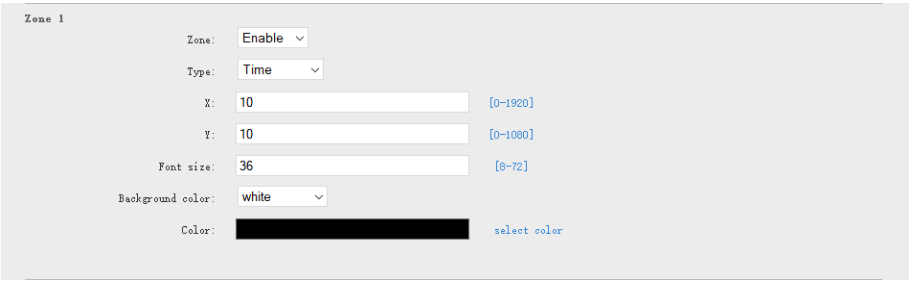
The insert type SCROLL TEXT is only available in zone 1.

Item	Function	Value
Position	Defines the up position of the text	0 ~ 1080
Speed	Defines the speed for scrolling text in fps	0~30
Text	Enter your individual text	
Font size	Select the size of text characters	8~72 (default 36)
Background color	Select the background color for text, scroll text and time on the video	transparent | black | white
Color	Select the font color for text, scroll text and time	Open the color map and select one of 216 colors

Note: If insert type SCROLL TEXT is chosen, your individual text will move right to left within the video image.

6.3.2.1.4. **Type time**

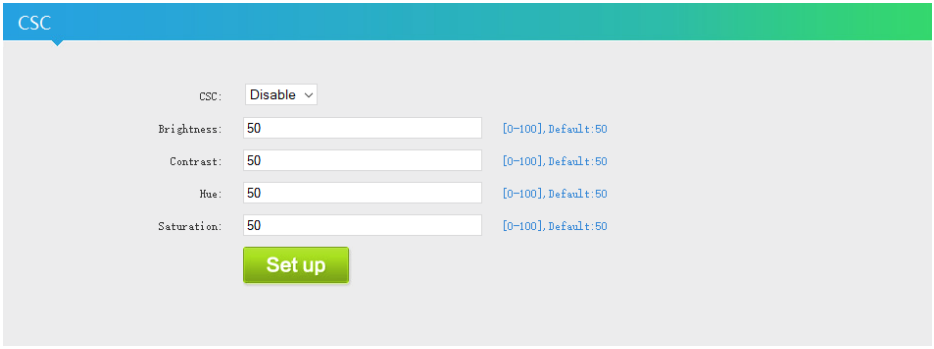
The insert type TIME is only available in zone 1.
If insert type TIME is chosen, the device time will be shown as HH:MM.
Enable NTP function to get the time always synced to UTC.



Item	Function	Value
X	Defines the left position of the text	0 ~ 1920
Y	Defines the up position of the text	0 ~ 1080
Font size	Select the size of text characters	8~72 (default 36)
Background color	Select the background color for text, scroll text and time on the video	transparent | black | white
Color	Select the font color for text, scroll text and time	Open the color map and select one of 216 colors

6.3.2.2. CSC: Image quality setting

Under normal circumstances it is not necessary to change the default settings for the image processor. If you try to encode critical video material, corrections for enhanced image quality can be done in the Image Quality Settings menu.

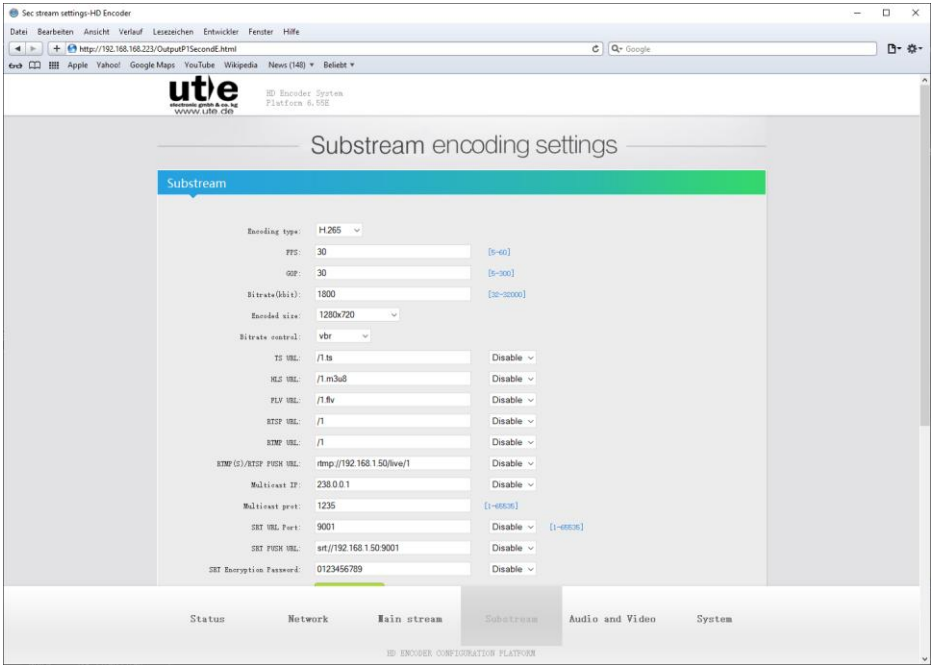


Item	Function	Value
CSC	Enable signal correction	Disable | enable
Brightness	Defines the brightness correction	0 ~ 100 (default 50)
Contrast	Defines the contrast correction	0 ~ 100 (default 50)
Hue	Defines the hue correction	0 ~ 100 (default 50)
Saturation	Defines the saturation correction	0 ~ 100 (default 50)

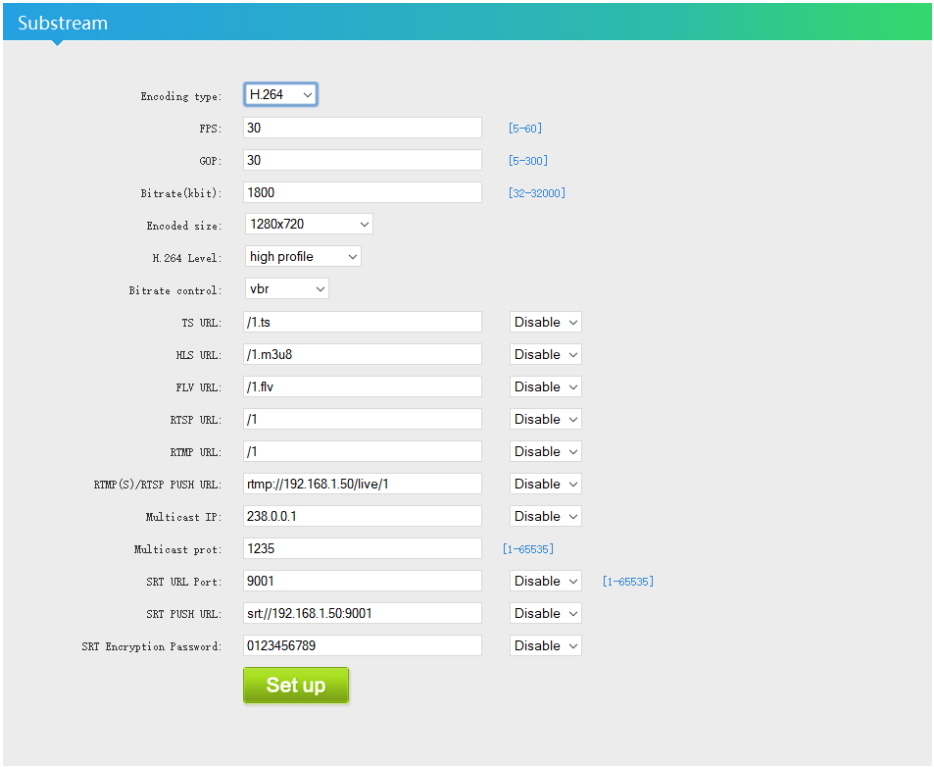
Confirm your individual image quality settings by clicking the ***Set up*** button at the bottom of the page once.

6.4 Substream encoding settings

In this section the substream and sub stream OSD settings are accessible.



6.4.1 Substream Settings



Item	Function	Value
Encoding type	Selector for the type of compression	H.265 | H.264 | MJPEG
FPS	Selector for frame rate [frames per second]	5 ~ 60
GOP	Selector for Group of Picture (GOP) size [frames as GOP]	5 ~ 300
Bitrate (kbit)	Selector for bit rate (Network bandwidth setting) in kbit	32 ~ 32000
Encoded Size	Selector for the encoded image size	same as input | 1920x1080 | … |

		1280x720 | … | 720x576 | … | 176x144
H.264 Profile	Selector for H.265/ H.264 profile	baseline | main | high profile
Bitrate Control	Selector for type of bitrate mode	CBR | VBR | Strong CBR
TS URL	Enter your TS URL You can enable or disable TS by selecting Enable/ Disable	/1.ts
HLS URL	Enter your HLS URL You can enable or disable HLS by selecting Enable/ Disable	/1.m3u8
FLV URL	Enter your FLV URL You can enable or disable FLV by selecting Enable/ Disable	/1.flv
RTSP URL	Enter your RTSP URL You can enable or disable RTPS by selecting Enable/ Disable	/1
RTMP URL	Enter your RTMP URL You can enable or disable RTMP by selecting Enable/ Disable	/1
RTMP(S)/ RTMP PUSH URL	Enter your RTMP(S) /RTSP ULR You can enable or disable RTMP(S)/ RTMP PUSH by selecting Enable/ Disable	rtmp://192.168.1.169/live/1
Multicast IP	Enter your IP address for MultiCast You can enable or disable MultiCast by selecting Enable/ Disable	238.0.0.1
Multicast port	Enter your port address for MultiCast	1~65535
SRT URL Port	Enter your SRT URL Port You can enable or disable SRT Port by selecting Enable/ Disable	1~65535
SRT PUSH URL	Enter your SRT URL You can enable or disable SRT PUSH by selecting Enable/ Disable	srt://192.168.1.169:9001

SRT Encryption Password	Enter your individual password for encryption You can enable or disable SRT Encryption by selecting Enable/ Disable	

Confirm your individual settings by clicking the ***Set up*** button once.

Notes:

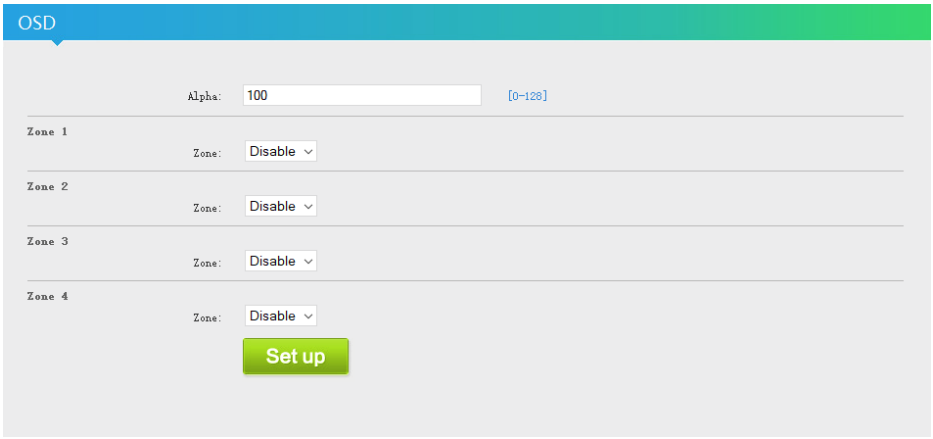
- FPS/ Frame rate: When the input resolution is 720i/50,1080i50, the frame rate will choose 25
- GOP: not available if selected Encoding type is MJEPG
- H.264 Level/ Profile: Not available if selected Encoding type is MJEPG or H.265. H.265 only supports main profile
- HTTP port: 1-65535 optional
- RTSP port: 1-65535 optional
- Multicast IP: 232.255.42.42 disable/RTP/UDP optional
- RTMP server IP: can set by stream media server
- RTMP server port: 1-65535 optional
- RTMP app name: can set by yourself
- RTMP stream name: can set by yourself

6.4.2 Substream OSD Settings

The HD-H265-1P Streaming Encoder allows to insert individual watermarks or logos on substream.

Four different overlays, named Zone, can be made in substream video signal.
There is a choice between logos or freely selectable text.
Use the OSD menu to arrange setting for type, content, colors and position.

Confirm your individual settings by the substream clicking the ***Set up*** button once.

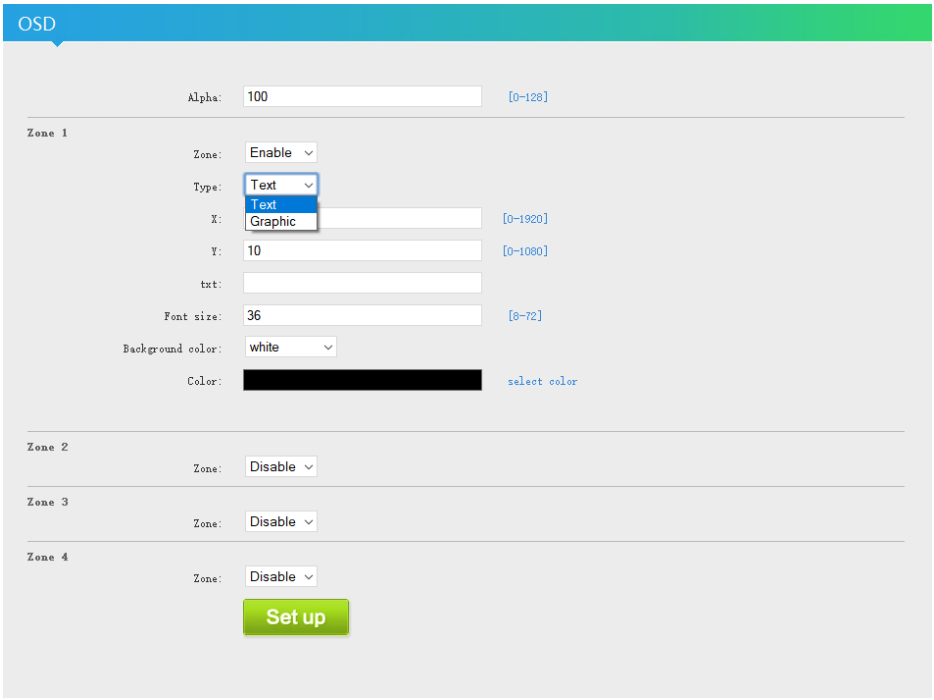


Alpha Key Level

As a general setting, valid for all four zones, the alpha key level is adjustable.

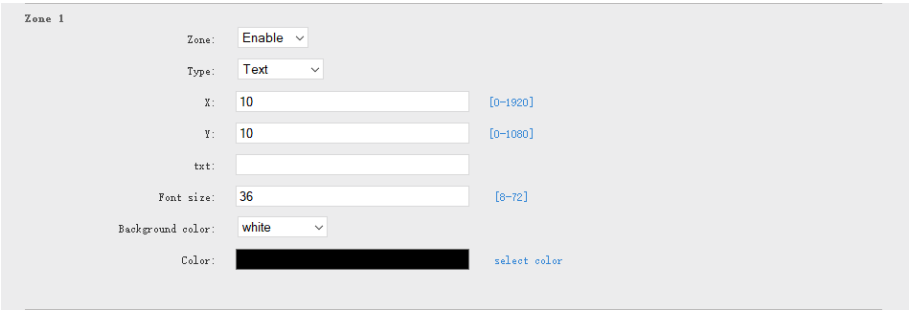
Item	Function	Value
Alpha	Set the level of opacity	0~128

6.4.2.1. Zone 1~4



Item	Function	Value
Zone	Enable OSD for Zone 1~4	Enable | disable
Type	Select the type of OSD	Text | Graphic

6.4.2.1.1. **Type Text**



Item	Function	Value
X	Defines the left position of the text	0 ~ 1920
Y	Defines the up position of the text	0 ~ 1080
Text	Enter your individual text	
Font size	Select the size of text characters	8~72 (default 36)
Background color	Select the background color for text, scroll text and time on the video	transparent | black | white
Color	Select the font color for text, scroll text and time	Open the color map and select one of 216 colors

6.4.2.1.2. **Type Graphic**

In each Zone a graphic file can be placed as a logo. The logo data are upload to the device internal memory.
Therefore size and data volume is limited.

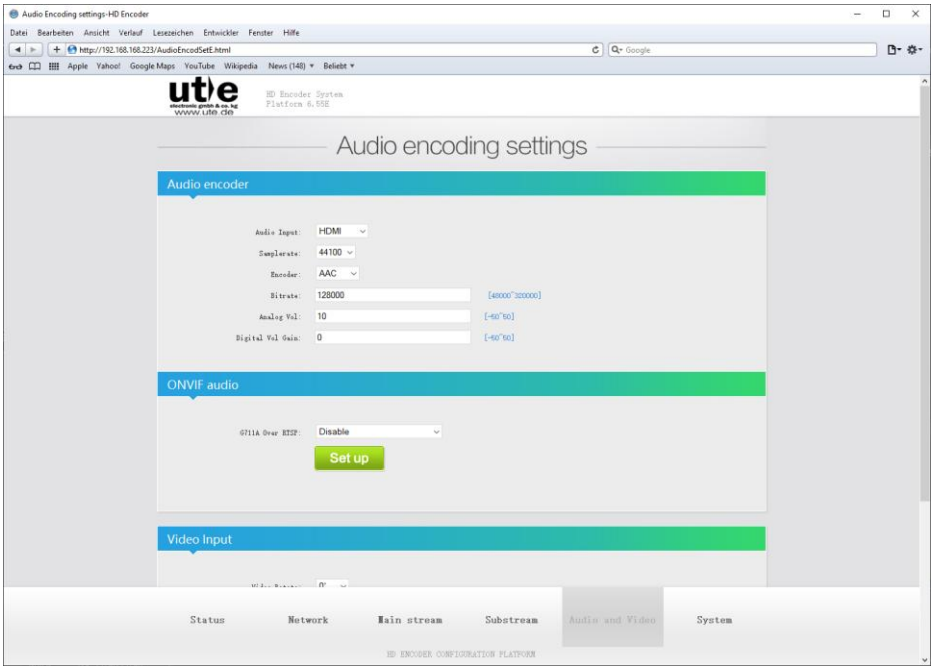
Item	Function	Value
X	Defines the left position of the picture	0 ~ 1920
Y	Defines the up position of the picture	0 ~ 1080
Logo	Select one of your uploaded pictures	Open the explorer to search for your logo file and upload

Note: Please upload PNG or 24-bit BMP(0xF1F1F1 is transparent) pictures less than 500 kByte.

- The file name is logo1.bmp or logo1.png for Zone 1.
- The file name is logo2.bmp or logo2.png for Zone 2.
- The file name is logo3.bmp or logo1.png for Zone 3.
- The file name is logo4.bmp or logo1.png for Zone 4.

6.5 Audio and Video Encoding Settings

In this section the audio settings are accessible.
Usually, keep as default, but you can set it as your need.

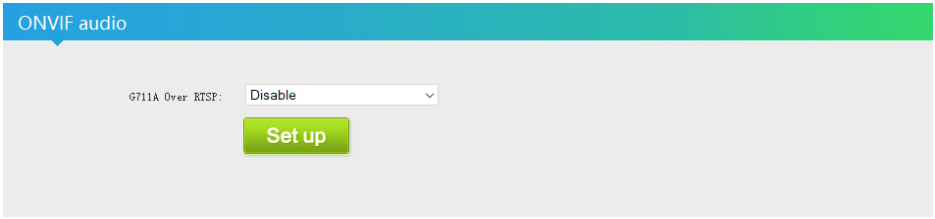


6.5.1 Audio encoder

Item	Function	Value
Audio Input	Select the input channel	HDMI | ANALOG
Samplerate	Select the sample rate to digitize in bit/s	44100 (44.1 kbit/s) | 48000 (48 kbit/s)
Encoder	Select the type of encoding	AAC | AAC+ | AAC++ | MP3 | MP2 | AC3
Bitrate	Selector for bit rate	40 k ~ 640 k
Analog Volume	Defines the audio level	-50 ~ 50
Digital Vol Gain	Defines the digital audio gain	-50 ~ 50

Confirm your individual settings for audio and ONVIF encoder by clicking the ***Set up*** button at the bottom of ONVIF audio section once.

6.5.2 ONVIF encoder

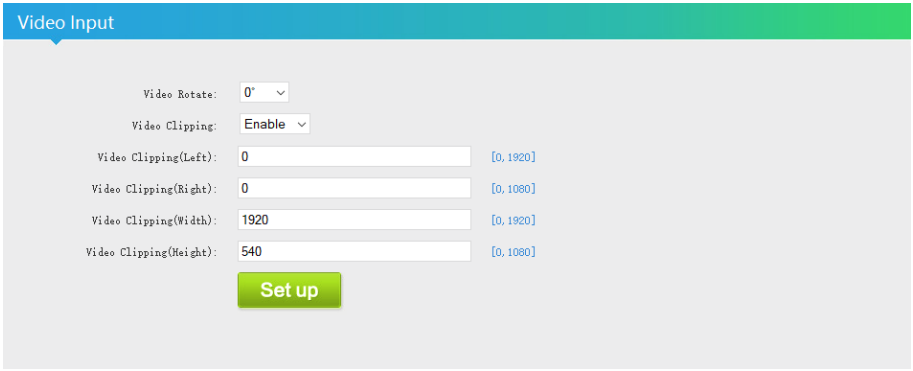


Item	Function	Value
G711A over RTSP	Enable or disable audio over RTSP	Disable | Enable | enable and resample with 8k

Confirm your individual settings for audio and ONVIF encoder by clicking the ***Set up*** button once.

6.5.3 Video Input

In this section you can select if you want to rotate an clip the video.

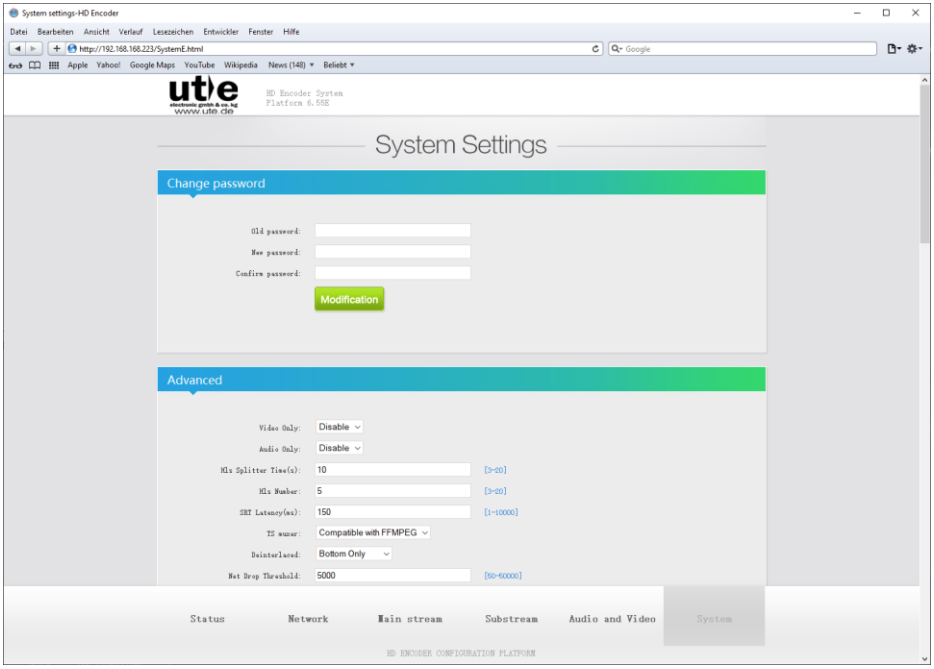


Item	Function	Value
Video Rotate:	Select the video rotation	0º | 90º | 180º | 270º
Video Clipping	Select if you want to clip the video input	Disable | Enable
Video Clipping (Left)	Select the left position of cutting content, the content right of this point will be shown.	0 1920
Video Clipping (Right)	Select the height position of cutting content, the content below this point will be shown.	0 1080
Video Clipping (Width)	Defines the width of the clipped content	0 1920
Video Clipping (Height)	Defines the height of the clipped content.	0 1080

Confirm your individual settings for video input by clicking the ***Set up*** button once.

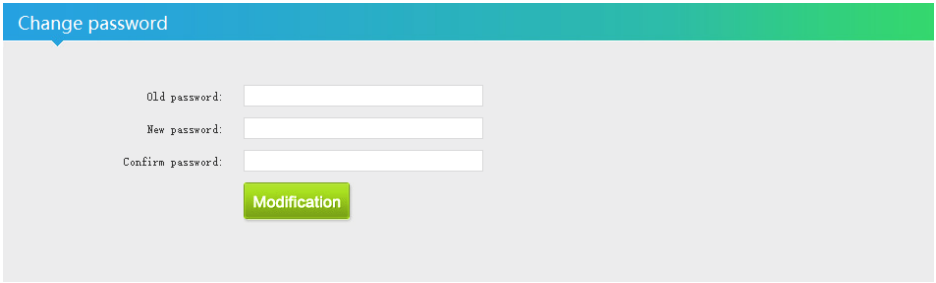
6.6 System Settings

The System menu allows to configure the device to operate using the individual set up.



6.6.1 Change password

In this section the password settings are accessible. Here you can change the default password to an individual password.

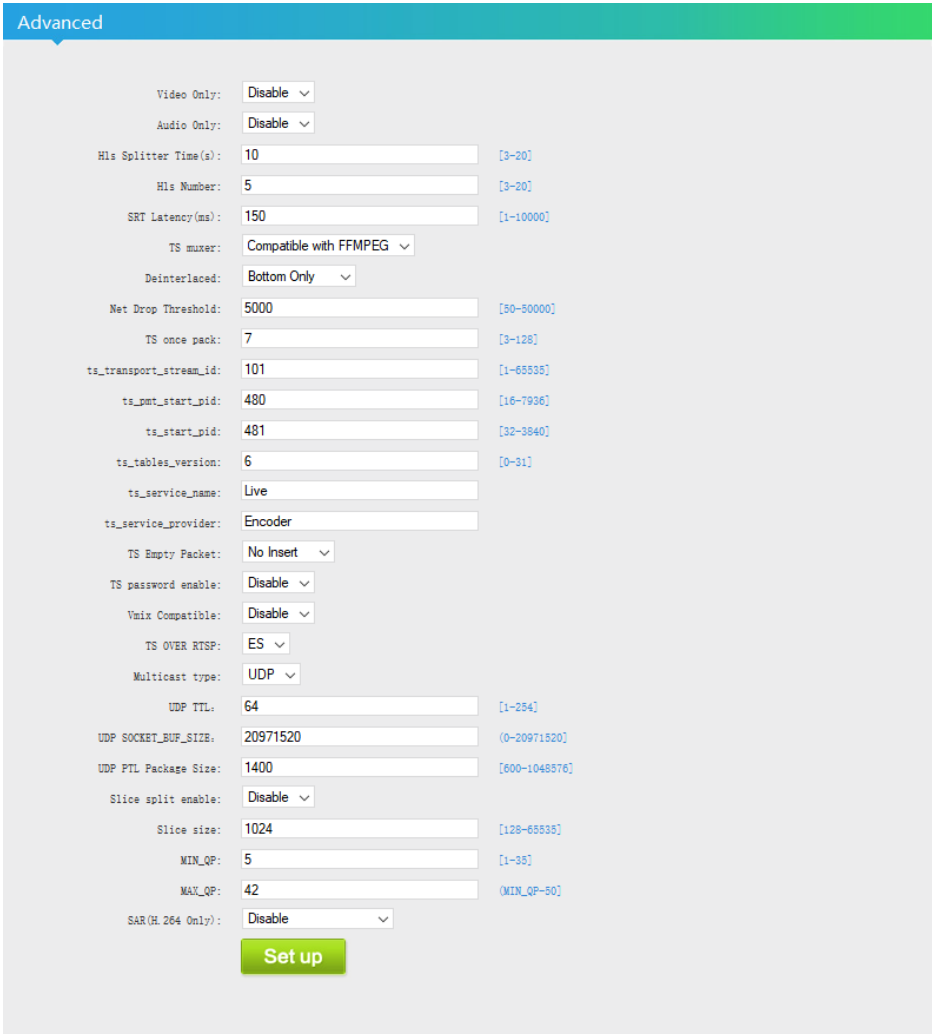


Item	Function
Old password	min. character a~z, A~Z, 1~0
New password	min. character a~z, A~Z, 1~0
Confirm password	min. character a~z, A~Z, 1~0

Confirm your individual settings by clicking the ***Modification*** button once.

6.6.2 Advance Settings

In this section the advanced system settings are accessible



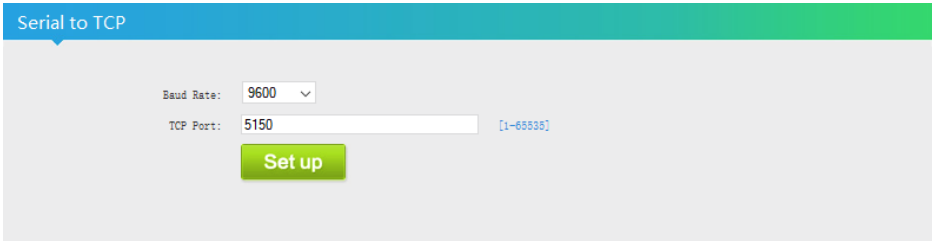
Item	Function	Value
Video Only	Enable Video only encoding	Disable | Enable
Audio Only	Enable Audio only encoding	Disable | Enable
HLS Splitter Time(s)	Select the delay for HLS in seconds	3 ~ 20
HLS Number	Select the HLS number	3 ~ 20
SRT Latency (ms)		1 ~ 10000
TS Muxer	Select type of TS mux compatibility	Compatible with VLC | Compatible with FFMPEC
Deinterlaced	Select type of deinterlacing	Both | Bottom Only | Field to Frame
Net Drop Threshold	Select the threshold for net drops	50 ~ 50000
TS once pack	Select the number of TS packs	3 ~ 128
ts_transport_ stream_id	Select the transport stream ID	1 ~ 65535
ts_pmt_start_ pid	Select the TS packet identifier	16 ~ 7936
ts_start_pid	Select the TS packet identifier	32 ~ 3840
ts_tables_ version	Select the TS table	0 ~ 31
ts_service_ name	Enter your TS service name	Live (default)
ts_service_ provider	Enter your TS service provider	Encoder (default)
TS Empty Packet	Select the type of TS empty packet insertion	No Insert | Insert(1.2x) | … | Insert(3.5x)
TS password enable	Enable TS password	Disable | Enable
Vmix Compatible	Enable the stream as Vmix compatible	Disable | Enable

TS OVER RTSP	Enable the TS over RTSP	ES | TS
Multicast type	Select type of MultiCast	RTP | UDP | PTL
UDP TTL	Select the UDP TTL	1 ~ 254
UDP SOCKET_ BUF_SIZE	Select the UDP buffer size	0 ~ 20971520
UDP PTL Package Size	Select the UDP PTL Package Size	600 ~ 1048576
Slice split enable	Enable slice splitting	Disable | Enable
Slice size	Select the slice size	128 ~ 65535
MIN_QP	Select the lower level for QP	1 ~ 35
MAX_QP	Select the high level for QP	MIN_QP ~ 50
SAR (H.264 Only)	Select the aspect ratio	Disable | 16:15 (720:576->4:3) | 64:65 (720:576->16:9) | 8:9 (720:480->4:3) | 32:27 (720:480->16:9)

Confirm your individual advance settings by clicking the ***Set up*** button once.

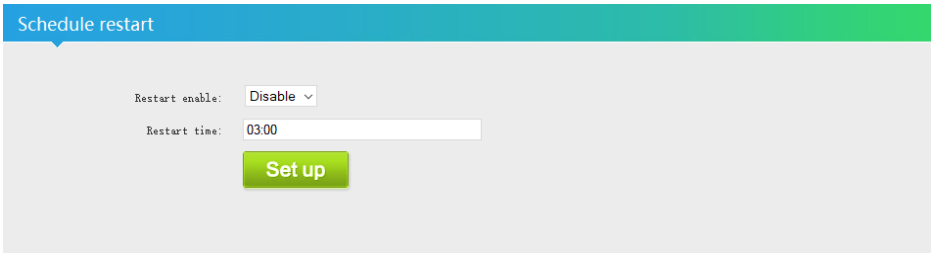
6.6.3 Serial to TCP

None of the encoders has a serial port, so the selection and entries made in this section have no effect.



6.6.4 Schedule restart settings

In this section the restart settings are accessible, you can enable and set a scheduled restart.
Using this function, the encoder will restart at the set time automatically.



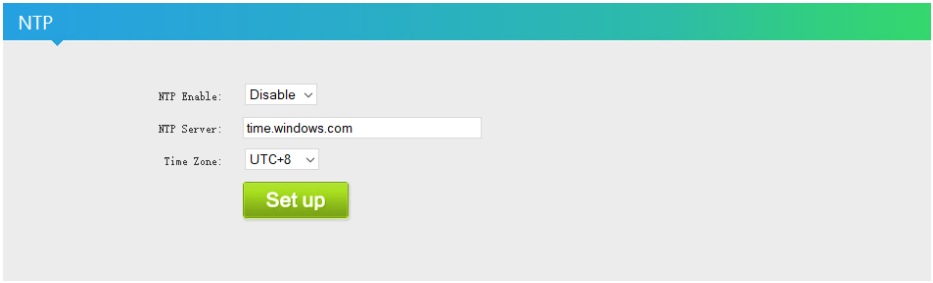
Item	Function	Value
Restart enable	Enable or disable a schedule restart	Enable | Disable
Restart time	Set the schedule restart time	HH:MM

Confirm your individual schedule restart settings by clicking the ***Set up*** button once.

6.6.5 NTP settings

In this section the NTP settings are accessible.

Using this function, the encoder is synchronized to NTP time from the selected server.



Item	Function	Value
NTP enable	Enable NTP sync function	Disable | Enable
NTP Server	Enter address of your preferred NTP server	time.windows.com (default)
Time Zone	Select your local time zone	UTC-12 | … | UTC-1 | UTC | UTC+1 | … | UTC+12

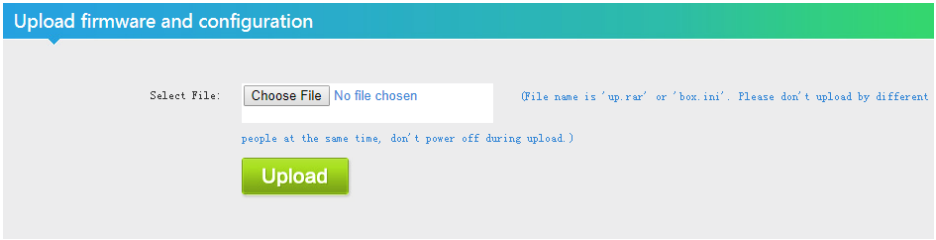
Confirm your individual schedule restart settings by clicking the ***Set up*** button once.

🕮 **Note**: Central European Time (CET) Time Zone is UTC+1, during summer time, the CET Time Zone is UTC+2

6.6.6 Upload firmware and configuration

In this section the firmware upload function is accessible.

In case a newer firmware package is available, here the user can update the device. Choose the new firmware file on the connected PC and start the upload.



The update file name has to be “up.rar”, and it have to be an origin “rar” compressed file. Never try to upload any different file.

The configuration file name has to be “box.ini”.

When upload check that no other people upload at the same time. Don't power off or refresh the page during upload.
When the procedure is finished the device waits for a restart.

Item	Function	Value
Select File	Search the file from PC for upload file	up.rar or box.ini

Confirm the individual settings by clicking the ***Upload*** button once.

🕮 **Note**: Please don't upload by different people at the same time, don't power off during upload..

6.6.7 Backup firmware and configuration

In this section the firmware backup function and the backup configuration function are accessible.
Here the user can store and save the current firmware and configuration as backup to an external data carrier.

Item	Function	Value
Firmware	Backup the systems firmware	up.rar
Configuration	Backup the systems configuration	box.ini

Use the ***Firmware*** button once to open the backup procedure to save the systems firmware to an external data carrier at the connected PC.

Use the ***Configuration*** button once to open the backup procedure to save the systems values and individual configuration to an external data carrier at the connected PC.

6.6.8 System settings (Reboot and Reset)

In this section the reboot and reset functions are accessible.
Here the user can restart the device to confirm any configuration or reset the device back to factory default values and functions.

Item	Function	Value
Reboot	Reboot the system to confirm individual settings	User settings
Reset	Reset the system to factory default	Default settings

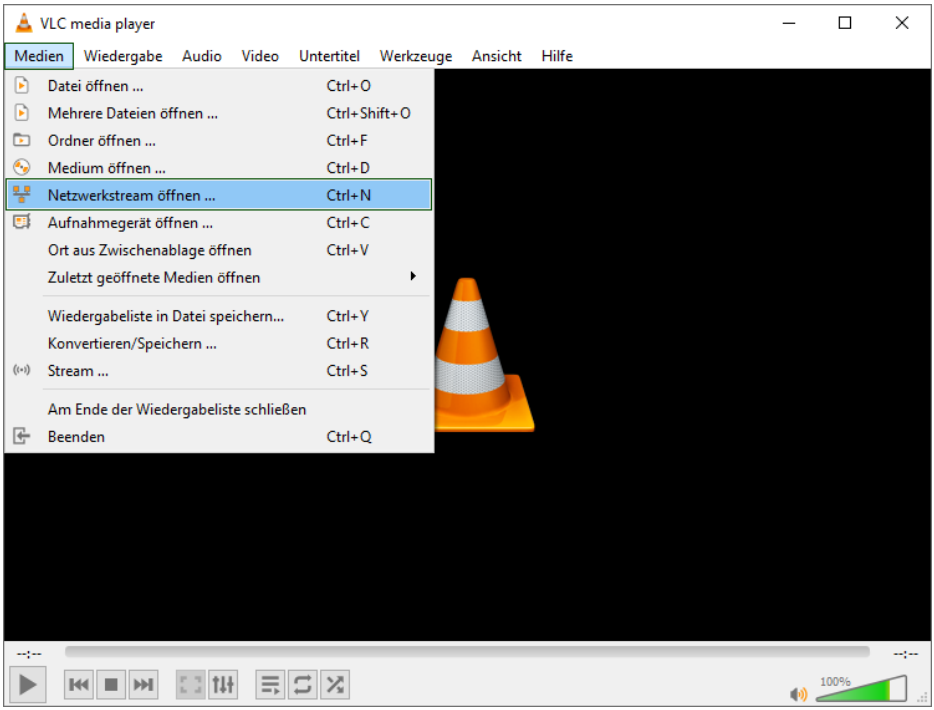
To confirm your individual settings click ***Reboot***. The system will reboot after confirming a security question and start again using the latest settings.

To reload the factory settings click ***Reset***. The system will reboot after confirming a security question and start again using the default settings.

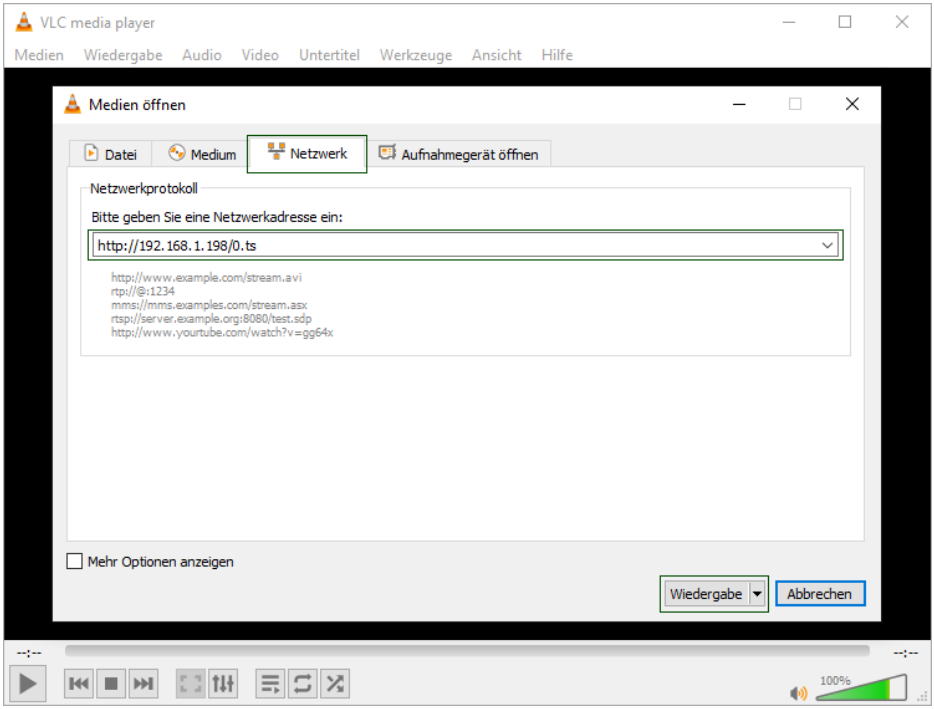
7. VLC Operation

The HD-H265-1P is compatible to be used with VLC open media player software. After all settings are ok, you can use VLC to test the stream.

Step 1. Start the VLC application at your PC and open the Network Stream.



Step 2. Enter the IP address of the encoder to play the stream video.



Step 3. Click PLAY to start the video.

8. Specifications

Interfaces	
Video Input	(1) HDMI input, (HDCP compliant) max. support 1920x1080@60Hz
Audio Input	(1) External Analog audio input & HDMI embed audio
Ethernet	(1) RJ45, 1000Mbps – with PoE
Video General	
HDMI Input Resolution	Up to 1920x1080@60Hz
Video Encoding	
Video Format	H.264/AVC high/ main/ baseline Profile H.265/HEVC main profile MJPEG/JPEG baseline
Video Resolution	Up to 1920x1080@60Hz
Video Bitrate	0.1 ~ 32Mbps
Video FPS (Frames per second)	5 ~ 60 Hz/ FPS
Bitrate Control	VBR/ CBR
Streaming Protocols	HTTP / HTTPS / HLS / FLV / RTSP / RTMP / RTMPS / UDP/RTP (Unicast/Multicast) TS Stream Protocols and ONVIF.
Audio Encoding	
Audio Format	AAC/ AAC+/ AAC++/ MP3/ MP2/ AC3 G711
Sample Rates	44.1kHz/ 48kHz
Bitrate	12 ~ 640kbps
System/ Control	
Control Method	Web based management
Firmware	Ethernet software upgrade
General	
Transmission Distance	up to 100m to the next active component (e.g. switch)
Operation Temperature	-10ºC ~ +70ºC
Storage Temperature	-20ºC ~ +80ºC
Humility	5% ~ 90%, relative humility, non-condensing
External Power Supply (not necessary when PoE)	Input: AC 100~240V, 50/60Hz, Output: 12V DC 1A
Dimension (L*W*H)	170mm x 130mm x 30mm
Net Weight	300g

9. Frequently Asked Questions

Q: How to access to the encoder web-interface by default IP ?

A: The computer's IP network segment need be same as the encoder's default IP. ex: if the encoder's default IP is 192.168.1.168, then you need change your computer's ip to 192.168.1.*(mark "*" numbers range will be 0~254, except 168).

Q: H.265 will save bandwidth than H.264?

A: YES, H.265 will save nearly 33% bandwidth than H.264.

Q: What is the maximum resolution after encoded ?

A: The encoder HD-H265-1P support a maximum resolution of 1080p, but it depends on your signal source , if your signal source is 720p, then max encoded resolution is 720p, respectively.

Q: How to push stream to media server to do live broadcast by YouTube, Facebook, Ustream, Twitter or like that?

A: Because most server can not support H.265 for the moment, so if you want to push stream to server, you need choose encoding level to H.264, and then set RTMP protocol. Put your server's IP, server's port, app name and stream name to the web-interface after enable RTMP protocol. Please kindly note that you need set the DNS same as your router's by network setting.

Q: Does the encoder support push stream to IPTV s like WOWZA or Nginx Media Server?

A: Yes, HD-H265-1P supports IPTV like Wowza, Nginx Media Server, etc

10. After-sales/ Customer Service

If there appear some problems when running the HDMI Streaming encoder, please check and deal with the problems referring to this user manual.
Any transport costs are borne by the users during the warranty.

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. There terms and conditions may be changed without prior notice.

1) **Product Limited Warranty:** We warrants that its products will be free from defects in materials and workmanship for two years**,** which starts from the first day you buy this product (The purchase invoice shall prevail).
   Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the unit is within the Warranty period must be presented to obtain warranty service.

2) **Scope**
   These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

3) **What the warranty does not cover (Warranty Exclusion)**
   - Warranty expiration.
   - Factory applied serial number has been altered or removed from the product.
   - Damage, deterioration or malfunction caused by:
     - Normal wear and tear.
     - Use of supplies or parts not meeting our specifications.
     - No certificate or invoice as the proof of warranty.
     - The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
     - Damage caused by force majeure.
     - Servicing not authorized by distributor.
     - Any other causes which does not relate to a product defect.
   - Shipping fees, installation or labor charges for installation or setup of the product.

4) **Documentation**
   Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defeat has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of dealer.

5) **Technical Support:** Email to our after-sales department or make a call, please inform us the following information about your cases.
   - Product version and name.
   - Detailed failure situations.
   - The formation of the cases.

Remarks: For any questions or problems, please try to get help from your local dealer or our customer support (info@ute.de).

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