DiVAR ELECTRONICS

MVE105H

USER MANUAL

HEVC H.265 HDMI Encoder

Import, Manufacturing and Distribution by

vuetec.tv UG (haftungsbeschränkt)

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MVE105H - HEVC H.265 Video + Audio Encoder

The HEVC encoder MVE105H is a hardware device used for high-definition video signal (720P / 1080P, etc.) encoding and network transmission, using the latest and high-efficient high-definition digital video compression technology H.265, with the characteristics of reliable, high-definition, low bit rate 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 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 and precision design, the small size, the power consumption is less than 10W, offers an easy and energy efficient installation.

Includes

- 1 Encoder
- 1 Power Supplies, 12 V DC / 2 A

Features

- H.264\H.265 HDMI Encoding
- Equipped with 1 channel HDMI video input
- Dual channels encoder which can output TS dual stream with different signals
- Support settings of the bit rates and resolution for each channel as required
- Widely used in variety of digital distribution systems such as CATV digital head-end, satellite and terrestrial digital TV etc.
- Be able to replace of HD capture card and support VLC decoding

The Encoder Hardware

The transport-stream hardware encoder MVE105H features;

- Support standard H.265\H.264 encoding
- Save bandwidth up to 33% when choose H.265 codec, i.e 1.5 MBps bandwidth will be workable to transport 1080P video.
- Audio coding support MPEG1 Audio Layer2
- CBR/VBR/ABR code rate controlling, 16 kbit/s ~ 32 Mbit/s
- Support Network interface full-duplex mode 1000M
- Support HTTP, UTP, RTSP, RTMP, ONVIF, unicast and multicast
- Output stream format: TS/VES/AES
- The WEB operating interface, configuration interface in English and Chinese are optional
- Support web management
- Support resolution setting
- Support switching between mono and stereo audio
- Support decoding the set-top box
- Support transmit in LAN and WAN

Hardware I/Os

All I/Os are placed on one front for easy installation.

- Power input: 12 V DC input , using 12 V 1 A power supply
- Status indication: Lit if there is network connection, off when there is no network. At reset, if the light is not on after 10 seconds, the device is restarted.
- Power indication: Lit to indicate if the power is normal
- Reset button: it is used to reset the device, when turned on, press and hold for 10 seconds, the device IP will back to factory IP, 192.168.1.168
- HDMI input: it is used for HDMI signal input (SDI model MVE105S available)
- Analog audio input: use to combine analog audio sources with HDMI signals
- Ethernet port: 10/1000M network port

Specifications

Video:

Video input	HDMI-A 1.3 (HDCP conform)
Resolution	1080p / 1080i / 720p 1600x1200 / 1400x1050 / 1440x900 / 1280x1024 / 1280x960 / 1280x800 / 1024x768 / 800x600 etc.
Frame rate	60 Hz max.
Coding	H.265 Main Profile encoding H.264 Main Profile encoding H.264 Baseline Profile encoding H.264 High Profile encoding MotionJPEG encoding
Rate	32 ~ 32000 kbit/s
Rate control	CBR / VBR
GOP type	Adjustable
Video preprocessing	de-interlacing noise reduction, sharpening
Latency	<200 ms

Audio:

Encoding format	AAC, MP3
Input connector	Digital: HDMI embedded Analog: 3,5 mm TRS
Sampling rate	self-adaption
Bit rate	32k, 44.1k, 48k, 64k, 96k, 128k, 160k, 192k, 320k
Sampling accuracy	24 bit
Code rate	64 ~ 320 kbit/s

Network:

Network port	RJ45 Ethernet
Data rate	<1000 Mbit/s
Head stream	HTTP, UTP, RTSP, RTMP, ONVIF protocol
Data stream	TS Standard Stream, Dual Code Stream
Configuration	WEB based operation interface
Firmware	Update through network

Electrical & Mechanical:

Input Power Requirements:	DC 12 V @ 1 A
Power Adapter:	AC 90 V~240 V
Power Consumption:	< 5 W
Dimensions:	165 mm × 85 mm × 24 mm
Weight:	300 g

Environmental:

Operating Temperature:	-20°C ~ +60°C
Storage Temperature:	-20°C ~ +80°C
Relative Humidity:	0% ~ 95% (non-condensing)
MTBF:	>100,000 hours

Operating System

The MVE105H can be controlled by the WEB GUI interface. Connect the encoder to a PC using the Ethernet connection and a standard Cat5/6 LAN cable. To access a standard WEB browser is best.

Log-In to the System

Standard Log-In

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

Open the Log-In Dash Board in your web browser. Enter 192.168.1.168 in URL address, the Log-In window appears. Type the user name and password.

Default Address

The System comes with default address and password.

Default address	192.168.1.168
Default User	admin
Default Password	admin

Reset & Initialization

Input the power supply to turn on encoder and press reset (RST) on the encoder's front constantly for about 10 seconds. The system will be restarted and initialized. The default IP of the encoder is 192.168.1.168 after initialization.

Web GUI

Just after Log-In the web-based GUI appears at the browser. The Header shows the device type and version of firmware.

The Footer contains the selection switches to open the several menus.

Language Selector

On the Header's right hand side a selector allows to toggle between different languages. This selection is available only on the Status Display page.

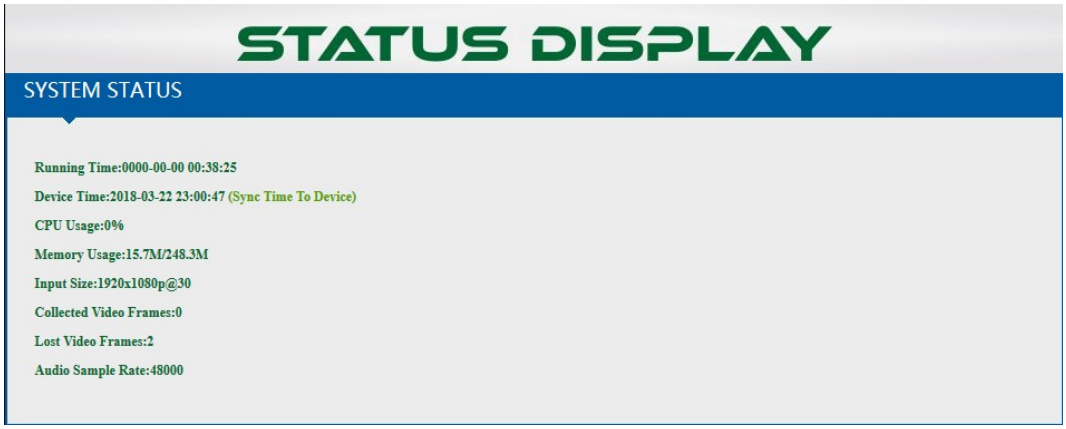
Function	Value
OSD Language	English | Deutsch

Status Display

Click the STATUS button to open the Status Display.

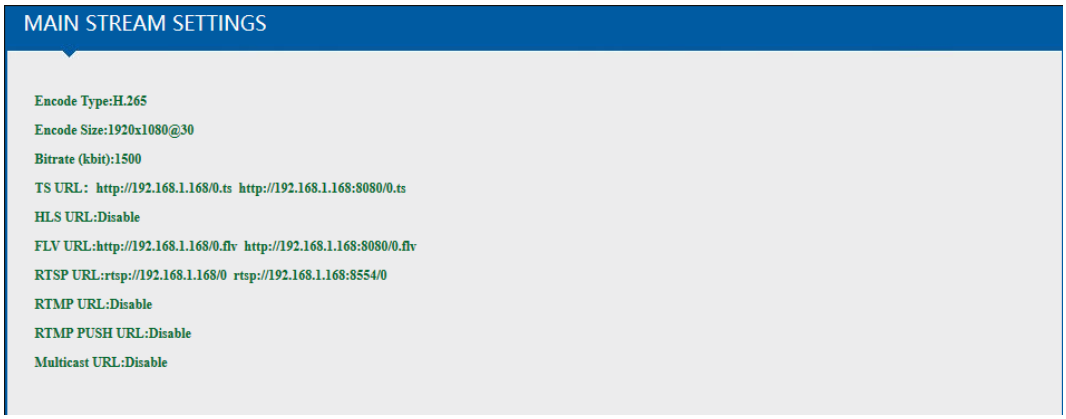
The Status Display shows the device current settings and functions.

System Status



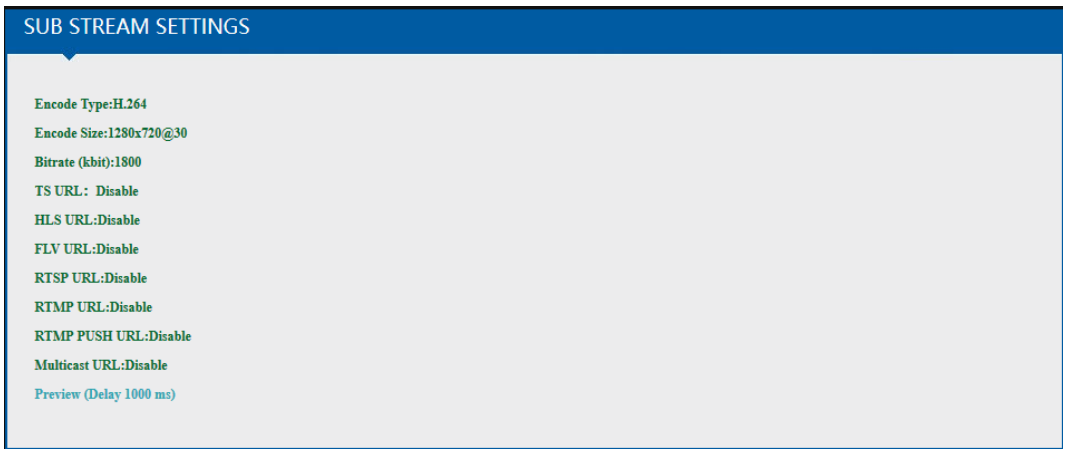
The Systems Status window shows an overview about the device basic conditions.

Main Stream Settings



The Main Stream Settings window shows an overview about the device Main Stream settings, like type of encoder selected, bit rate, streaming ULR, etc..

Sub Stream Settings



The Sub Stream Settings window shows an overview about the device Sub Stream settings, like type of encoder selected, bit rate, streaming ULR, etc..

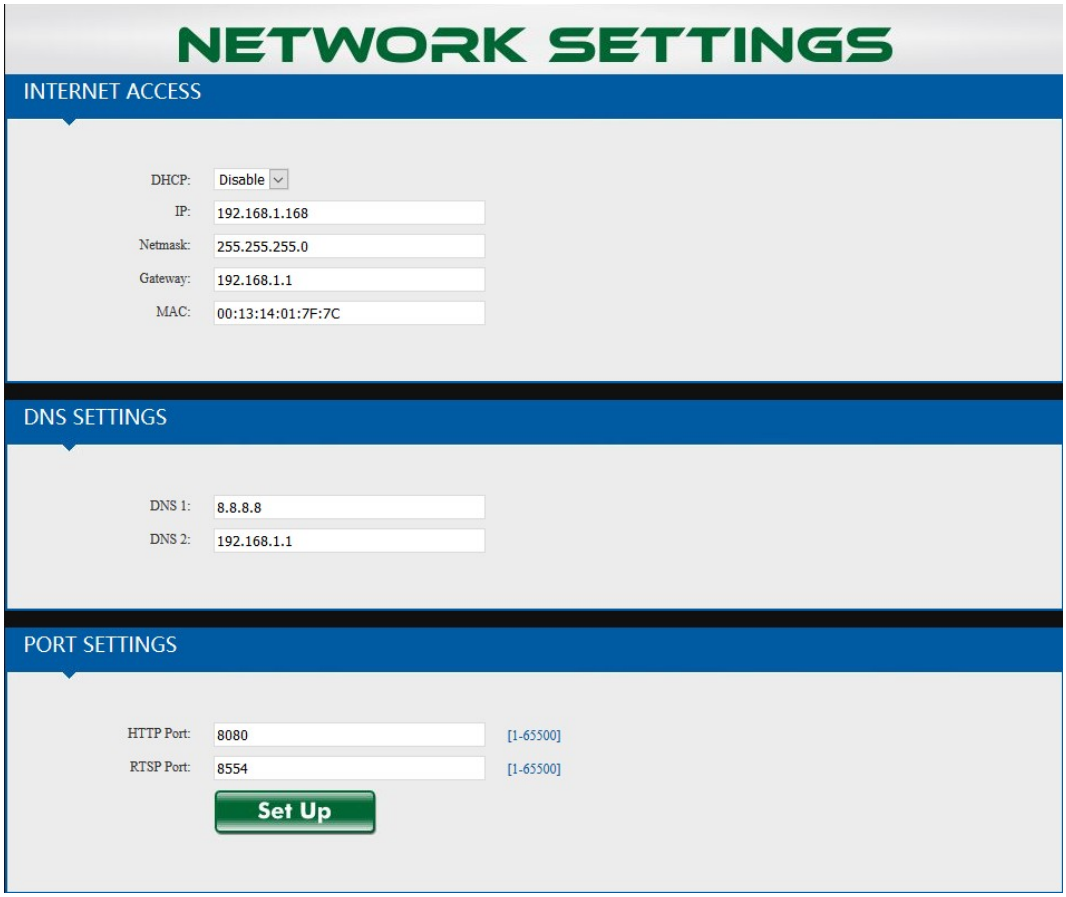
Network

Click the NETWORK button to open the Network settings.

The Network menu allows to configure the device to operate within the local net environment.

IP Address, DNS and Ports

In this section the network settings are accessible.



Confirm the individual settings clicking the SET UP button once.

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	00:13:14:01:7F:7C
DNS 1	Enter your individual DNS address	8.8.8.8

Item	Function	Value
DNS 2	Enter your individual DNS address	192.168.1.1 (default)
HTTP Port	Enter your individual HTTP port	8080 (default)
RTSP Port	Enter your individual RTSP port	8554 (default)

WiFi Device

In case this encoder is a WiFi version of MVE105H an additional window WIFI SETTINGS appears.

Item	Function	Value
DHCP	Enables DHCP mode	Enable | Disable
IP	Enter your individual IP address	192.168.1.100
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	00:13:14:01:7F:7D
DNS 1	Enter your individual DNS address	8.8.8.8
DNS 2	Enter your individual DNS address	192.168.1.1 (default)
HTTP Port	Enter your individual HTTP port	8080 (default)
RTSP Port	Enter your individual RTSP port	8554 (default)

***NOTE**: YOU NEED TO BUY THE WIFI VERSION OF THE DEVICE IF YOU NEED WIFI CAPABILITY. THE DEVICE WILL BE WIFI STATUS AFTER REBOOT WHEN THERE IS NO NETWORK CABLE CONNECTED.*

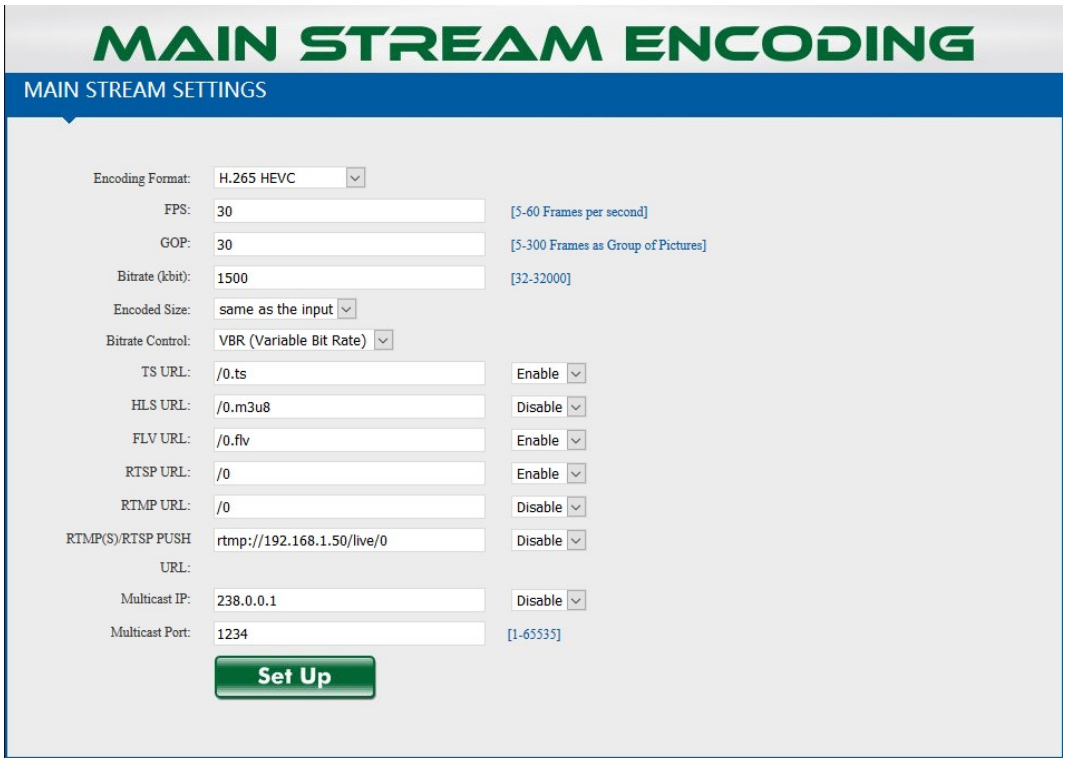
Main Stream Encoding

Click the MAIN STREAM button to open the Main Stream settings.

The Main Stream menu allows to configure the device to operate using an individual set up.

Main Stream Settings

In this section the mainstream settings are accessible.



Confirm the individual settings clicking the SET UP button once.

Item	Function	Value
Encoding	Selector for the type of compression	H.265 | H.264 | MJPEG
FPS	Selector for frame rate	5~60 frames per second
GOP	Selector for GOP size	5~300 frames as GOP
Bitrate	Selector for bit rate	32~32000 kbit
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
Bitrate Control	Selector for type of bit rate control	CBR | VBR
TS ULR	Enter your TS ULR	/0.ts

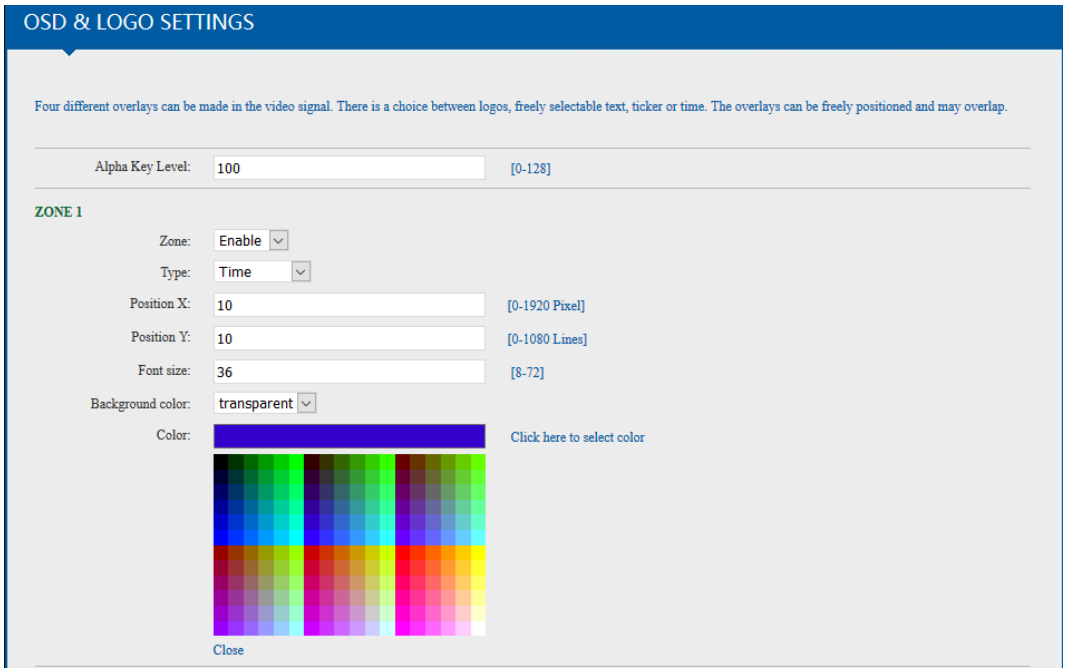
Item	Function	Value
HLS ULR	Enter your HLS ULR	/0.m3u8
FLV ULR	Enter your FLV ULR	/0.flv
RTSP	Enter your RTSP ULR	/0
RTMP ULR	Enter your RTM ULR	/0
Push ULR	Enter your RTMP(S) /RTSP ULR	rtmp://192.168.1.50/live/0
MultiCast IP	Enter your IP address for MultiCast	238.0.0.1
MultiCast Port	Enter your port address for MultiCast	1～65535

***NOTE**: WHEN THE INPUT RESOLUTION IS 1080I50, CHOOSE 25 FPS AS FRAME RATE.*

OSD & LOGO Settings

The MVE105 HEVC Encoder allows to insert individual watermarks or logos.

Four different overlays, named Zone, can be made in the 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.



Alpha Key Level

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

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

OSD Zone 1

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	Enable | disable
Type	Select the type of OSD	Text | Graphic | Scroll Text | Time
Position X	Defines the horizontal point of start	0~1920 px
Position Y	Defines the vertical point of start	0~1080 lines
Scroll Speed	Defines the speed for scrolling text	0~30 fps
Your Text	Enter your individual text	
Font Size	Select the size of text characters	8~72 lines (default 36)
Background	Select the background for text, scroll text and time	Transparent | black | white
Color	Select the font color for text, scroll text and time	Open the color map and select one of 216 colors
Logo	Select your individual logo	Open the explorer to search for your logo file and upload

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.

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

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.

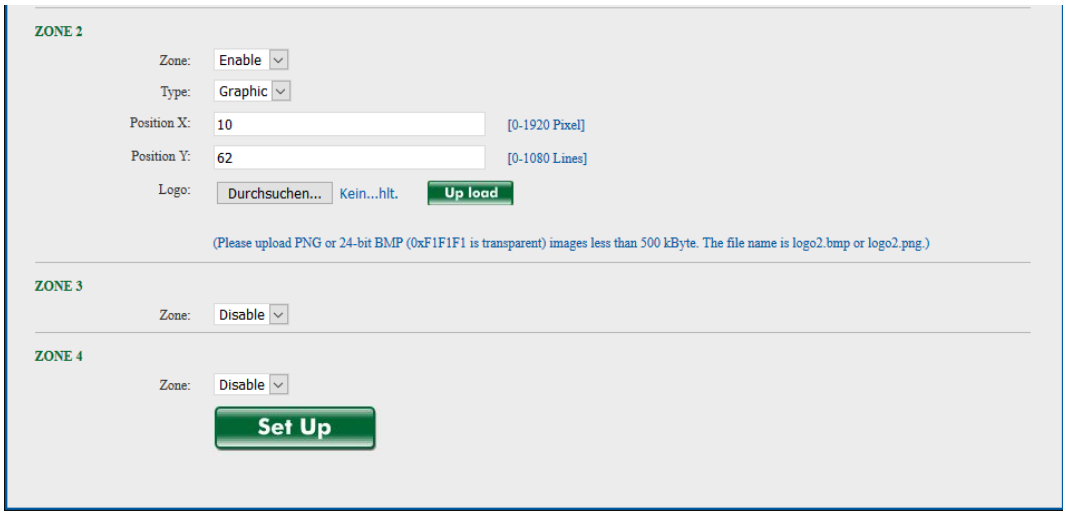
Create your individual logo image elsewhere and upload as PNG or BMP file. For transparency use 24 bit color and chose 0xF1F1F1. The file should not exceed 500 kB.

Confirm the individual settings clicking the SET UP button once.

NOTE: *THE LOGO FILE HAVE TO BE PNG OR BMP FORMAT. THE SIZE IS LIMITED TO 500 KBYTE. THE FILE NAME IS LOGO1.PNG OR LOGO1.BMP.*

OSD Zone 2 - 3 - 4

The Zone 2, 3 and 4 offers insert of text and graphic only.



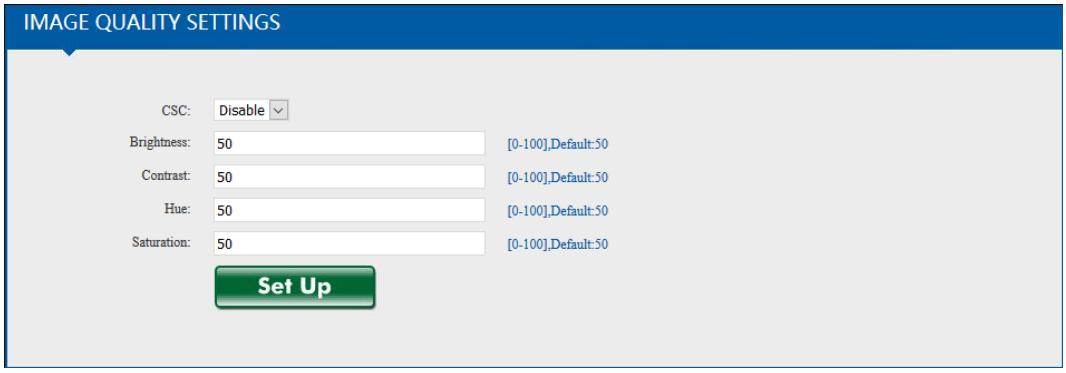
Confirm the individual settings clicking the SET UP button once.

Item	Function	Value
Zone	Enable OSD for Zone 2 , 3, 4	Enable | disable
Type	Select the type of OSD	Text | Graphic
Position X	Defines the horizontal point of start	0~1920 px
Position Y	Defines the vertical point of start	0~1080 lines
Your Text	Enter your individual text	
Font Size	Select the size of text characters	8~72 lines (default 36)
Background	Select the background for text	Transparent | black | white
Color	Select the font color for text	Open the color map and select one of 216 colors
Logo	Select your individual logo	Open the explorer to search for your logo file and upload

NOTE: *THE LOGO FILE HAVE TO BE PNG OR BMP FORMAT. THE SIZE IS LIMITED TO 500 KBYTE. THE FILE NAME IS LOGO2/3/4.PNG OR LOGO2/3/4.BMP.*

Image Quality Settings

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.



Confirm the individual settings clicking the SET UP button once.

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)

NOTE: *THE DEFAULT VALUE IS 50. CORRECTION CAN BE +/- 100 %*

Sub Stream Encoding

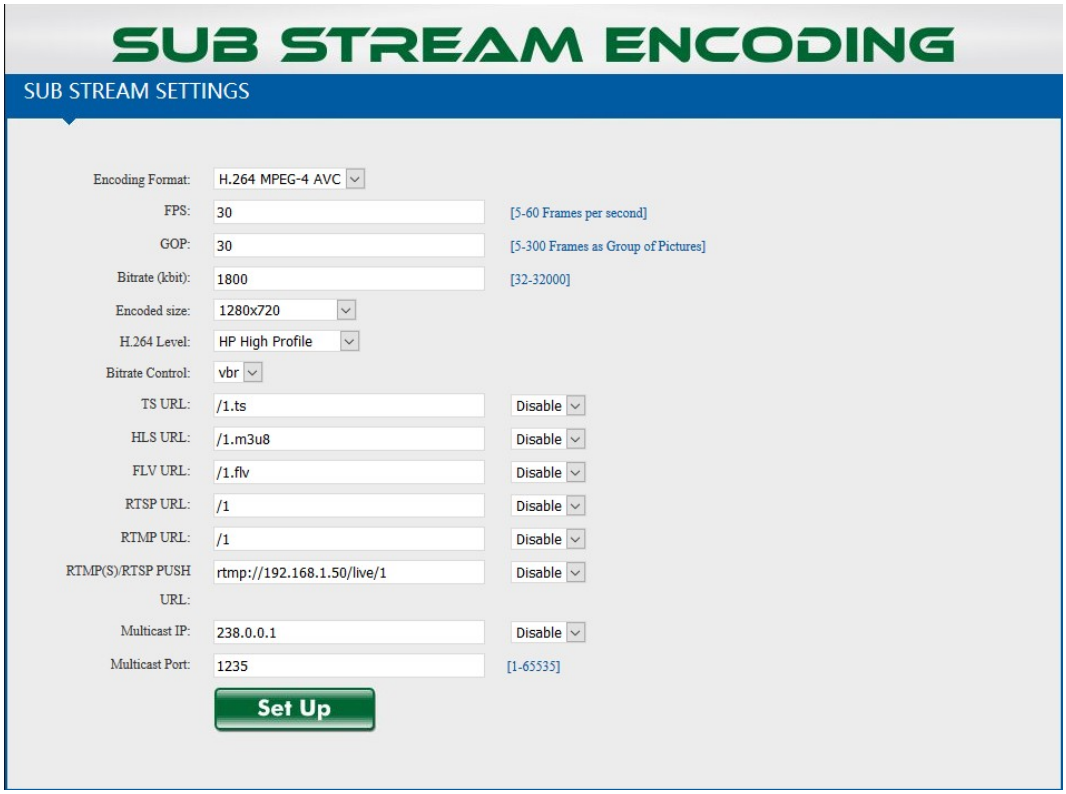
Click the SUB STREAM button to open the Sub Stream settings.

The MVE105H encoder offers a second stream from the incoming source. This stream is independent from any setting at the Main Stream section.

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

Sub Stream Settings

In this section the sub stream settings are accessible.



Confirm the individual settings clicking the SET UP button once.

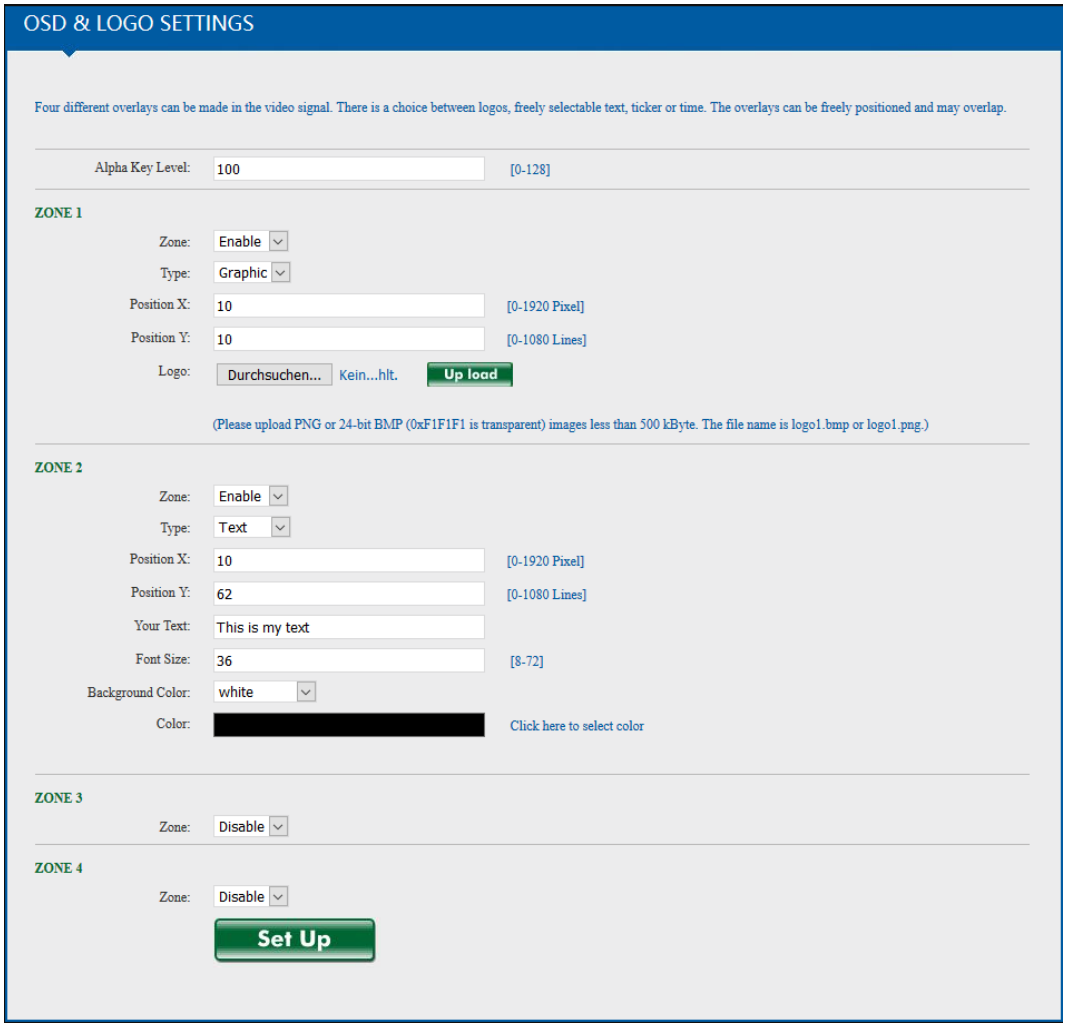
Item	Function	Value
Encoding	Selector for the type of compression	H.265 | H.264 | MJPEG
FPS	Selector for frame rate	5~60 frames per second
GOP	Selector for GOP size	5~300 frames as GOP
Bitrate	Selector for bit rate	32~32000 kbit
Encoded Size	Selector for the encoded image size	same as input | 1920x1080 | … | 1280x720 | … | 720x576 | … | 176x144

Item	Function	Value
H.264 Level	Selector for H.264 profile	Baseline | Main | High
Bitrate Control	Selector for type of bit rate control	CBR | VBR
TS ULR	Enter your TS ULR	/0.ts
HLS ULR	Enter your HLS ULR	/0.m3u8
FLV ULR	Enter your FLV ULR	/0.flv
RTSP	Enter your RTSP ULR	/0
RTMP ULR	Enter your RTM ULR	/0
Push ULR	Enter your RTMP(S) /RTSP ULR	rtmp://192.168.1.50/live/0
MultiCast IP	Enter your IP address for MultiCast	238.0.0.1
MultiCast Port	Enter your port address for MultiCast	1～65535

***NOTE**: WHEN THE INPUT RESOLUTION IS 1080I50, CHOOSE 25 FPS AS FRAME RATE.*

OSD & LOGO Settings

The MVE105 HEVC Encoder allows to insert individual watermarks or logos.



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

Confirm the individual settings clicking the SET UP button once.

Alpha Key Level

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

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

OSD Zone 1, 2 , 3 , 4

The OSD capability for Zone 1 to 4 is identical.

Item	Function	Value
Zone	Enable OSD for Zone 1, 2, 3, 4	Enable | disable
Type	Select the type of OSD	Text | Graphic
Position X	Defines the horizontal point of start	0~1920 px

Item	Function	Value
Position Y	Defines the vertical point of start	0~1080 lines
Scroll Speed	Defines the speed for scrolling text	0~30 fps
Your Text	Enter your individual text	
Font Size	Select the size of text characters	8~72 lines (default 36)
Background	Select the background for text, scroll text and time	Transparent | black | white
Color	Select the font color for text, scroll text and time	Open the color map and select one of 216 colors
Logo	Select your individual logo	Open the explorer to search for your logo file and upload

NOTE: *THE LOGO FILE HAVE TO BE PNG OR BMP FORMAT. THE SIZE IS LIMITED TO 500 KBYTE. THE FILE NAME IS LOGO1/2/3/4.PNG OR LOGO1/2/3/4.BMP.*

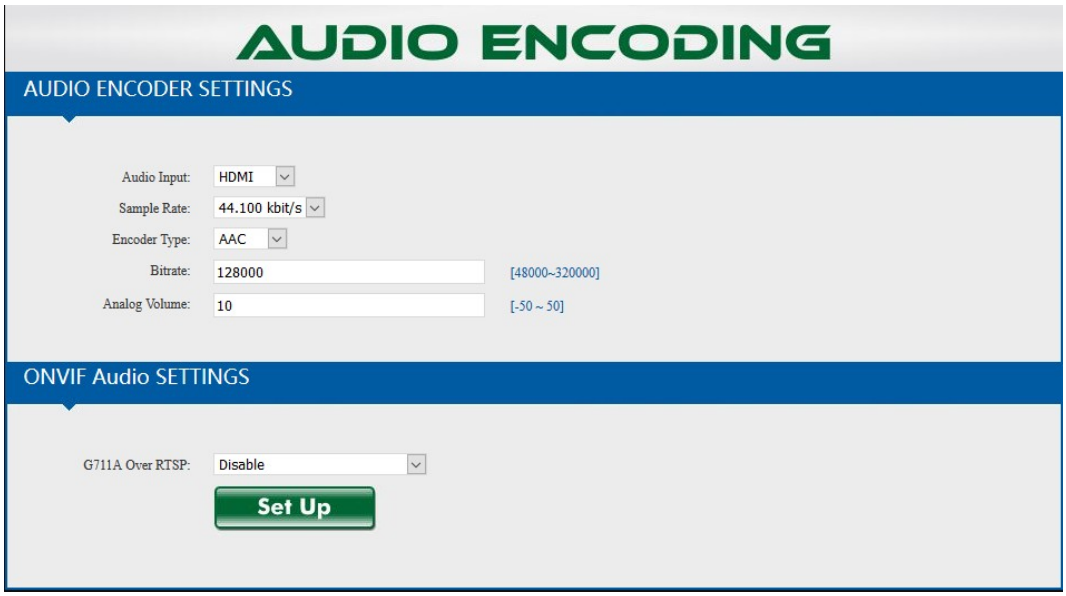
Audio Settings

Click the AUDIO button to open the Audio settings.

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

Audio Settings

In this section the audio settings are accessible.



Confirm the individual settings clicking the SET UP button once.

Item	Function	Value
Audio Input	Select the input channel	HDMI | analog
Sample rate	Select the sample rate to digitize	44.1 | 48 kbit/s
Encoder Type	Select the type of encoding	AAC | AAC+ | AAC++ | MP3 | MP2 | AC3
Bitrate	Selector for bit rate	48 k ~ 320 k
Analog Volume	Defines the audio level	0~100 (default 50)
G711A	Enable audio over RTSP	Disable | Enable | enable and resample with 8k

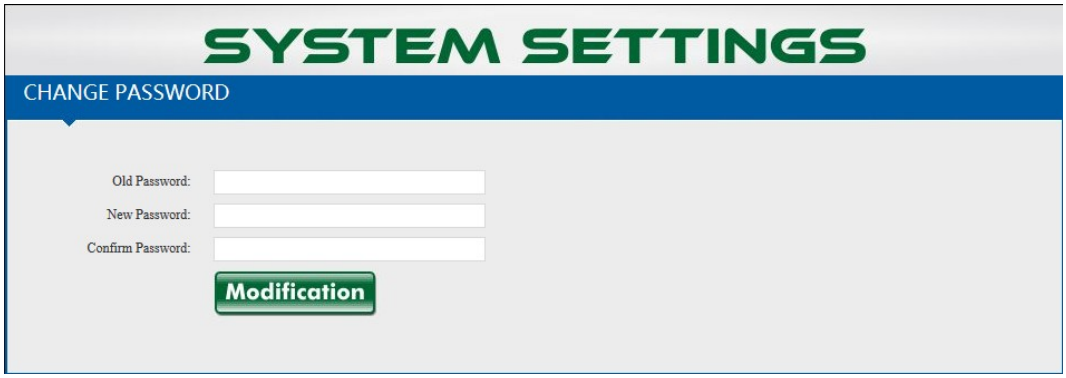
System Settings

Click the SYSTEM button to open the System settings.

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

Change Password

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

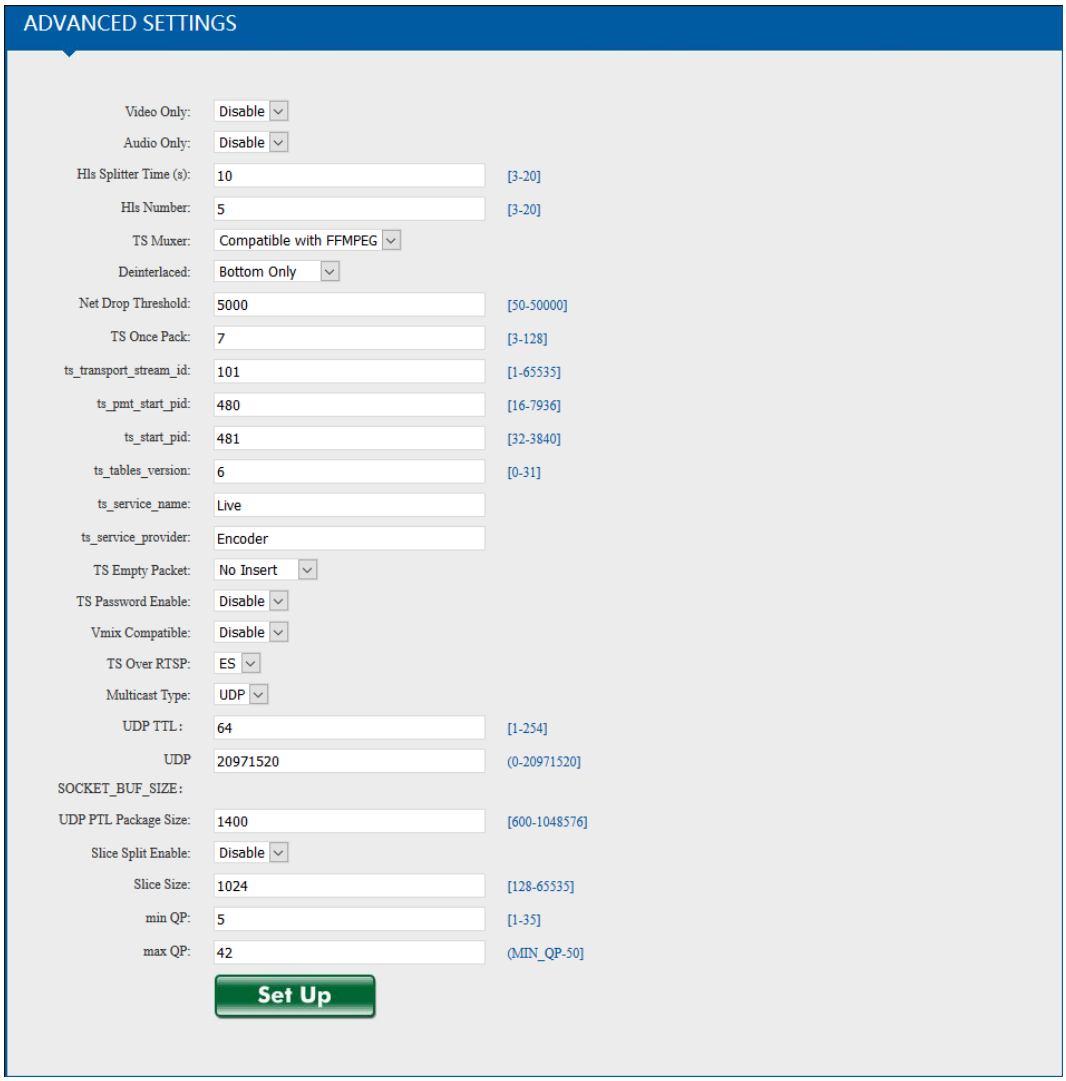


Confirm the individual settings clicking the MODIFICATION button once.

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

Advanced Settings

In this section the advanced system settings are accessible.



Confirm the individual settings clicking the SET UP button once.

Item	Function	Value
Video Only	Enable Video only encoding	Disable | enable
Audio Only	Enable Audio only encoding	Disable | enable
HLS Splitter Time	Select the delay for HLS	3~20 sek
HLS Number	Select the HLS number	3~20
TS Muxer	Select type of TS mux compatibility	VLC | FFMPEG
Deinterlacer	Select type of deinterlacing	Both fields | bottom field only | field to frame
Net drop Threshold	Select the threshold for net drops	50~50000
TS One Pack	Select the number of TS packs	3~128
TS ID	Select the transport stream ID	1~65535

Item	Function	Value
TS PMT Start PID	Select the TS packet identifier	16~7936
TS Start PID	Select the TS packet identifier	32~3840
TS Table	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	None | 1.2x | 1.3x | 1.5x | 2x | 2.5x | 3x | 3.5x
TS Password	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	UDP | RTP
UDP TTL	Select the UDP TTL	1~254
UDP buffer	Select the UDP buffer size	0~209771520
UDP PTL Paket	Select the UDP Package size	600~1048576
Slice Split	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	35~50

Serial to TCP

In this section the serial port settings are accessible.

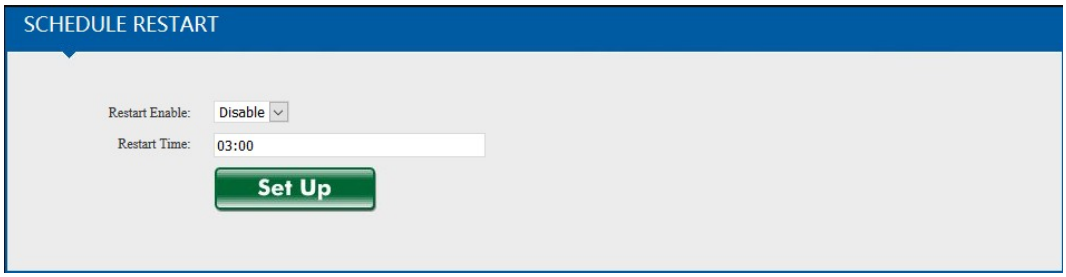
Confirm the individual settings clicking the SET UP button once.

Item	Function	Value
Baud rate	Select the baud rate for serial port	300 ~ 115200 Bd
TCP Port	Select the TCP Port	1~65335

Schedule Restart

In this section the restart settings are accessible.

Using this function, the encoder will restart at the set time automatically.



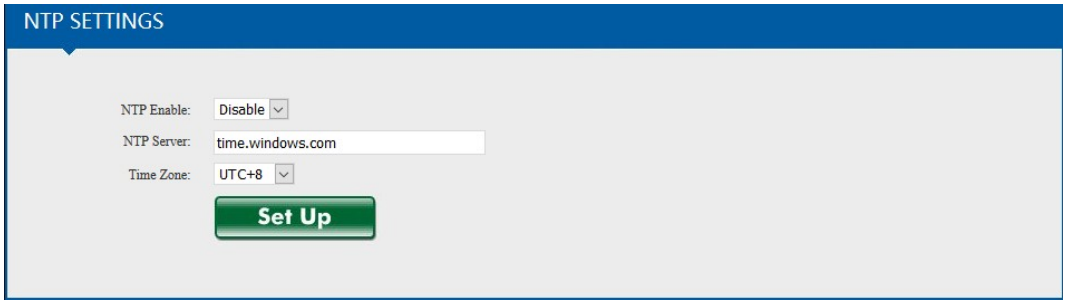
Confirm the individual settings clicking the SET UP button once.

Item	Function	Value
Restart	Enable scheduled restart function	Disable | enable
Restart Time	Select the time for restart	hh : mm

NTP Settings

In this section the NTP settings are accessible.

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



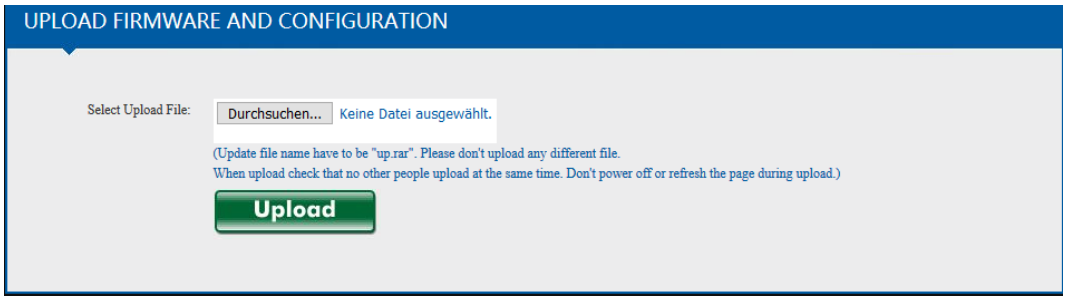
Confirm the individual settings clicking the SET UP button once.

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

Upload Firmware and Configuration

In this section the firmware upload function are 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 have to be “up.rar”, and it have to be an origin “rar” compressed file. Never try to upload any different file.

Confirm the individual settings clicking the UPLOAD button once.

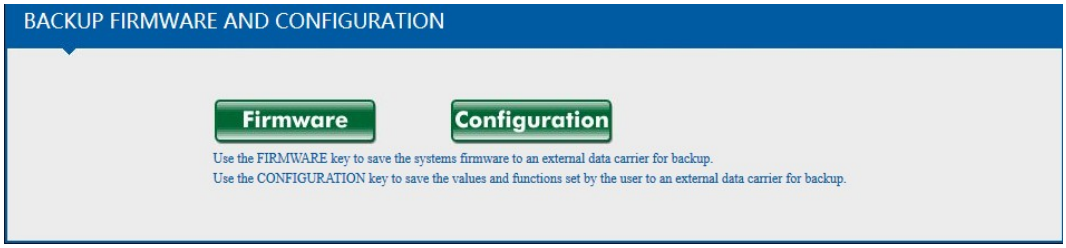
When upload check that no other people upload at the same time. Don't power off or refresh the page during upload. When the procedure is finish the device waits for a restart.

Item	Function	Value
Select Upload	Search the PC for upload file	up.rar

NOTE: CHOOSE THE COMPRESSED UPGRADE PACKAGE(.RAR FILE) WITHOUT DECOMPRESSING PACKAGES. DO NOT REFRESH THE PAGE AND OTHER OPERATIONS DURING THE UPGRADE.*

Backup Firmware and Configuration

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



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.

Item	Function	Value
Firmware	Backup the systems firmware	“up.rar”

Item	Function	Value
Configuration	Backup the systems configuration	“box.cfg”

System Settings

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

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

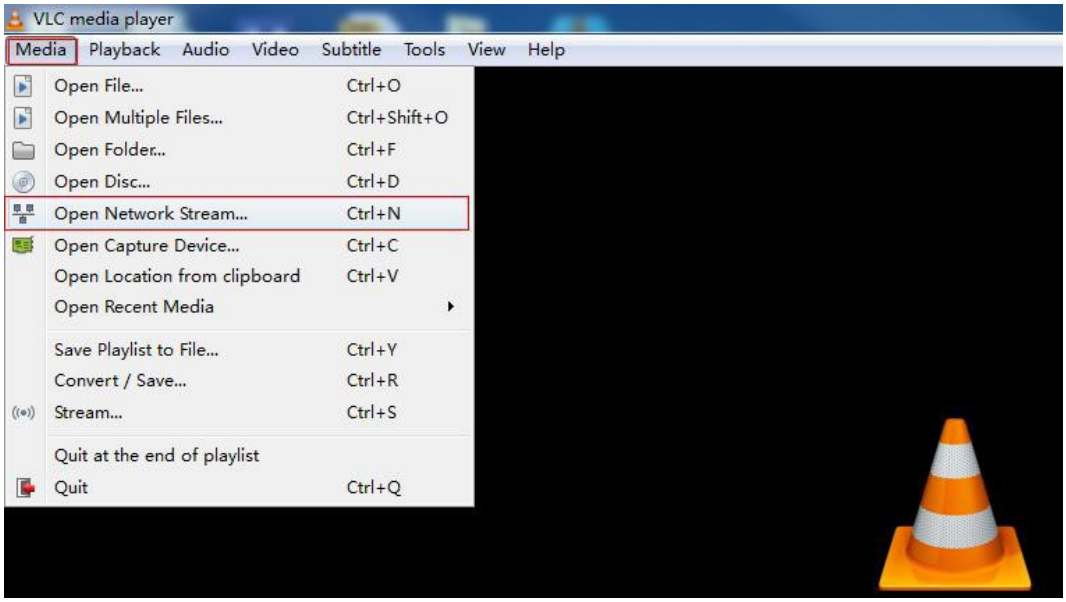
To reload the factory settings click RESET. The system will reboot after confirming a security question and start again using the default settings.

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

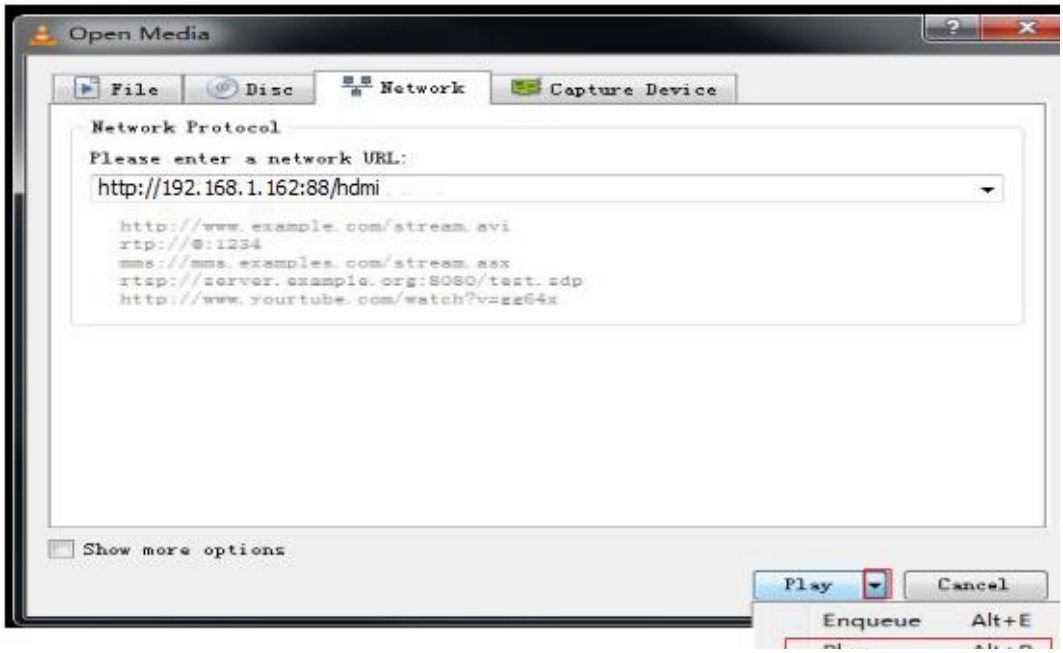
VLC Operation

The MVE105H is compatible to be used with VLC open media player software.

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



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



Click PLAY to start the video.

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: *Our encoder 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.*

Q: How to push stream to media server to do live broadcast by Ustream, Youtube 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 WOWZA?

A: *YES*

Power Supply

The unit is powered by the 12 V DC 1 Amp universal voltage [100 V - 240 V AC 50/60 Hz input range] AC power adapters, similar to the shown above power supply above.

NOTE: *THE MVE105 FEATURES ENVIRONMENTALLY CONSCIOUS PACKAGING MATERIAL TO PROTECT THE MVE105H SYSTEM DURING TRANSPORTATION AND CAN BE USED FOR TEMPORARY STORAGE WHEN BETTER FORMS OF STORAGE ARE NOT AVAILABLE.*

SAFETY PRECAUTIONS

- 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.

Conformity Declaration

to EMV guideline (89/336/EC) and to low-voltage guideline (73/23/EC chapter 10)

The importer/manufacturer: vuetec.tv UG, Hasselbusch 124a, 24558 Henstedt-Ulzburg

declares hereby, that the product:

- Product name: HEVC Encoder
- Model number: MVE105H
- Year of construction: 2016

corresponds to the regulations of the guidelines described above:

The following harmonized norms were used:

- **EN 55011** ISM Equipment, Group 1, Class A
- **EN 55022** Conducted Emissions, Class B
- **EN 50081-2** Generic standard interference transmission, industry area
- **EN 50082-2** Generic standard interference immunity, industry area
- **prEN55103-1** EMV product family norm for Audio-, Video and audio-visual facilities as well as for studio light control facilities for the professional usage, -Part 1: Limiting values and measurement procedure for disturbing emissions
- **prEN55103-2** EMV product family norm for Audio-, Video and audio-visual facilities as well as for studio light control facilities for the professional usage, -Part 2: Requirements on the interference immunity
- **EN 61000-3-2** Power Factor Harmonic Correction
- **EN 61000-3-3** Flicker & Voltage Fluctuation Limits
- **EN 61000-4-2** Electrostatic Discharge Immunity
- **EN 61000-4-3** Radiated Electromagnetic Fields
- **EN 61000-4-4** Fast Transients-Burst Immunity
- **EN 61000-4-5** Input Surge Immunity
- **EM 61000-4-6** Conducted RFI
- **EN 61000-4-11** Voltage Dips

The following national or international norms (or parts/clauses from this) and specifications were used:

- **DIN EN 6099** Verbindungsmaterial für Niederspannungsstromkreise für Haushalt und ähnliche Zwecke; Teil 1: Allgemeine Anforderungen
- **IEC 127-6** Geräteschutzsicherungen

Henstedt-Ulzburg, 29.09.2016 Dipl. Ing. Erwin W. Lissy

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