

Encoder & IPTV Streamer with HDMI Input



h.265 & h.264 compatible encoder & IP streamer combined – **New: HDE-265L** with **'Loop-HDMI'** output

- ✓ HDMI-compatible input for encoding
- ✓ Stereo Audio embedded or external Input (3.5mm stereo*)
- ✓ HD Resolution 1080p, 1080i, 720p
- ✓ IP output: RTSP, RTMPs, UDP/RTP, HTTP, HLS, FLV, MJPG
- ✓ **NEW: SRT-Support: Only 265-Versions!**
- ✓ Distribution of Video Camera HD-SDI and other sources content over LAN, WAN or internet
- ✓ 2 simultaneously and independent Live stream broadcast encoder engines to multiple destinations
- ✓ Video-over IP applications
- ✓ IPTV/OTT applications
- ✓ Video conferencing, Camera streaming
- ✓ IPTV on LAN applications, Corporate IPTV for Broadcasters
- ✓ HD and SD video encoding (incl. 1080p)
- ✓ Corresponding product: HSD-340 HDMI to SDI converter, HDE-1264/1265 in 1RU 19" , HDE-4264/4265, ADE-4264/4265 HDE-275Q = 2x 4Kp30 2x Full-HD to IP

BLANKOM HDE-265 /HDE-264

IPTV encoder designed for TV signal distribution in excellent quality over LAN and INTERNET.

The H.265 (HEVC) compatible compression technology features low bit rates for IPTV/OTT systems. The high-efficient encoding chips saves bandwidth cost through all its resolution range.

Distribution of SD and HD TV channels through the IPTV/OTT network using state-of-art IP technology from almost any kind of video input.

Excellent Video and Audio quality. High reliability. No regular service and maintenance need during operation. Available as HDE-264 with only h.264 compatible codec support.

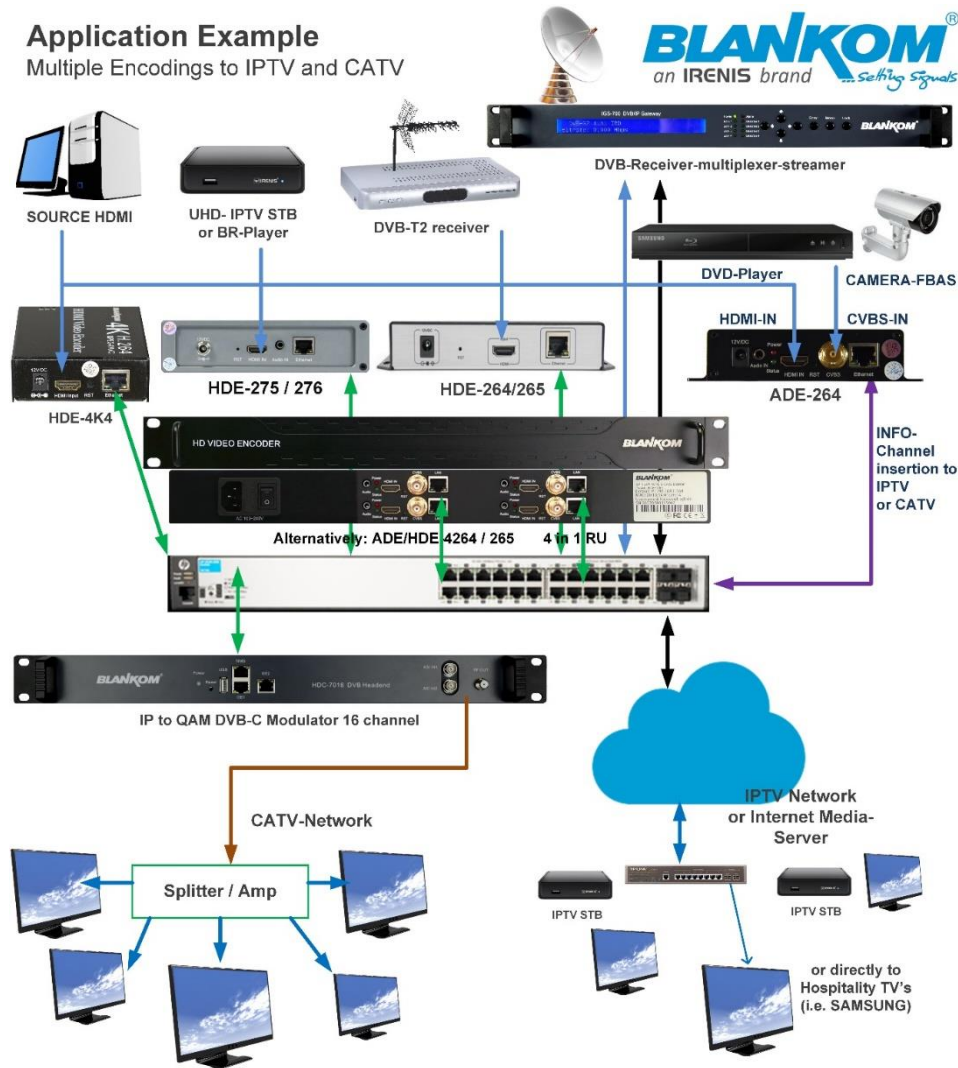
**) depending on model*

BLANKOM HDE-265/264 compatible encoders serving the distribution of SD and HD TV/video content through IP networks in digital quality.

The live video can be received by Internet media server by TV sets, with IPTV Set-Top Boxes, with PC's and Tablets/Smartphones using i.e. VLC Player



Application Example
Multiple Encodings to IPTV and CATV



Available in different styles of these SoC-Linux encoder streamer:

Apart from the boxed versions we offer them with integrated PSU's in 19 Inch Rackmount types

Function	H.264 compatible Encoder and IP Streamer (HEVC comp. Only HDE-265)
INPUT	HDMI-Cable compatible (1.4)
Resolution	1080p, 1080i, 720p and below
Video encoder	H.265 (HEVC) or H.264 (AVC) (or both = HDE-265 only), MJPG support
Audio encoder	AAC +/+, MP3, MPEG1Layer2, AC-3stereo (External analogue stereo Input depending on Model)
Audio Bit-rate:	Bit-rate: 32k/48k/96k/128k/160k/192k, Data-rate: 64 kbps-384 kbps
Data interface	RJ45, 1000Mb/s Ethernet interface, management by web browser (HDE-264=100BaseT only)
Protocol	HTTP, RTSP, RTMPs, UDP/RTP, FLV, HLS ; Unicast/Multicast, MJPG, SRT (h.265 units only)
Data Rate	32 kbps – 32 Mbps
Encoding bitrate	CBR/VBR
GOP Structure	IBBP
ONVIF	Supported by RTSP: G711A/U
Picture adjust	De-interlacing, Noise reduction, Sharpening
OSD	4x Logo and Text Insertions as transparent overlay
Upgrade	Firmware- and Configuration-File for Backup UP- and Download by Web-IF (since V6.42... Nov. 2019)
Power supply	12V DC, 1A
Dimensions / Weight	165x85x24mm / 0.5 kg
Consumption	5W

Examples with HDMI- Input Modules:

Hint: All Modules have same IP settings as factory defaults. So at first, change all of them to avoid conflicts with the addresses if you'll connect them to the same switch(es).

HDE-1265



HDE-4265



HDE-08265



HDE-16265



Recommended companion products:

- IP to HDMI or HD-SDI Outputs: HDD-275 the complimentary Digital Signage Decoder
 - IPTV SetTopBox BLANKOM 6800+
 - OBS- Open Broadcaster Software
 - Video Lan Client VLC
 - IGS-2000/4000/6000 modular IP to HD-SDI decoder
 - A Linux/MAC/MS- PC/Server with Restreamer 2 from datarhei
 - Youtube and other online streaming services,
- Please check our Websides about tipps and tricks for the SoC-DSP Encoder family: PDF_ <https://www.blankom.de/assets/downloads/Encoder-How-to-set-Keyframe-frequency.pdf>
<https://www.blankom.de/tipps-tricks-encoder.html> or in German:
<https://www.blankom.de/tipps-tricks-encoder-de.html>

Anmerkung:

Alle von uns veröffentlichten Betriebsanleitungen richten sich an den Antennen- und IT-Fachmann, der über grundlegende Kenntnisse der Empfangs-, Netzwerk- und Anlagentechnik verfügt. Die Einhaltung aller relevanten Vorschriften und Richtlinien für den Aufbau und Betrieb von solchen Anlagen obliegt dem Installateur und/oder dem Betreiber. Insbesondere sind die in den jeweiligen Ländern geltenden Vorschriften und Richtlinien für die Inbetriebnahme speziell für den Stromanschluß und alle mit den Produkten in Zusammenhang stehenden und geltenden Normen und Gesetze einzuhalten.



Remark:

All operating instructions published by us are intended for the antenna and IT specialist who has basic knowledge of reception, network and system technology. Compliance with all relevant regulations and guidelines for the installation and operation of such systems is the responsibility of the installer and/or the operator. In particular, the regulations and guidelines applicable in the respective countries for commissioning, especially for the power connection, and all standards and laws related to the products must be complied with.



Annotation:

Tous les modes d'emploi que nous publions sont destinés aux professionnels de l'antenne et de l'informatique qui ont des connaissances de base en matière de réception, de mise en réseau et de technologie des équipements. Le respect de toutes les réglementations et directives pertinentes pour l'installation et l'exploitation de ces systèmes relève de la responsabilité de l'installateur et/ou de l'exploitant. En particulier, il convient de respecter les réglementations et directives applicables dans les pays respectifs pour la mise en service, notamment pour le raccordement électrique, ainsi que toutes les normes et lois relatives aux produits.



Annotazione:

Tutte le istruzioni per l'uso da noi pubblicate sono destinate al professionista dell'antenna e dell'informatica che ha una conoscenza di base della tecnologia di ricezione, di rete e delle apparecchiature. Il rispetto di tutti i regolamenti e le linee guida pertinenti per l'installazione e il funzionamento di tali sistemi è responsabilità dell'installatore e/o dell'operatore. In particolare, devono essere rispettati i regolamenti e le linee guida applicabili nei rispettivi paesi per la messa in funzione, soprattutto per il collegamento alla rete elettrica e tutte le norme e le leggi relative ai prodotti.



Anotación:

Todas las instrucciones de uso publicadas por nosotros se dirigen al profesional de la antena y de la informática que tiene conocimientos básicos de recepción, de redes y de tecnología de equipos. El cumplimiento de todos los reglamentos y directrices pertinentes para la instalación y el funcionamiento de dichos sistemas es responsabilidad del instalador y/o del operador. En particular, deben cumplirse los reglamentos y directrices aplicables en los respectivos países para la puesta en marcha, especialmente para la conexión de la energía y todas las normas y leyes relacionadas con los productos.



Anotação:

Todas as instruções de operação publicadas por nós são destinadas ao profissional de antena e TI que possui conhecimentos básicos de recepção, rede e tecnologia de equipamentos. O cumprimento de todos os regulamentos e diretrizes relevantes para a instalação e operação de tais sistemas é de responsabilidade do instalador e/ou do operador. Em particular, os regulamentos e diretrizes aplicáveis nos respectivos países para comissionamento, especialmente para a conexão de energia e todas as normas e leis relacionadas aos produtos devem ser obedecidas.

Hint: HDMI-Cable are usually limited to 10m length.

Please have also a look into the Quickstart-Manual of the SDE-265, which is almost more enhanced. (www.blankom.de)

Appearance:



DC-Jack 12V, 100BaseT Ethernet (264 versions only) or GbE (265 versions), Status LEDs, HDMI IN, RESET Button-hole, HDE-265(L) (L=Loop out) have an additional 3.5mm Stereo Jack Audio-Input:



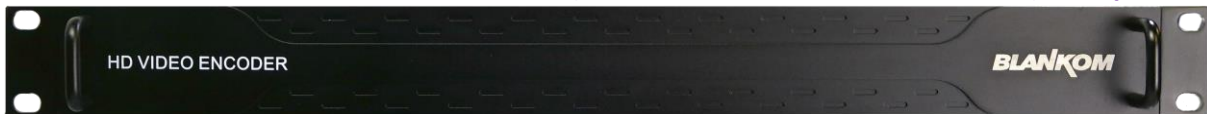
Variant with SDI Inputs: SDE-265 (no 264 available any more)



Attention: Please always use the delivered external Power Supply Unit with 12V DC and 1...3A (dep. on model). Higher Voltage will destroy the device.

SDI-Versions have a loop through to cascade the Input to other SDI-devices...

Available 1RU Versions: 1264 / 1265 and 4264 (ADE and HDE-Versions as well as SDE) Example:



Front



REAR example ADE-4264 = CVBS + HDMI support (ADE-264 has a separate Flyer and quick start)

12xy means 1 encoder, 42xy means 4 Encoders (xy can be (2)64 or (2)65 = MPEG4 or HEVC compatible)

A = Analog (CVBS + HDMI support), S=SDI, H= only HDMI – Versions



Rear of HDE-4264/-4265



Example Sticker with default settings (MAC may be different)
 Note: HDE-4264B has been redesigned with 4x GbE outputs now to be independent per encoding process-Streaming and might use different networks to stream to.

Attention! Because of a cut in the hardware for the HDE-265 (see also end of the document):

From November 2020 production on, the chipset has been changed to the HDE-265L. So if ordering the HDE-1265 in 1RU later on, it is based on the new one. Therefore the firmware is different too and to be considered when updating. The normal **HDE-265 boxed** version latest firmware was: **6.53E**, then **5.x**, while the **HDE-265L** and new produced **HDE-1265** is actually **5.05** and for **Ambarella chip: 2.8A**. The difference can be detected in the web-IF in the top frame or because the new one supports **1x Main encoder** and **3x secondary encoder** streamer parts. So the firmware is related to the used chipset hardware !!!

Notes Remarks and Hints:

The Fast- or Gigabit-Ethernet-port **does not support PoE** so please take care of not accidentally using a PoE switch- you can damage the port and the unit will be not accessible anymore.

We recommend to use an IGMP-V2/3 protocol capable GBE- Switch to avoid flooding your network with unmanaged multicast streams. Also some consumer Internet routers do not like Multicasts (UDP/RTP) and might reboot periodically.

An Internet-connection is not necessary as long as you need to use NTP and does not have an own NTP server in your network.

Please assure that your HDMI –Output you like to encode is set to max. HD with 1080p60 or lower. Higher values will not work. 1080i50 will be shown as 1920x1080@25 in the Input status window

The embedded Linux system takes some seconds to fully boot. After the System-LED is on, you can connect your browser to it. We recommend Chrome, Opera, and Mozilla. For a preview Popup in the browser, a flash-player add-on need to be installed for the browser.

Sometimes it is helpful to reload the browser – page to get the changed settings and values because of different browser behaviours...

The RESET button will erase all your settings and the unit will be forced to start with factory defaults. Use a thin wire to pass the small hole and press the inside button by it for at least 5-10 seconds until the System LED will go off. The encoder would perform a restart than after releasing the button.

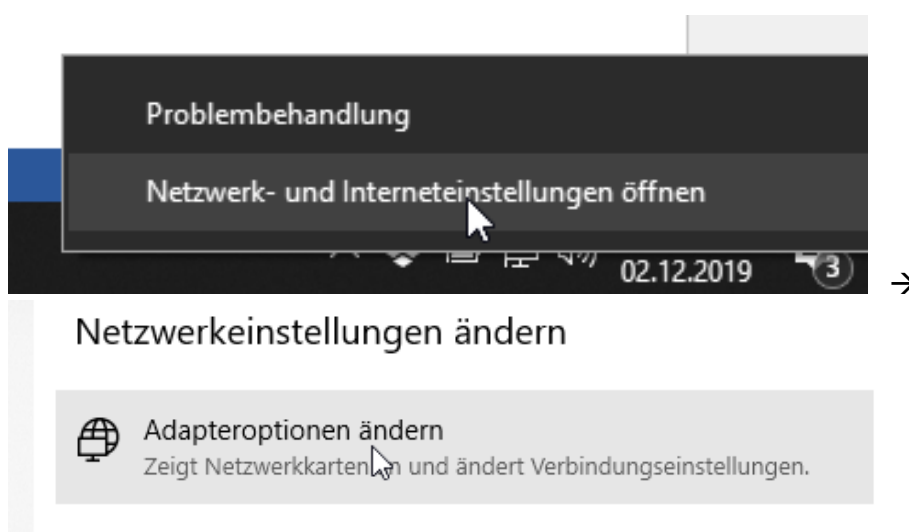
The Web-Interface lookalike may vary between different Versions but basically its self-explaining.

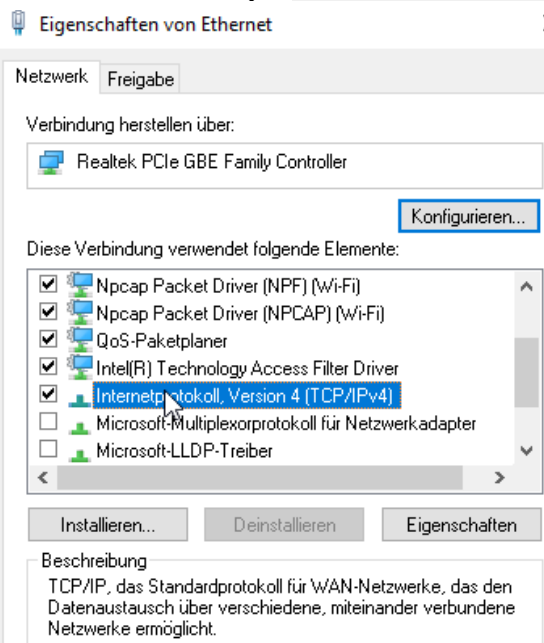
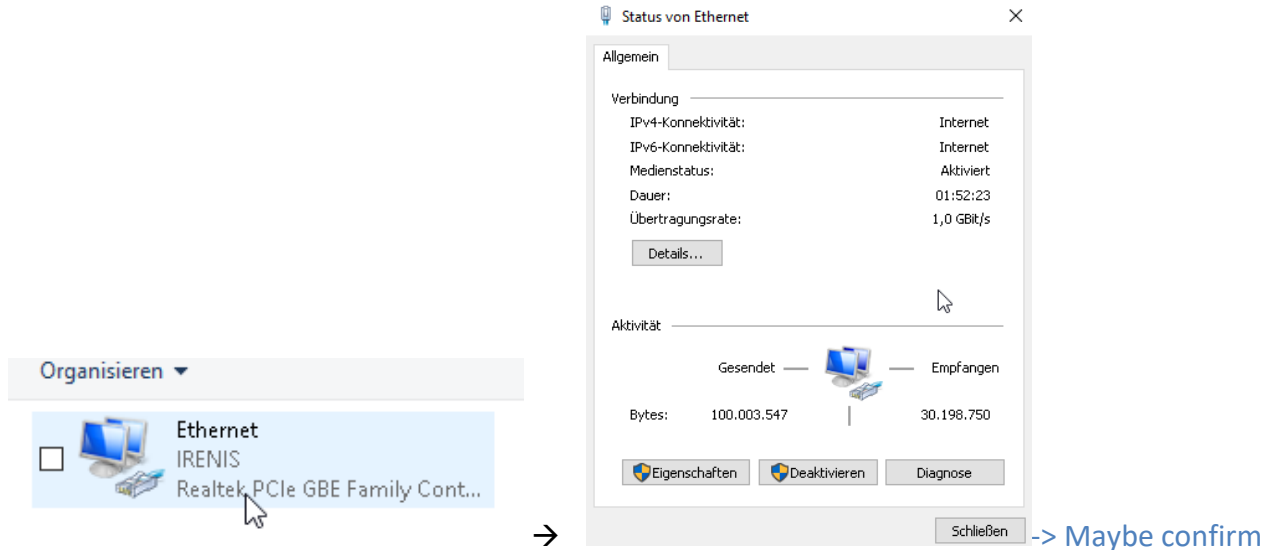
- The SDI versions supporting the first embedded Stereo-Audio-Pair to be encoded.

Setting up your PC/Laptop before connecting:

If you use a Windows based PC, you should assign its Ethernet adapter into the same range like the encoder: Use a static IP like follows:

1st: Open your network settings in System Menu:





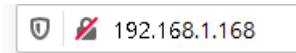
Administrator access->

Change IPv4 settings:

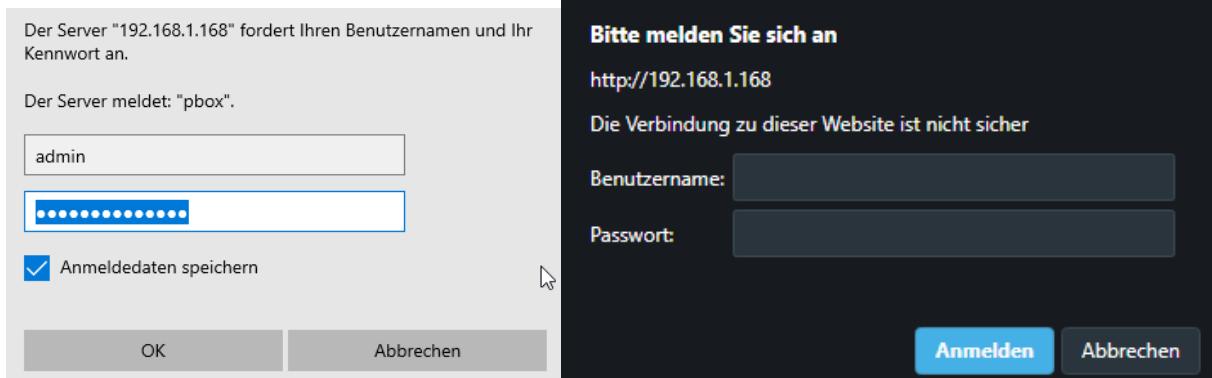


And confirm please. Linux users should know how to change the ethernet or WIFI settings.

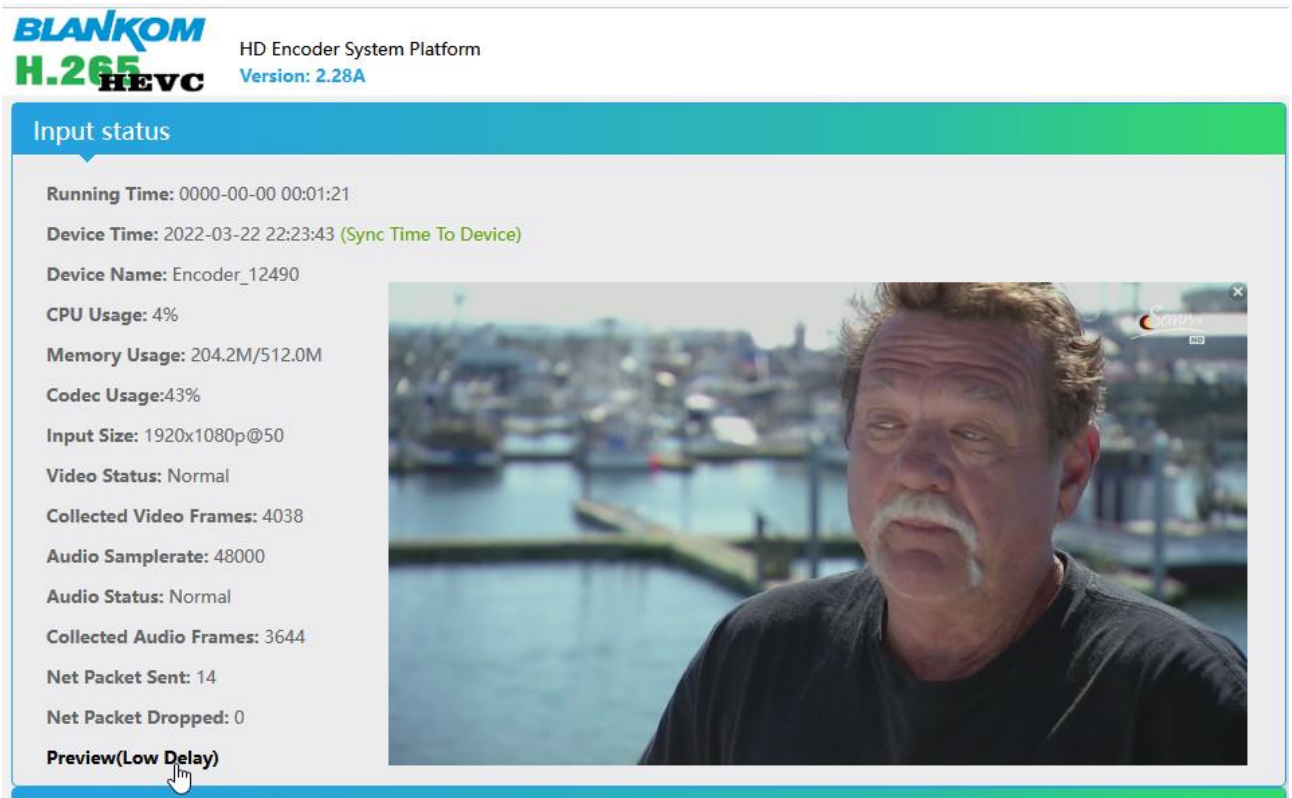
Then open your browser and enter the http- Address of the box 192.168.1.168 (w/o https):



Depending on browser you'll get a log-in-screen window:



Enter the default username = admin, default password = admin and here we go (new design):



The STATUS page shows your Setup encodings for the MAIN and the Sub stream(s).

Parallel and different streaming's can be used for all encoder parts as long as the capacity of the system is not claiming it: You will get a message if the encoding capacity will be reached and one or more sub-streams would be disabled... The B-Models support only one streaming Method enabled in Main and sec. Stream (= max. 2 outputs)

Main stream

Encode Type: H.265

Encoding Type: 1920x1080@25

Bitrate(kbit): 3200

TS URL: http://192.168.1.168/0.ts http://192.168.1.168:8086/0.ts

HLS TS URL: Disable

HLS MP4 URL: Disable

MP4 URL: <http://192.168.1.168/0.mp4> <http://192.168.1.168:8086/0.mp4>

FLV URL: http://192.168.1.168/0.flv http://192.168.1.168:8086/0.flv

RTSP URL: rtsp://192.168.1.168/0 rtsp://192.168.1.168:8554/0

RTMP URL: Disable

RTMP(S) PUSH URL: Disable

Multicast URL: Disable

SRT URL: Disable

SRT PUSH URL: Disable

HLS PUSH URL:Disable

[Preview\(HTML5\)](#)

Substream1

Encode Type: H.264

Encoding Type: 1280x720@25

Bitrate(kbit): 3200

TS URL: Disable

HLS TS URL: Disable

HLS MP4 URL: Disable

MP4 URL: <http://192.168.1.168/1.mp4> <http://192.168.1.168:8086/1.mp4>

FLV URL: http://192.168.1.168/1.flv http://192.168.1.168:8086/1.flv

RTSP URL: Disable

RTMP URL: Disable

RTMP(S) PUSH URL: Disable

Multicast URL: Disable

SRT URL: Disable

SRT PUSH URL: Disable

HLS PUSH URL:Disable

[Preview\(HTML5\)](#)

The STATUS page shows your Setup encodings for the MAIN and the Sub-stream(s).

Parallel and different streaming's can be used for all encoder parts as long as the capacity of the system is not claiming it: You will get a message if the encoding capacity will be reached and a sub-stream should be disabled...

In some Sub-Streams and model depending you can check the Picture/Sound directly in the browser by the button/link Preview (HTML5).

Settings Menu:

Main stream

Encoding Type:	<input type="text" value="H.265"/>	
Encoded Size:	<input type="text" value="Same as input"/>	
FPS:	<input type="text" value="Custom"/>	
Custom FPS:	<input type="text" value="25"/>	[5-60]
GOP:	<input type="text" value="25"/>	[5-300]
Bitrate Control:	<input type="text" value="VBR"/>	
Image Quality Range:	<input type="text" value="Lower -> Best"/>	
Bitrate(kbit):	<input type="text" value="3200"/>	[32-32000]
TS URL:	<input type="text" value="/0.ts"/>	Enable ▾
HLS TS URL:	<input type="text" value="/0.m3u8"/>	Disable ▾
HLS MP4 URL:	<input type="text" value="/0_mp4.m3u8"/>	Disable ▾
MP4 URL:	<input type="text" value="/0.mp4"/>	Enable ▾
FLV URL:	<input type="text" value="/0.flv"/>	Enable ▾
RTSP URL:	<input type="text" value="/0"/>	Enable ▾
RTMP URL:	<input type="text" value="/0"/>	Disable ▾
RTMP(S)/RTSP PUSH URL:	<input type="text" value="rtmp://192.168.1.169/live/0"/>	Disable ▾
Multicast IP:	<input type="text" value="238.0.0.1"/>	Disable ▾
Multicast Port:	<input type="text" value="1234"/>	[1-65535]
Multicast SAP Name:	<input type="text" value="GROUP0_STREAM0"/>	
SRT URL Port:	<input type="text" value="9000"/>	Disable ▾
SRT PUSH URL:	<input type="text" value="srt://192.168.1.169:9000"/>	Disable ▾
SRT Encryption Password:	<input type="text" value="0123456789"/>	Disable ▾
HLS PUSH URL:	<input type="text" value="https://a.upload.youtube.com/http_upload_hls?ci"/>	Disable ▾

Apply

Stream Parameters

TS Video PID:	<input type="text" value="100"/>	[16-8190]
TS Audio PID:	<input type="text" value="200"/>	[16-8190]
TS Transport Stream ID:	<input type="text" value="101"/>	[1-65535]
TS Original Network ID:	<input type="text" value="65281"/>	[1-65535]
TS PMT Start PID:	<input type="text" value="480"/>	[16-7936]
TS Start PID:	<input type="text" value="481"/>	[32-3840]
TS Tables Version:	<input type="text" value="6"/>	[0-31]
TS Service ID:	<input type="text" value="1"/>	[1-65535]
TS Service Name:	<input type="text" value="Live"/>	
TS Provider Name:	<input type="text" value="Encoder"/>	
Conform to System B (DVB):	<input type="button" value="Disable"/>	
TS Null Packet:	<input type="button" value="No Insert"/>	
TS TDT:	<input type="button" value="Disable"/>	
SRT Latency(ms):	<input type="text" value="150"/>	[1-10000]
SRT Bandwidth(KByte):	<input type="text" value="0"/>	[0-102400](0=nolimit)

OSD

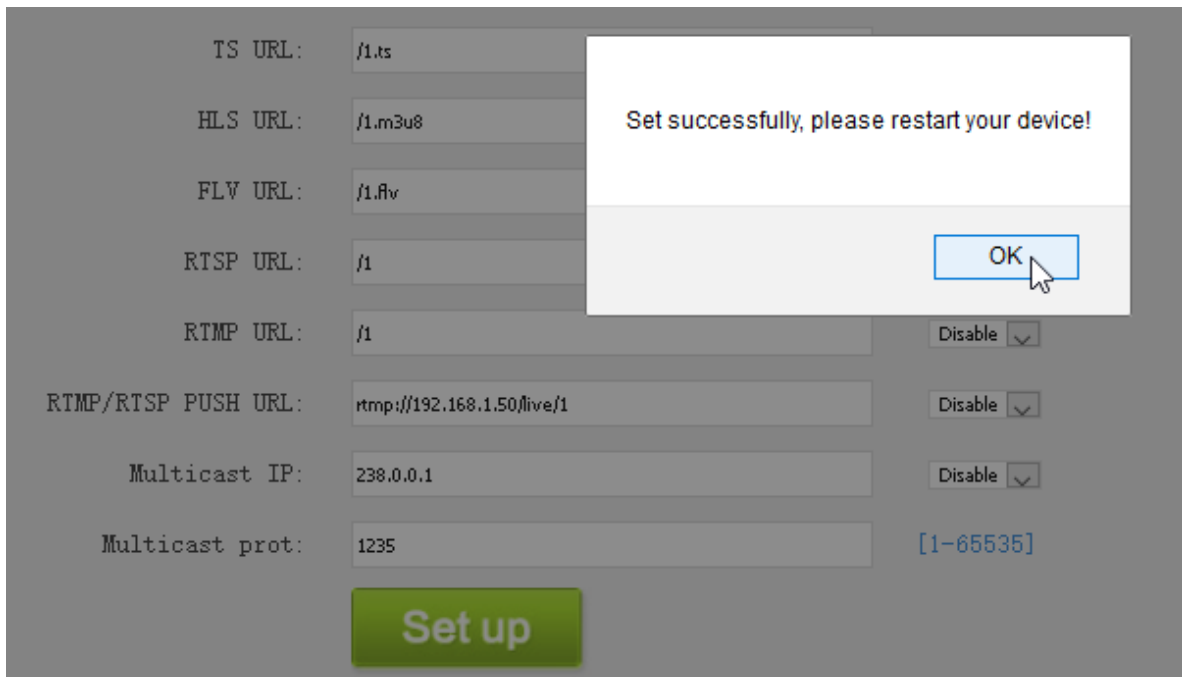
Status Network **Main stream** Substream1 Substream2 Substream3 Audio&Video System

But you need to enable the FLV or HLS stream before using that – and Flash-Player support is needed by your browser but disabled by Adobe:

Enabling it in the related (Sub-)Stream settings

FLV URL :	<input type="text" value="/1.flv"/>	<input type="button" value="Enable"/>
RTSP URL :	<input type="text" value="/1"/>	<input type="button" value="Disable"/>

Applying it by APPLY Button! Than change back to the STATUS Page and use the Preview link.
Best is to use h.264 encoding, but h.265 works also.

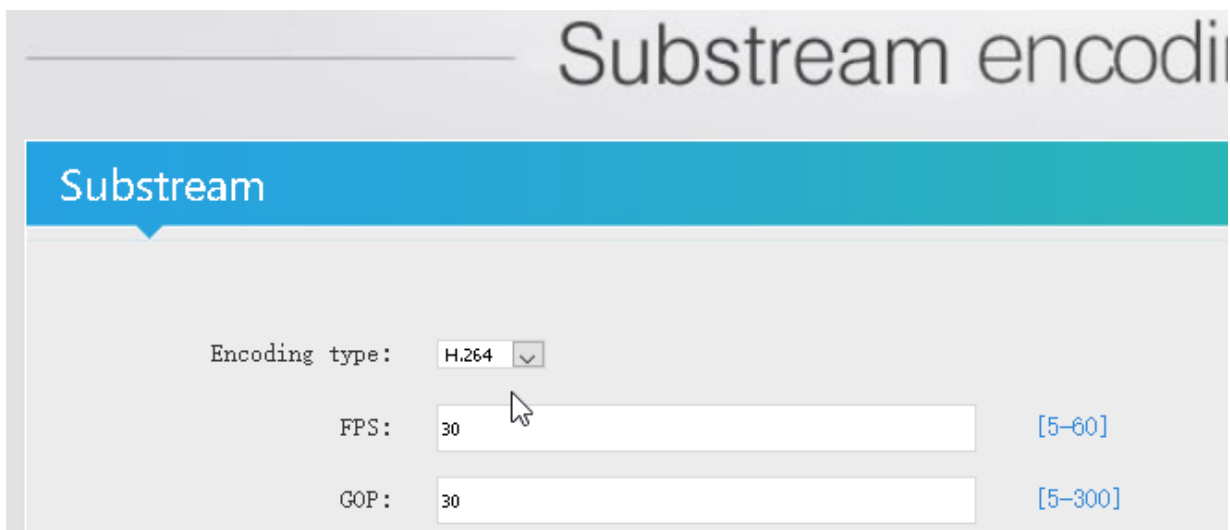


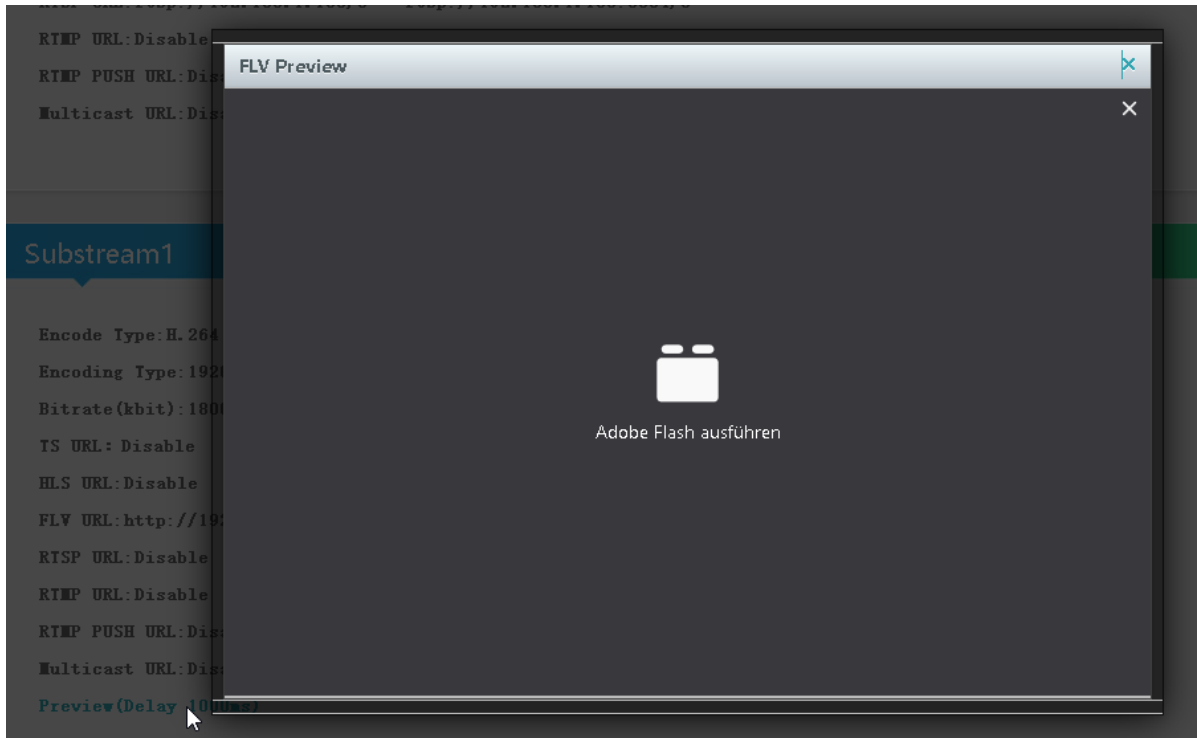
This doesn't mean to restart the encoder but to restart your Stream-receiver-Decoder like VLC or IPTV SetTopBox to re-sync it to the new codec values. This message will pop up every time you change the encoder parameters. Receivers are stupid and might not react to the changed values by themselves.

Depending on Model: Preview in Browser is possible from within the status page as a link:

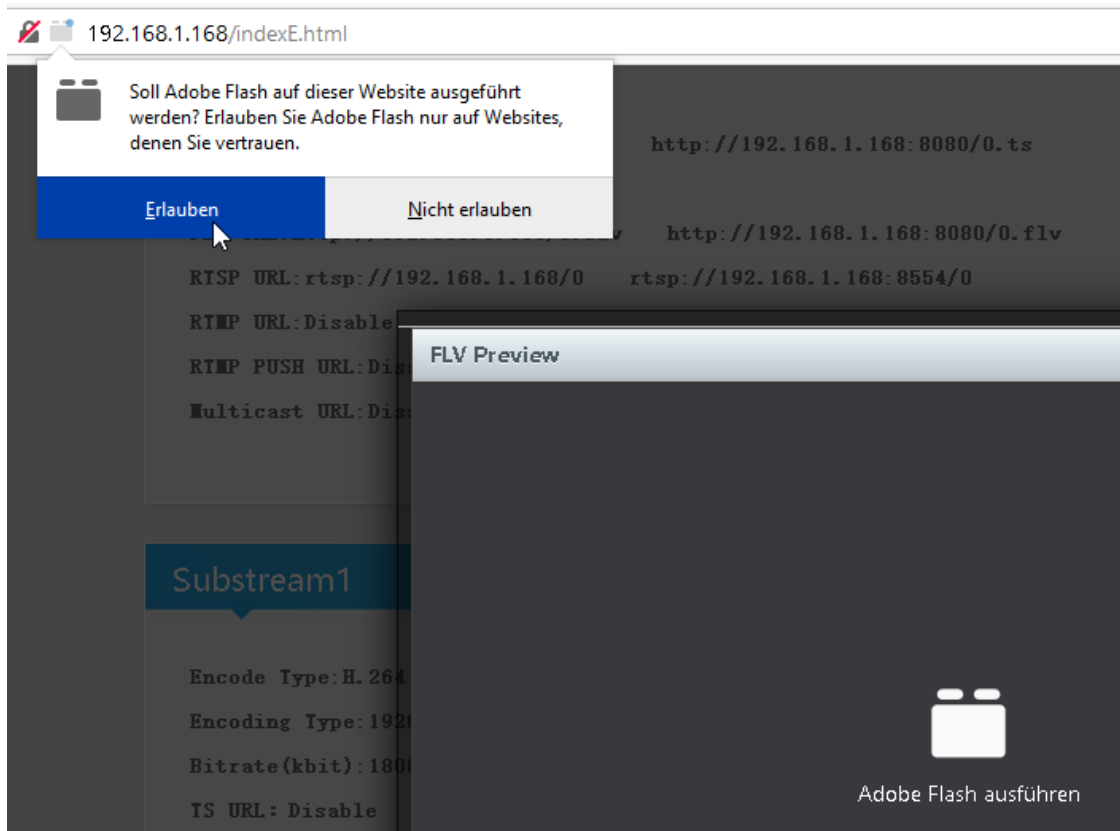


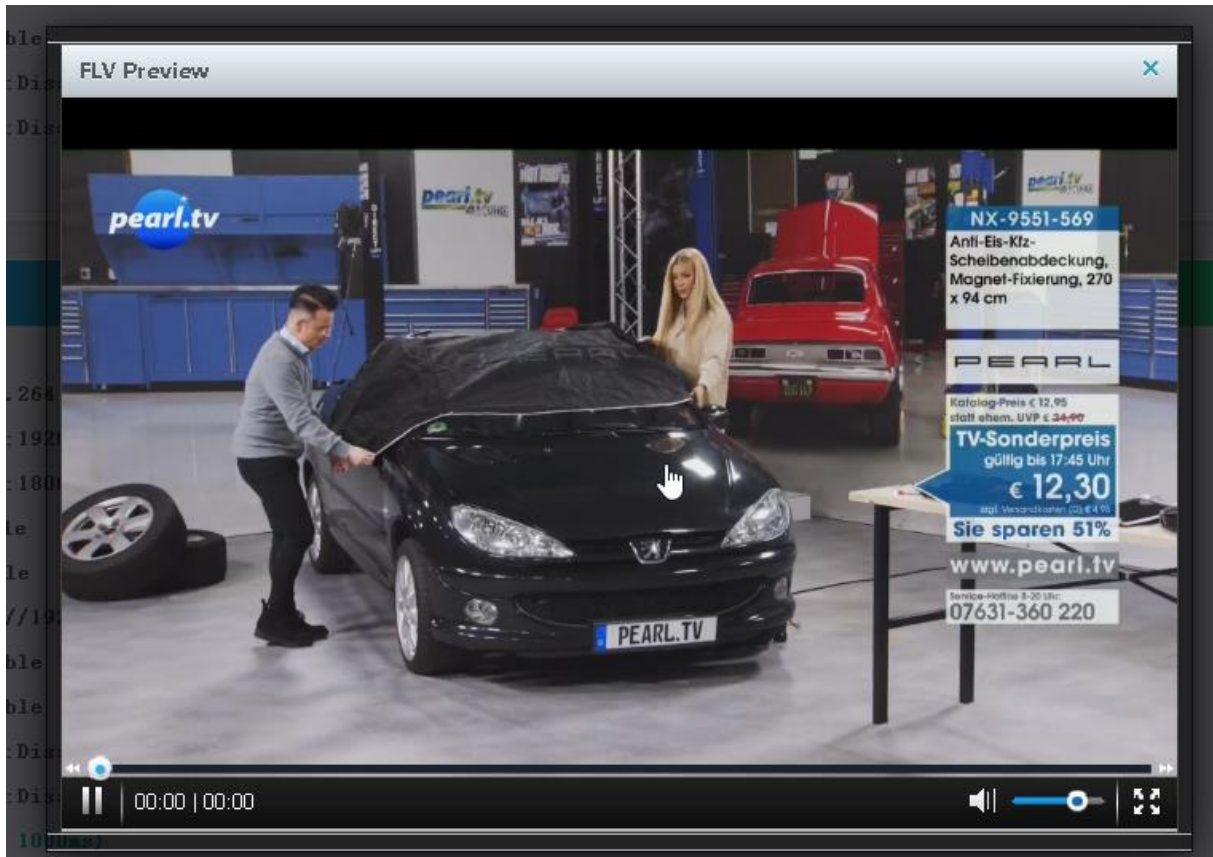
HINT: Adobe Flash **does not** work with HEVC h.265 codec!!!! You need to have h.264 encoding to be set in the main or sub-stream menu:





Allow your browser to do that (here Mozilla):





Note: For FLV or HLS in the preview, your browser (Mozilla preferred) should have adobe flash player installed and HLS-stream-detector ADDON ->

<https://addons.mozilla.org/de/firefox/addon/hls-stream-detector>

Back to STATUS page:

Like the hint above, sometimes it's helpful to reload the Status page i.e. if you see @0:



To gather the actual values like Input HDMI values:

```
Running Time:0000-00-00 00:04:59
Device Time:2019-12-02 15:01:11(Sync Time To Device)
CPU Usage:11% (If CPU usage always more than 85%, please close some stream.)
Memory Usage:30.4M/485.6M
Input Size:1920x1080p@50
Collected Video Frames:14564
```

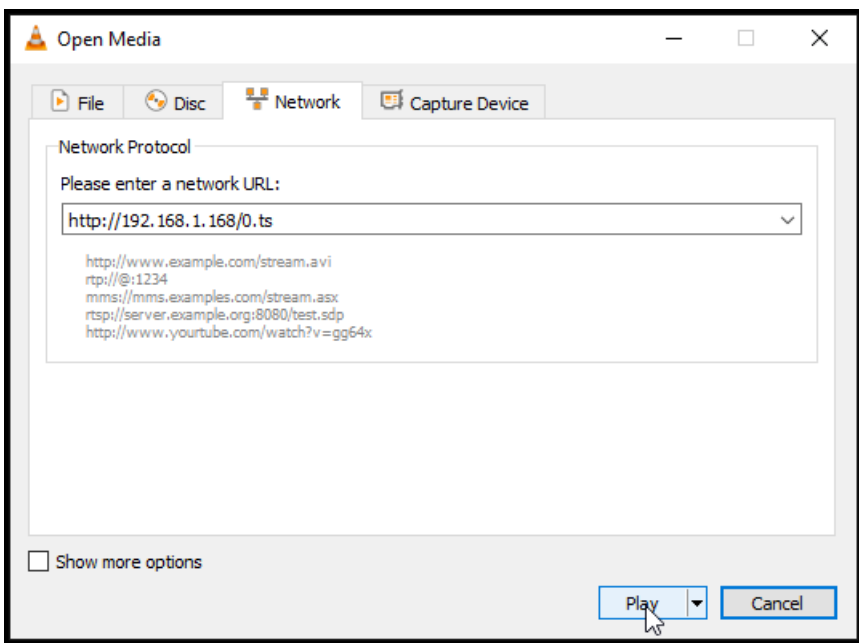
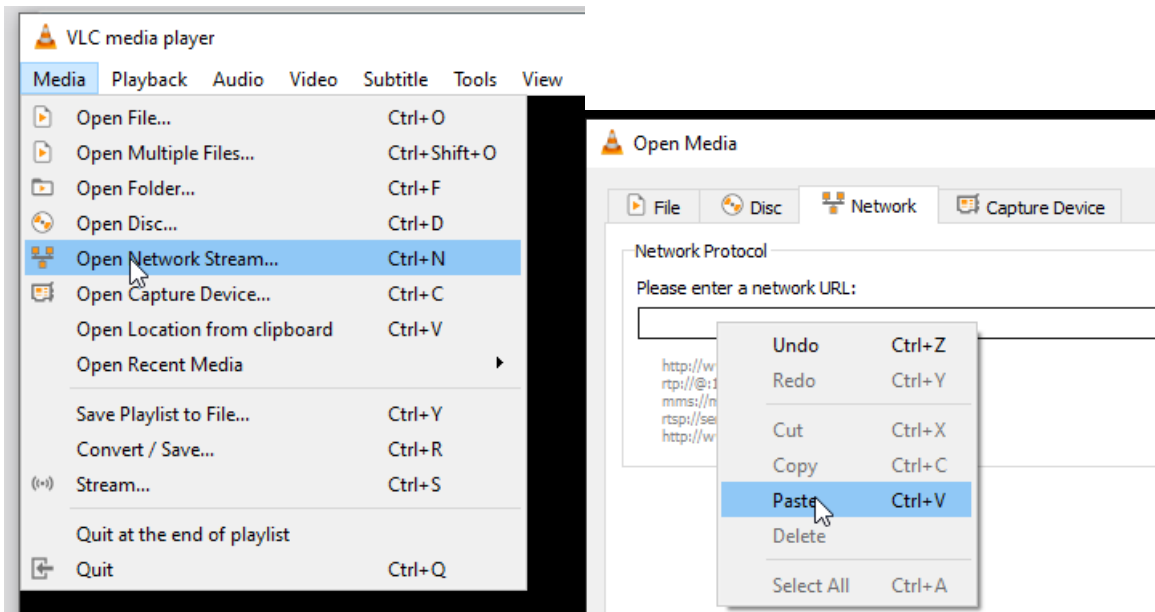
The device time can be adjusted by the Network-setup-part NTP-Server which you need to tell the NTP server URI and UTC-time difference. UK = '0', Germany normal is UTC+1...

If you press (Sync Time to Device) it will be updated.

To also check your encoding streams you can copy the URI from the STATUS page:



Mark it by the mouse and COPY it - Than insert into VLC:



Note: If you more than one Network-Card in operation (like WIFI and GbE) in your receiving machine, VLC often doesn't recognize where to catch it from. Manually settings of METRIC Values for both can solve this issue.



Multicasts:

Note: UDP/RTP-Address will be taken by VLC with an @ and we have made it easy for you:

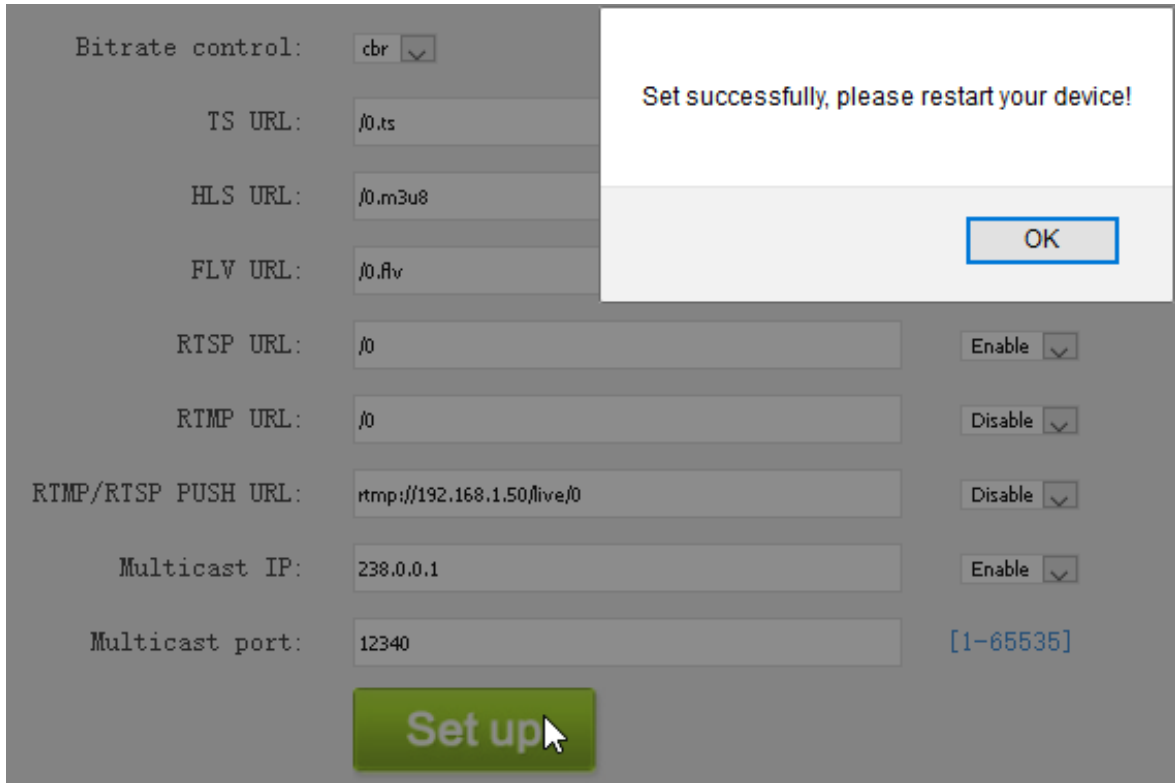
Multicast IP:	<input type="text" value="238.0.0.1"/>	Disable <input type="button" value="v"/>
Multicast port:	<input type="text" value="12340"/>	Disable <input type="button" value="v"/> Enable <input type="button" value="v"/>
<input type="button" value="Set up"/>		

Apply please. Back to status page, you can copy and paste the multicast address:

RTMP URL:	Disable
RTMP(S) PUSH URL:	Disable
Multicast URL:	udp://@238.0.0.1:1234
SRT URL:	Disable
SRT PUSH URL:	Disable
HLS PUSH URL:	Disable
Preview(HTML5)	

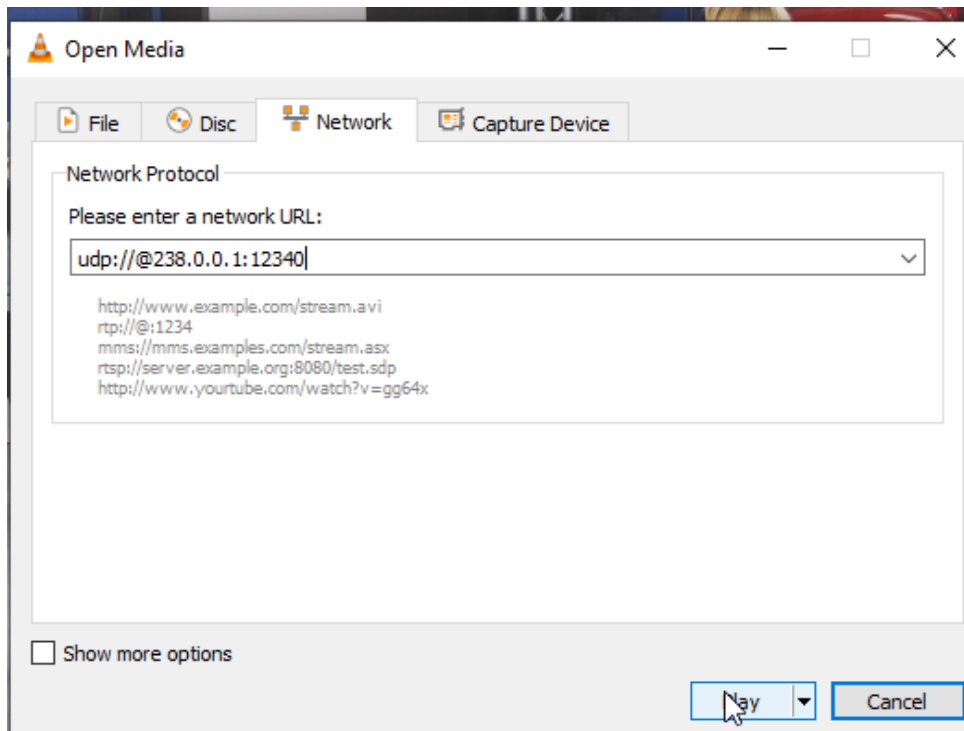
- Kopieren
- Alles auswählen
- Auswahl drucken...
- Bildschirmfoto aufnehmen

Again: If this message is shown:



You **do not need to restart the encoder** only the IPTV-receivers you have in your network need to re-sync to the stream because you changed Stream-values (like h.264 or Audio parameters) !!!

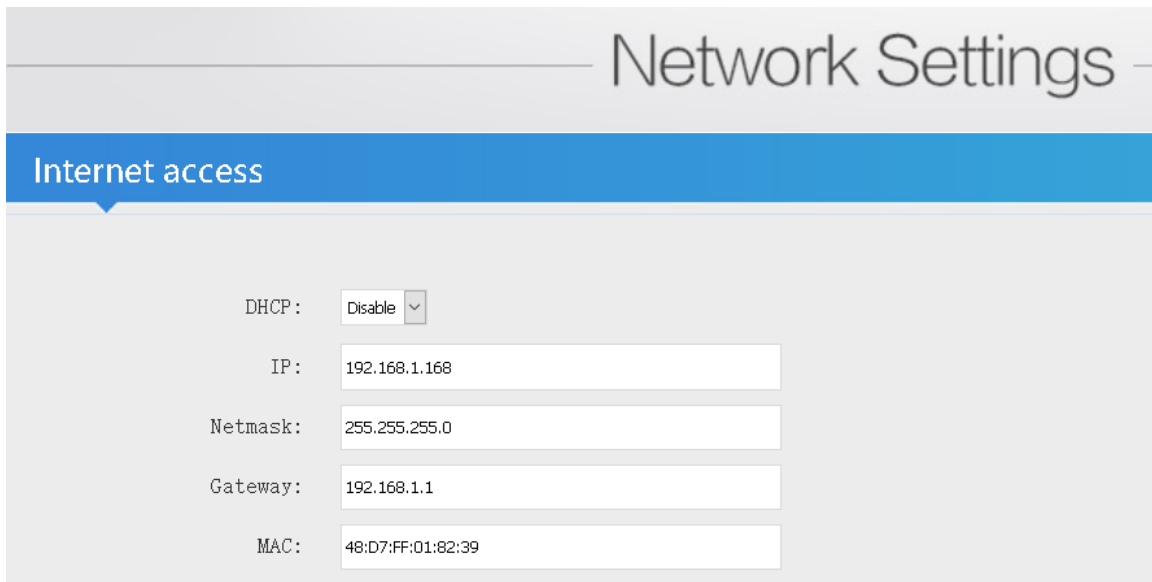
VLC: Paste the address (incl. the @)





Network: Here you can change the encoders IP-address and mode:

If you change it to DHCP – after a reboot it will catch it from your router. Disadvantage: You need to check the encoder given IP Address by your router in its own menu or use an IP-Scanner-tool.



DNS

DNS1:

DNS2:

We assume, that you are familiar with the basic settings of a network.

PORT

HTTP Port: [1-65500]

RTSP Port: [1-65500]

These are the basic ports for HTTP and RTSP-Streaming use. You can modify that but we recommend to keep them as they are because RTSP – receivers might be fixed to that port while HTTP isn't. The bottom of every of the menu-pages contain the 'Set up' buttons to take and enable your changes.

The **MAIN** and **SUB-Stream adjustments** are nearly all similar:

Mainstream encoding settings

Main stream

Encoding type:

FPS: [5-60]

GOP: [5-300]

Bitrate(kbit): [32-32000]

Encoded size:

H.264 Level:

Bitrate control:

TS URL:

HLS URL:

FLV URL:	<input type="text" value="/0.flv"/>	Enable ▾
RTSP URL:	<input type="text" value="/0"/>	Enable ▾
RTMP URL:	<input type="text" value="/0"/>	Disable ▾
RTMP/RTSP PUSH URL:	<input type="text" value="rtmp://192.168.1.50/live/0"/>	Disable ▾
Multicast IP:	<input type="text" value="238.0.0.1"/>	Disable ▾
Multicast port:	<input type="text" value="12340"/>	[1-65535]

Set up

On Screen Display Menu: You can 'Overlay' a Text or Logo over the encoded Picture in 4 Zones:

OSD

For deeper detailed explanations about the OSD feature refer to the full – Manual please.

Also for the ONVIF settings with RTSP.

Alpha:	<input type="text" value="100"/>	[0-128]
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Zone 1

Zone:	Enable ▾	
Type:	<div style="border: 1px solid black; padding: 2px;"> Text ▾ Text Graphic Scroll Text Time </div>	
X:	<input type="text"/>	[0-1920]
Y:	<input type="text"/>	[0-1080]
Text:	<input type="text"/>	
Font size:	<input type="text" value="36"/>	[8-72]
Background color:	white ▾	
Color:	<input style="background-color: black; width: 100px; height: 20px;" type="text"/>	select color

Zone 2
Zone: ▾

Zone 3
Zone: ▾

Zone 4
Zone: ▾

LOGO
LOGO: Keine Dat... gewählt.

Please upload PNG or 24-bit BMP (0xF1F1F1=transparent) pictures less than 500 kByte.
The file name has to be logo1.bmp\logo2.bmp\logo3.bmp\logo4.bmp, or logo1.png\logo2.png\logo3.png\logo4.png.

It supports BMP with a special background colour if you like to be that transparent – or simply use already transparent PNG files. Names and limitations of size are shown in the web.

Substream

Encoding type:	<input type="text" value="H.264"/>	
FPS:	<input type="text" value="30"/>	[5-60]
GOP:	<input type="text" value="30"/>	[5-300]
Bitrate(kbit):	<input type="text" value="1800"/>	[32-32000]
Encoded size:	<input type="text" value="1280x720"/>	
H.264 Level:	<input type="text" value="high profile"/>	
Bitrate control:	<input type="text" value="cbr"/>	
TS URL:	<input type="text" value="/1.ts"/>	<input type="button" value="Disable"/> ▾
HLS URL:	<input type="text" value="/1.m3u8"/>	<input type="button" value="Disable"/> ▾
FLV URL:	<input type="text" value="/1.flv"/>	<input type="button" value="Disable"/> ▾
RTSP URL:	<input type="text" value="/1"/>	<input type="button" value="Disable"/> ▾
RTMP URL:	<input type="text" value="/1"/>	<input type="button" value="Disable"/> ▾
RTMP/RTSP PUSH URL:	<input type="text" value="rtmp://192.168.1.50/live/1"/>	<input type="button" value="Disable"/> ▾
Multicast IP:	<input type="text" value="238.0.0.1"/>	<input type="button" value="Disable"/> ▾
Multicast port:	<input type="text" value="1235"/>	[1-65535]

Audio settings are common for both stream encoder parts:

VBR-Encoding is more effective than CBR. – See WWW.BLANKOM.DE Tutorial chapter...

But Note: The H.264 as our most cost-effective Encoder-Streamer does not have an external Audio analogue Input like the H.265 versions:

So you should use the HDMI embedded Audio like shown in the following picture:

Audio Input = HDMI

Audio encoding settings

Audio encoder

Audio Input:

Samplerate:

Encoder:

- AAC
- AAC+
- AAC++

Audio Channel:

Bitrate: [48000~256000]

Digital Volume: [-50~50]

ONVIF audio

G711A Over RTSP:

G711:

Self-explaining:

HD Encoder System
Platform

System Settings

Change password

Old password:

New password:

Confirm password:

The default settings are usually Ok for most use-cases:

Advanced

Video Only:	<input type="text" value="Disable"/>	
Audio Only:	<input type="text" value="Disable"/>	
Hls Splitter Time(s):	<input type="text" value="10"/>	[3-20]
Hls Number:	<input type="text" value="5"/>	[3-20]
TS muxer:	<input type="text" value="Compatible with FFmpeg"/>	
Deinterlaced:	<input type="text" value="Bottom Only"/>	
Net Drop Threshold:	<input type="text" value="5000"/>	[50-50000]
TS once pack:	<input type="text" value="7"/>	[3-128]
ts_transport_stream_id:	<input type="text" value="101"/>	[1-65535]
ts_pmt_start_pid:	<input type="text" value="480"/>	[16-7936]
ts_start_pid:	<input type="text" value="481"/>	[32-3840]
ts_tables_version:	<input type="text" value="6"/>	[0-31]
ts_service_name:	<input type="text" value="Live"/>	
ts_service_provider:	<input type="text" value="Encoder"/>	
TS Empty Packet:	<input type="text" value="No Insert"/>	
TS password enable:	<input type="text" value="Disable"/>	
ONVIF password enable:	<input type="text" value="Disable"/>	

Playing with 'De-interlaced settings' helps sometimes fixing moving picture artefacts. BOTTOM only can solve right-left-camera sticking problems.

Vmix Compatible:	<input type="text" value="Disable"/>	
TS OVER RTSP:	<input type="text" value="ES"/>	
Multicast type:	<input type="text" value="UDP"/>	
UDP TTL:	<input type="text" value="64"/>	[1-254]
UDP SOCKET_BUF_SIZE:	<input type="text" value="20971520"/>	[0-20971520]
Slice split enable:	<input type="text" value="Disable"/>	
Slice size:	<input type="text" value="1024"/>	[128-65535]
MIN_QP:	<input type="text" value="5"/>	[1-35]
MAX_QP:	<input type="text" value="42"/>	(MIN_QP-50)

A schedules 'restart' can be programmed (NTP-Time = ON recommended):

NTP

NTP enable:

Ntp Server:

Time Zone:

Set up

Serial to TCP

Baud Rate:

TCP Port: [1-65535]

Set up

Supporting Rserial function if needed (Linux like)

Schedule restart

Restart enable:

Restart time:

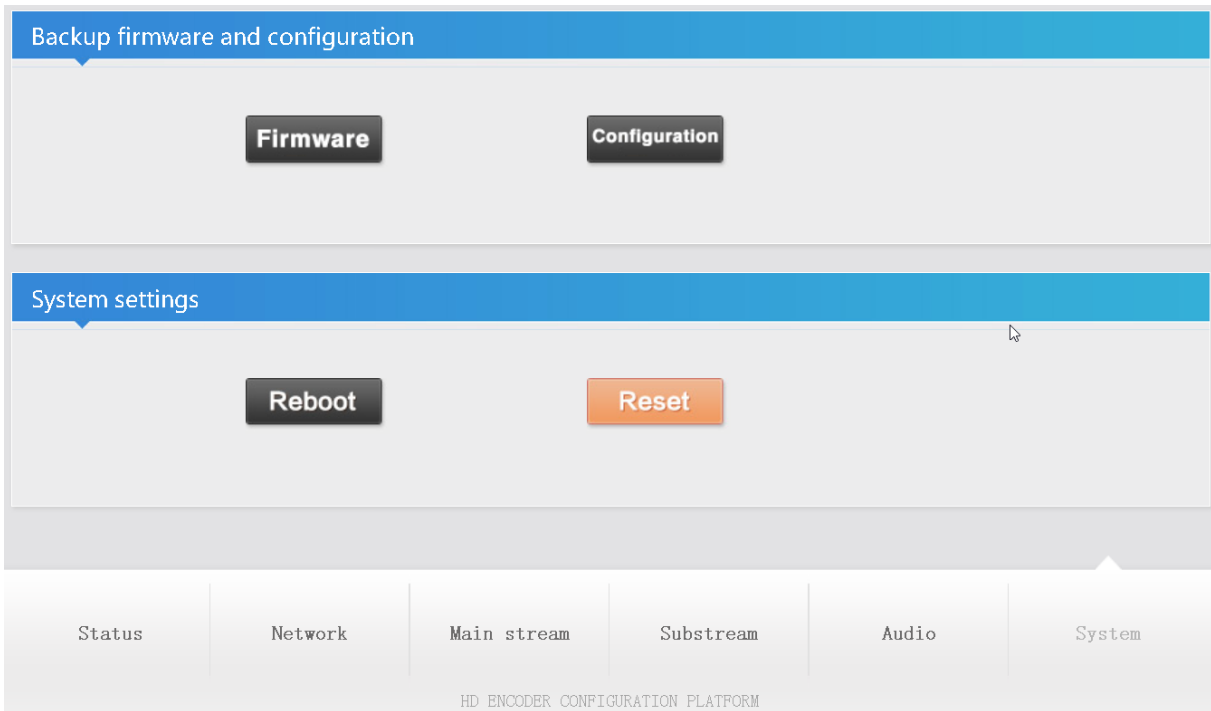
Set up

Upload firmware and configuration

Select File: Keine Datei ausgewählt. (File name has to be 'up.rar' or 'box.ini'. Please don't upload by different people at the same time and don't power off during upload.)

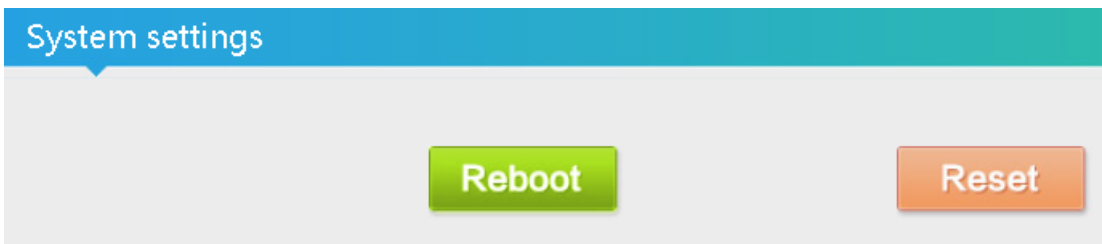
Upload

The settings as well as the Firmware can be back-upped and re-uploaded.



The config-settings file is a Linux based text file named box.ini. Do not modify store upload that by a windows editor except you will use notepad++ (freeware – please google...)

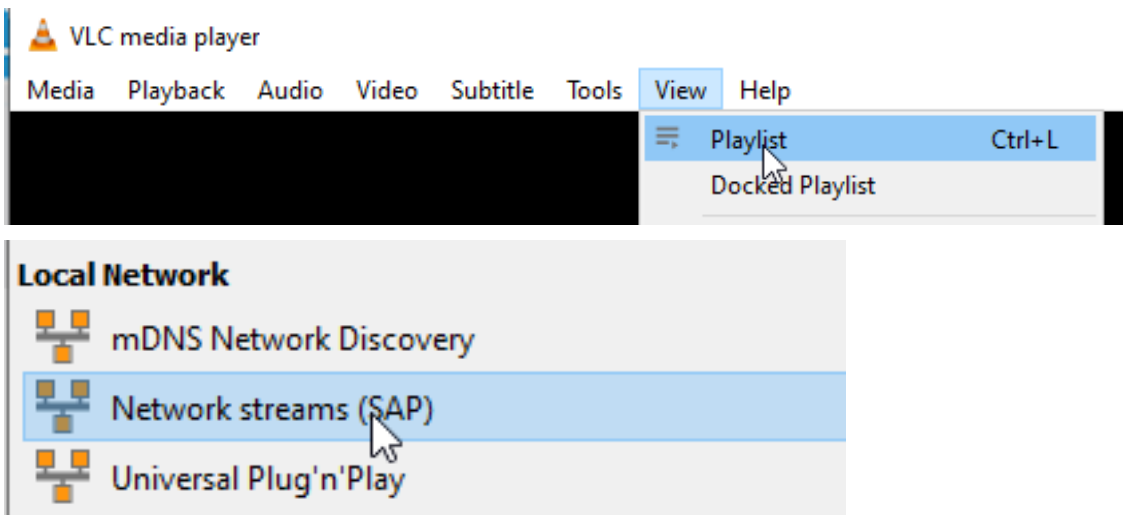
Finally i.e. after firmware update has been uploaded, the unit can be remotely reset to factory defaults or rebooted:

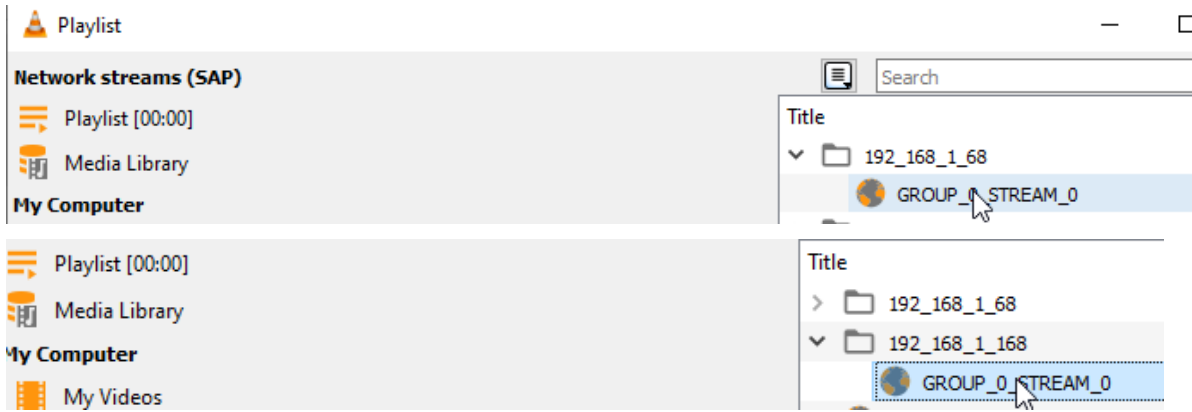


We recommend to make yourself familiar with 'What is Multicast and Unicast' and the corresponding IP-Ranges.

Note:

Using VLC SAP-Gathering will show a simple click'n start entry:

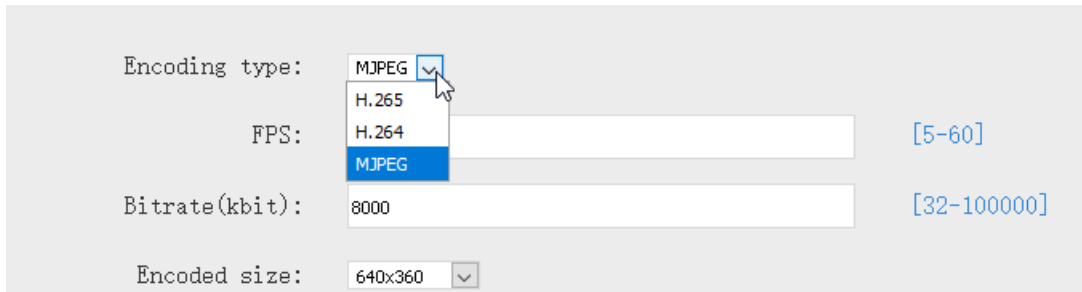




-> Will receive the stream. This works only with Multicast UDP / RTP!

A seldom case but: **MJPEG support:**

If you directly want to send the 'pictures' only as motion JPG format to a browser, you can set this to be enabled:



The status page will show:



Here on a different device with

substream Number 3 -> Therefore it is named to /3.mjpg

Please enable at least one RTSP output before changing to MJPEG – otherwise no streaming will happen.

We recommend better to choose the **Main-encoder** part for this so:

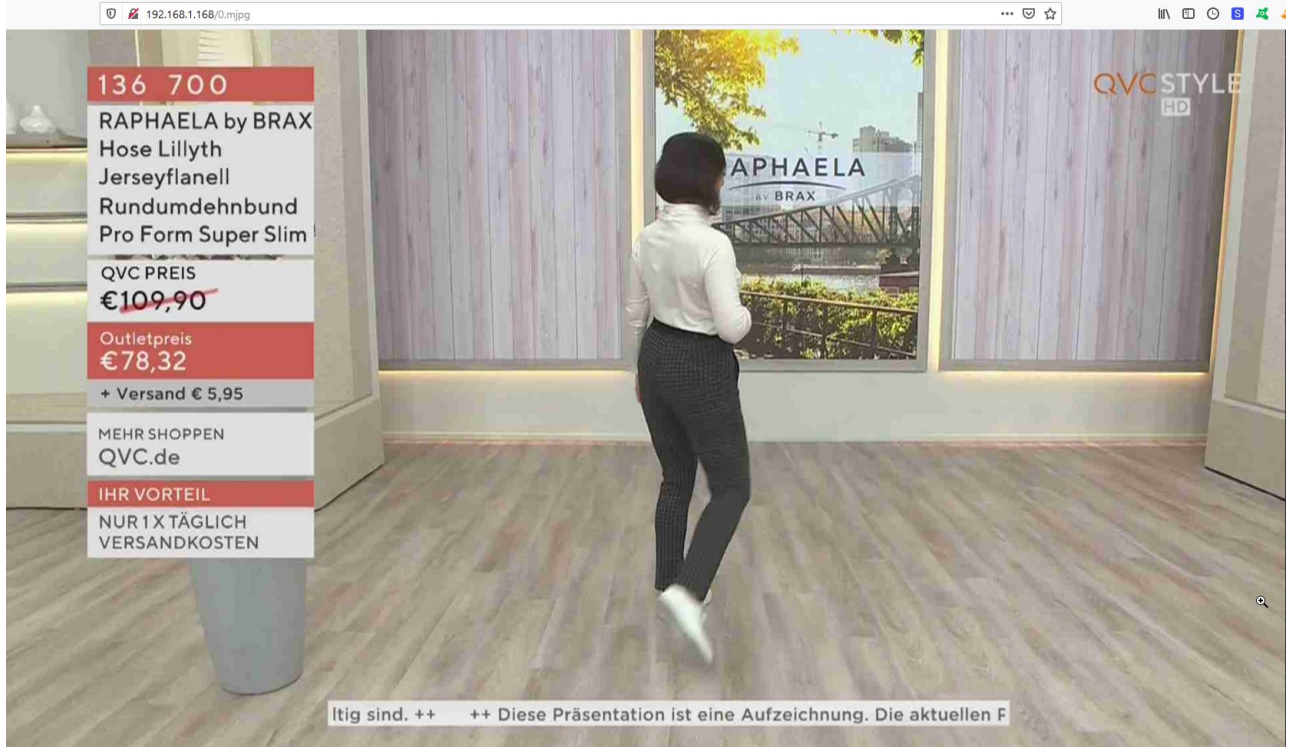
Encoding type:	<input type="text" value="MJPEG"/>	
FPS:	<input type="text" value="25"/>	[5-60]
Bitrate(kbit):	<input type="text" value="5000"/>	[32-100000]
Encoded size:	<input type="text" value="1920x1080"/>	
Bitrate control:	<input type="text" value="vbr"/>	

-> Status page... **PLEASE Note: RTSP has to be enabled for MJPG-stream:**

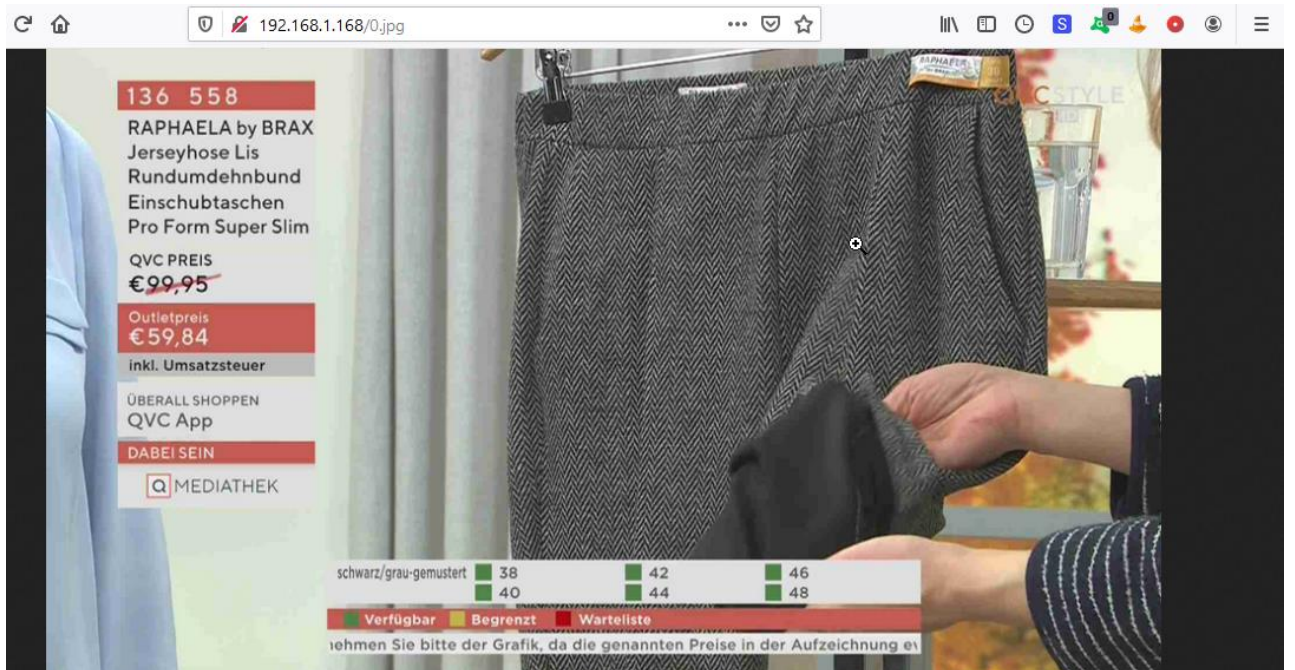
Main stream

Encode Type: MJPEG
Encoding Type: 1920x1080@25
Bitrate(kbit): 5000
MJPG URL: <http://192.168.1.168/0.mjpg>
JPG URL: <http://192.168.1.168/0.jpg>
TS URL: Disable
HLS URL: Disable
FLV URL: Disable
RTSP URL: <rtsp://192.168.1.168/0> <rtsp://192.168.1.168:8554/0>
RTMP URL: Disable
RTMP PUSH URL: Disable
Multicast URL: Disable

Link open by Mozilla:



Or only the still picture shows the moment of the screen when click on /0.jpg:



SRT-support: (Only supported by our encoders with h.265 compatibility because of processing power)

What is SRT? Please check also <https://www.srtalliance.org>

Encoder settings:

Mainstream encoding settings

Main stream

Encoding type:	<input type="text" value="H.264"/>	
FPS:	<input type="text" value="30"/>	[5-60]
GOP:	<input type="text" value="30"/>	[5-300]
Bitrate (kbit):	<input type="text" value="4500"/>	[32-32000]
Encoded size:	<input type="text" value="same as the input"/>	
H.264 Level:	<input type="text" value="high profile"/>	
Bitrate control:	<input type="text" value="vbr"/>	
TS URL:	<input type="text" value="/0.ts"/>	Enable ▾
HLS URL:	<input type="text" value="/0.m3u8"/>	Disable ▾
FLV URL:	<input type="text" value="/0.flv"/>	Disable ▾
RTSP URL:	<input type="text" value="/0"/>	Enable ▾
RTMP URL:	<input type="text" value="/0"/>	Disable ▾
RTMP (S)/RTSP PUSH URL:	<input type="text" value="rtmp://41.85.1.1/live/1"/>	Enable ▾
Multicast IP:	<input type="text" value="238.0.0.1"/>	Disable ▾
Multicast port:	<input type="text" value="1234"/>	[1-65535]
SRT URL Port:	<input type="text" value="9000"/>	Enable ▾ [1-65535]
SRT PUSH URL:	<input type="text" value="srt://192.168.1.41:9000"/>	Enable ▾
SRT Encryption Password:	<input type="text" value="0123456789"/>	Enable ▾

Set up

What is an SRT? (not available in the pure h.264 versions)

Secure Reliable Transport (SRT) is an Open-source software protocol and technology stack designed for live video streaming over the public internet.

SRT provides connection and control, reliable transmission similar to TCP, however, it does so at the application layer, using UDP protocol as an underlying transport layer. It supports packet recovery while maintaining low latency (default: 120 ms). SRT also supports encryption using AES.

Source: https://en.wikipedia.org/wiki/Secure_Reliable_Transport

Note: SRT works only in pairs: The stream receiver must support SRT reception.

Video Encoders are widely used in video transmission field, and SRT supported by our video encoder & decoder. Our Encoder & Decoder work perfectly for Haivision Play, Larix Broadcaster, etc.

More details: <https://www.srtalliance.org>

SRT-live-server (SLS)-for our Video Encoder

Our Video Encoders support SLS for SRT.

Introduction

srt-live-server(SLS) is an open source live streaming server for low latency based on Secure Reliable Transport(SRT). Normally, the latency of transport by SLS is less than 1 second via the internet.

Requirements

Please install the SRT first, refer to SRT(<https://github.com/Haivision/srt>) for system environment basics. SLS can only run on OS based on linux, such as mac, centos or ubuntu etc.

Source: <https://github.com/Edward-Wu/srt-live-server>

Put the following url to send to your docker container:
srt://your.server.ip:1935?streamid=input/live/yourstreamname

The screenshot shows a configuration interface for SRT. It includes several input fields and dropdown menus:

- RTMP (S)/RTSP PUSH URL: Disable ▾
- Multicast IP: Enable ▾
- Multicast port: [1-65535]
- SRT URL Port: Disable ▾ [1-65535]
- SRT PUSH URL: Enable ▾** (This row is highlighted with a red border)
- SRT Encryption Password: Disable ▾

A green "Set up" button is located at the bottom of the configuration area.

For P2P, select SRT PUSH and enter the destination IP Address and Port.

SRT network-Latency can be adjusted in SYSTEM Firmware Version depending... :

The screenshot shows the "Advanced" settings page with a teal header. The settings are as follows:

- Video Only: Disable ▾
- Audio Only: Disable ▾
- Hls Splitter Time(s): [3-20]
- Hls Number: [3-20]
- SRT Latency(ms): [1-10000]

SRT is a faster transport protocol for lower latency over public networks...

Encoder-parts settings enabling SRT-Protocol:

Bitrate control:	<input type="text" value="vbr"/>	
TS URL:	<input type="text" value="/0.ts"/>	<input type="button" value="Disable"/> ▾
HLS URL:	<input type="text" value="/0.m3u8"/>	<input type="button" value="Disable"/> ▾
FLV URL:	<input type="text" value="/0.flv"/>	<input type="button" value="Disable"/> ▾
RTSP URL:	<input type="text" value="/0"/>	<input type="button" value="Enable"/> ▾
RTMP URL:	<input type="text" value="/0"/>	<input type="button" value="Disable"/> ▾
RTMP(S)/RTSP PUSH URL:	<input type="text" value="rtmp://192.168.1.50/live/0"/>	<input type="button" value="Disable"/> ▾
Multicast IP:	<input type="text" value="238.0.0.1"/>	<input type="button" value="Disable"/> ▾
Multicast port:	<input type="text" value="1234"/>	[1-65535]
SRT URL Port:	<input type="text" value="9000"/>	<input type="button" value="Enable"/> ▾ [1-65535]
SRT PUSH URL:	<input type="text" value="srt://192.168.1.50:9000"/>	<input type="button" value="Disable"/> ▾
SRT Encryption Password:	<input type="text" value="0123456789"/>	<input type="button" value="Disable"/> ▾

Check the Status page for what is enabled...:

Main stream

Encode Type: H. 264

Encode Size: 1920x1080@25

Bitrate (kbit): 2500

■JPG URL: <http://192.168.1.168/0.mjpg>

JPG URL: <http://192.168.1.168/0.jpg>

TS URL: <http://192.168.1.168/0.ts> <http://192.168.1.168:8080/0.ts>

HLS URL: Disable

FLV URL: Disable

RTSP URL: <rtsp://192.168.1.168/0> <rtsp://192.168.1.168:8554/0>


RTMP URL: Disable

RTMP PUSH URL: Disable

■Multicast URL: Disable

SRT URL: <srt://192.168.1.168:9000>

SRT PUSH URL: Disable

Preview (Delay 1000ms) 

Additionally: SRT Latency can be adjusted in SYSTEM Firmware Version 6.53 onwards and encoder type dependent...:

It's a faster transport protocol for lower latency over public networks...

Usually SRT URL is OK for simple streaming from Encoder to the Client (media player, VLC, STB – but need to have SRT support in the client software).

For P2P direct streaming, select SRT PUSH and enter the destination IP Address and Port. Both source and destination (STB or VLC-PC or Decoder) have to be in the same subnet. Example: Over VPN, both devices need to 'see' each other (i.e. use PING).

You can check it by VLC: (please note, the @ in the URI is not necessary like in *udp/rtp*)



Some more useful links regarding SRT:

A Media server to handle SRT and more: The Open Broadcaster Software

<https://obsproject.com/>

<https://obsproject.com/wiki/Streaming-With-SRT-Protocol:>

See more details and a howto on one of the following pages or check our web www.blankom.de

Streaming With SRT Protocol

This feature requires OBS Studio 25.0 or newer.

Table of Contents:

- General Overview
- Can SRT be used with Twitch or my favorite service?
 - Services
 - Encoders
 - Servers
 - Players
- How to set up OBS Studio
 - Option 1: Stream SRT using the Streaming output
 - Option 2: Stream SRT using the Custom Ffmpeg Record output
- Examples of setups
 - Relay server to Twitch

<https://github.com/obsproject/obs-studio>

<https://github.com/haivision/srt>

Video Encoder & Decoder SRT settings as couple:

For HDMI/VGA&CVBS/SDI Decoder-Support h264 & h265, decoder SRT playing the URI as, here the encoder works as caller (SRT push URI) and listener (SRT URI port):

srt://ip:port **# encoder as Listener, decoder get srt from encoder, here 'ip' is the Encoder IP.**
 srt://port or srt://@port **# encoder mode as caller, push SRT to the decoder, (encoder SRT push URI as srt://decoder ip:port)**

With passphrase/Encryption, decoder SRT play URI:

srt://passpharese@ip:port **# encoder as Listener, decoder get SRT stream from encoder, here 'IP' is the Encoder IP.**
 srt://passphrase@port **# encoder mode as caller, push srt to the decoder.**
See below screenshot for settings:

Main stream

Encoding type: H.265

FPS: 25 [5-60]

GOP: 30 [5-300]

Bitrate (kbit): 2500 [32-32000]

Encoded size: 1280x720

Bitrate control: vbr

TS URL: /0.ts Enable

MJS URL: /0.m3u8 Enable

FLV URL: /0.flv Enable

RTSP URL: /0 Disable

RTMP URL: /0 Disable

RTMP (S)/RTSP PUSH URL: rtmp://28515w1109.qicp.vip.51992/live/10 Disable

Multicast IP: 238.0.0.1 Disable

Multicast port: 1234 [1-65536]

SRT URL Port: 9000 Enable [1-65536]

SRT PUSH URL: srt://192.168.1.169:9000 Enable

SRT Encryption Password: 0123456789 Disable

Set up

4K Decoder H.265/H.264

Status

Address setting

Advance setting

System setting

Status

System status

runtime: 0000-00-00 00:15:06
 cpu usage: 7%
 mem usage: 52MB/253MB
 output format: 1080P50
 decode wndnum: 4

Channel1

addr: srt://192.168.1.170:9000
 status: normal
 frame rate(fps): 25
 code rate(kbit/s): 2287

Channel2

addr: srt://@9000
 status: normal
 frame rate(fps): 25
 code rate(kbit/s): 437

Channel3

addr: srt://0123456789@192.168.1.170:9001
 status: normal
 frame rate(fps): 30
 code rate(kbit/s): 524

TS URL: /1.ts Enable

MJS URL: /1.m3u8 Disable

FLV URL: /1.flv Disable

RTSP URL: /1 Disable

RTMP URL: /1 Disable

RTMP (S)/RTSP PUSH URL: rtmp://192.168.1.50/live/1 Disable

Multicast IP: 238.0.0.1 Disable

Multicast port: 1235 [1-65536]

SRT URL Port: 9001 Enable [1-65536]

SRT PUSH URL: srt://192.168.1.169:9001 Enable

SRT Encryption Password: 0123456789 Enable

Set up

Advance setting

System setting

output format: 1080P50
 decode wndnum: 4

Channel1

addr: srt://192.168.1.170:9000
 status: normal
 frame rate(fps): 25
 code rate(kbit/s): 2031

Channel2

addr: srt://@9000
 status: normal
 frame rate(fps): 25
 code rate(kbit/s): 813

Channel3

addr: srt://0123456789@192.168.1.170:9001
 status: normal
 frame rate(fps): 30
 code rate(kbit/s): 527

Channel4

addr: srt://0123456789@9001
 status: normal
 frame rate(fps): 30
 code rate(kbit/s): 497

OSD

Status Network Main stream Substream Audio System

BECAUSE ADOBE HAS STOPPED FLASH player and the web browser developers are disabling flash systematically, we have arranged to get the preview by HTML5:
NOTE: The PREVIEW only works with CODEC h.264 – Not with h.265! v.6.51 or 6.53E
(Old Hardware model, New Hardware Firmware starts with 5.0x)

input status

```
Running Time:0000-00-00 00:00:04  
Device Time:2021-01-29 13:46:01 (Sync Time To Device)  
CPU Usage:14%  
Memory Usage:16.5M/248.3M  
Input Size:1920x1080p@50  
Collected Video Frames:661  
Lost Video Frames:2  
Audio Samplerate:48000
```

Main stream

```
Encode Type:H.264  
Encode Size:1920x1080@50  
Bitrate(kbit):6000  
TS URL: http://192.168.1.168/0.ts    http://192.168.1.168:8086/0.ts  
HLS URL:Disable  
FLV URL:http://192.168.1.168/0.flv    http://192.168.1.168:8086/0.flv  
RTSP URL:rtsp://192.168.1.168/0    rtsp://192.168.1.168:8554/0  
RTMP URL:Disable  
RTMP(S) PUSH URL:Disable  
Multicast URL:Disable  
SRT URL:Disable  
SRT PUSH URL:Disable  
Preview(HTML5)
```





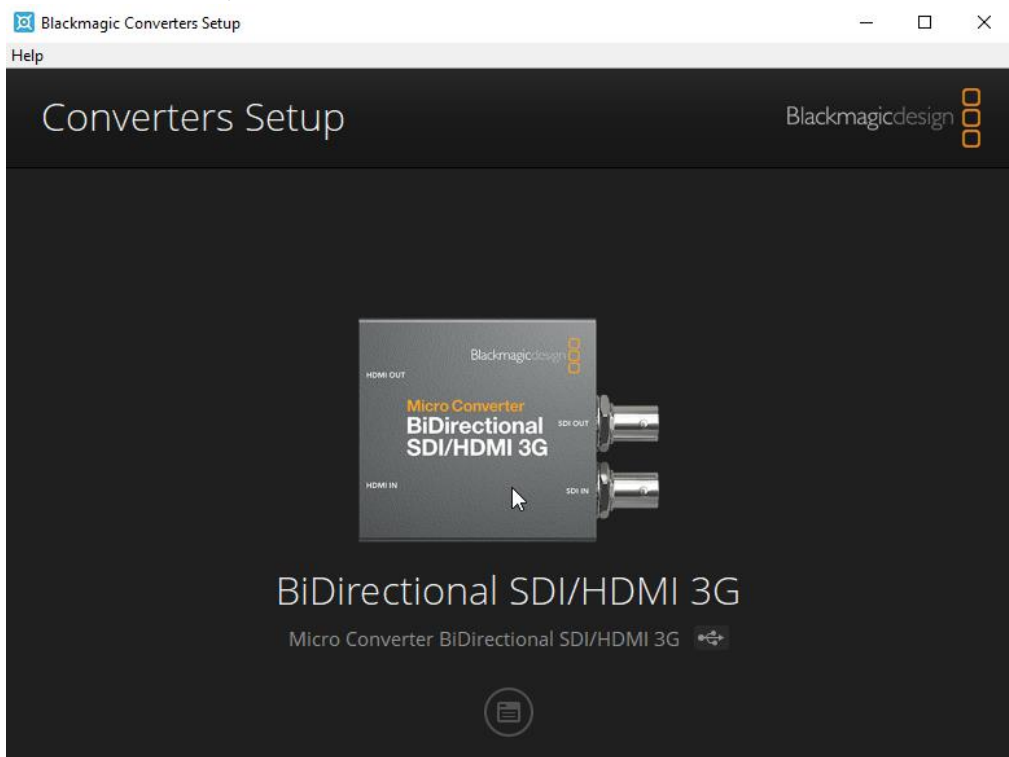
Full screen:



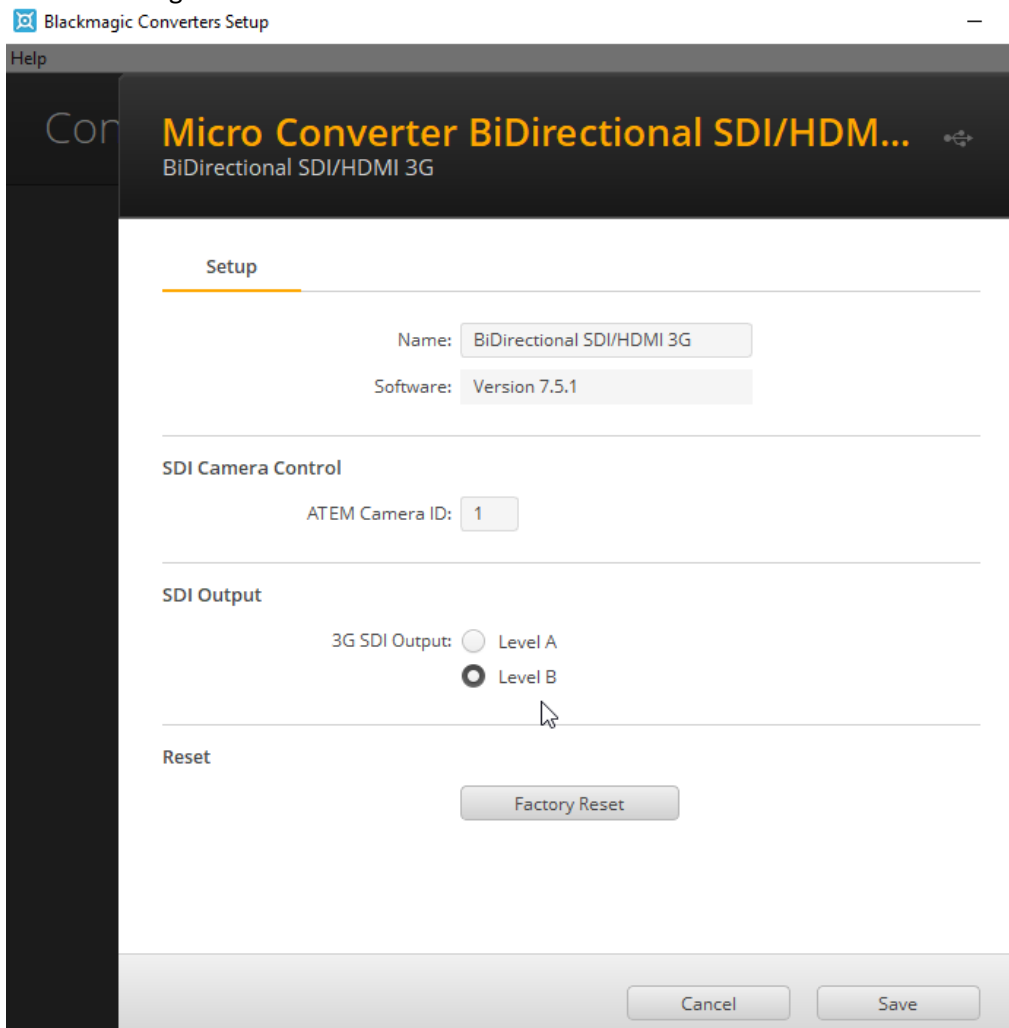
Go back with ESC Button

Attention if you are using BLACKMagic converter HDMI/SDI:

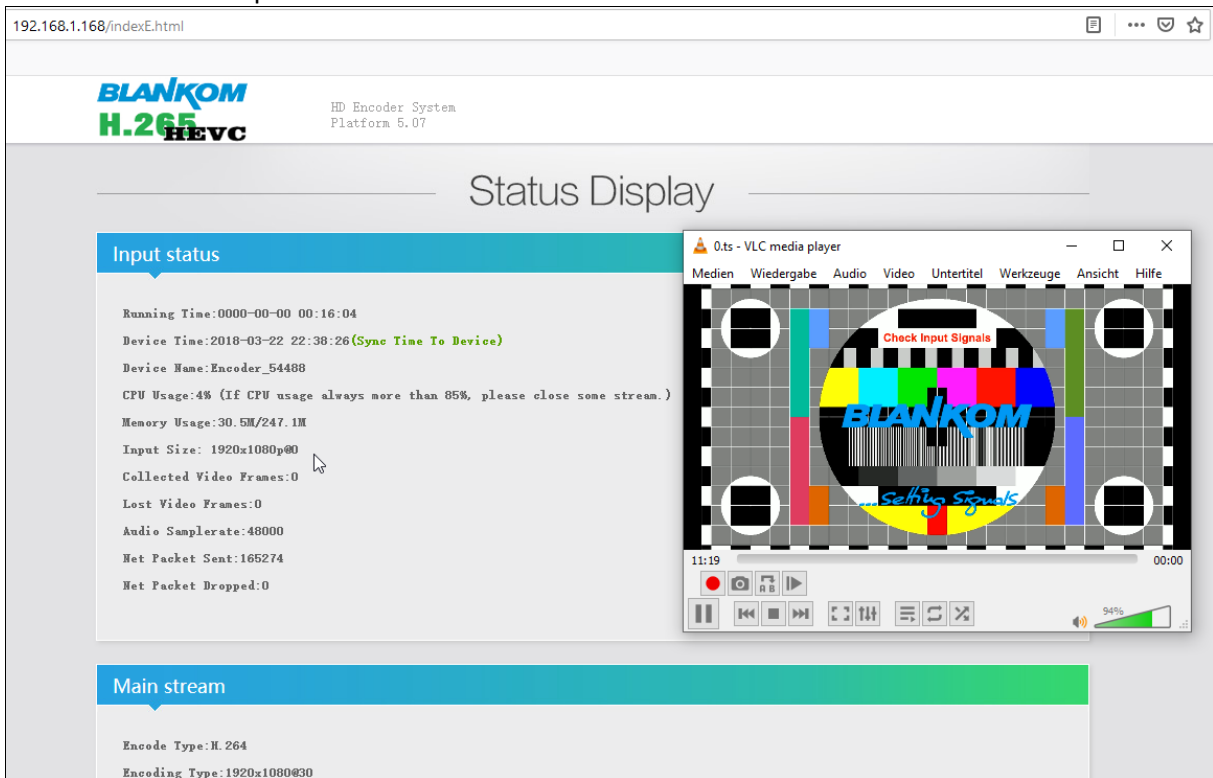
Here Version 7.5.1, Build 107bfb5d



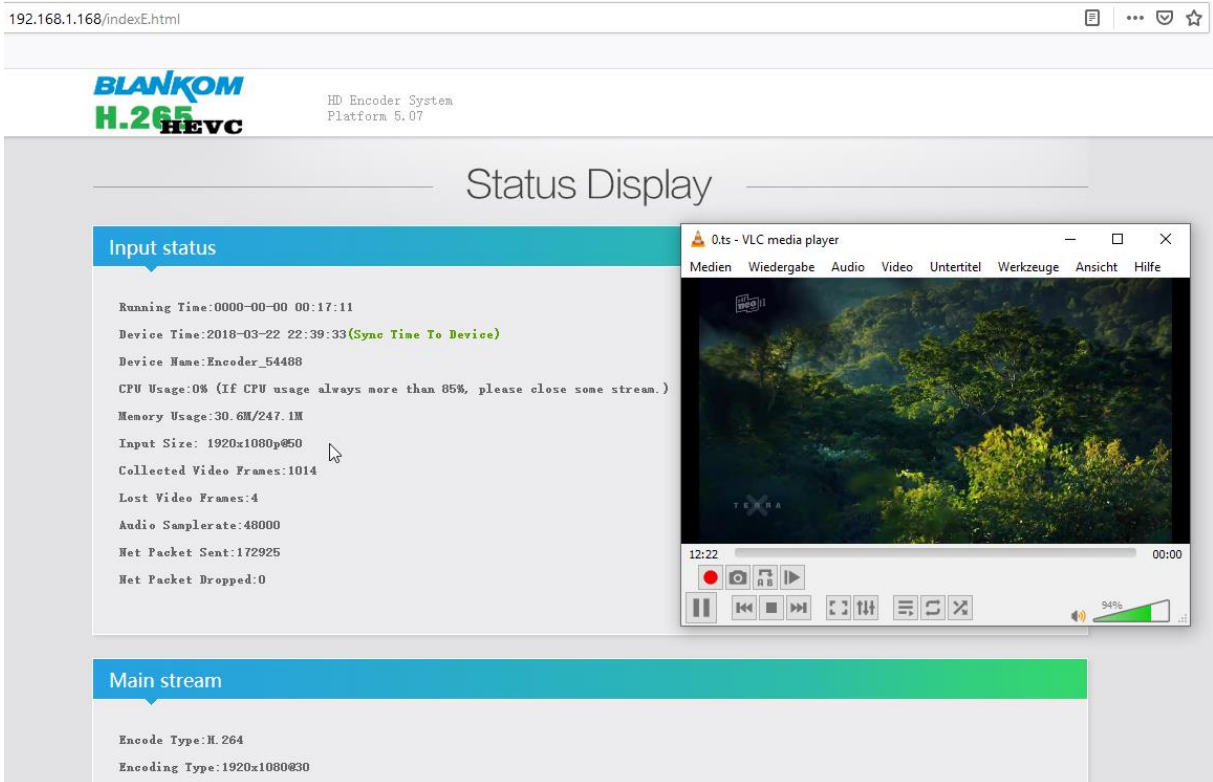
It has 2 Modes to operate as SDI output: Level A and B:
Default setting is B and this will not work with our SDI encoders:



So you need to **change it to A:**
See **with B** the SDI Input is **not detected:**

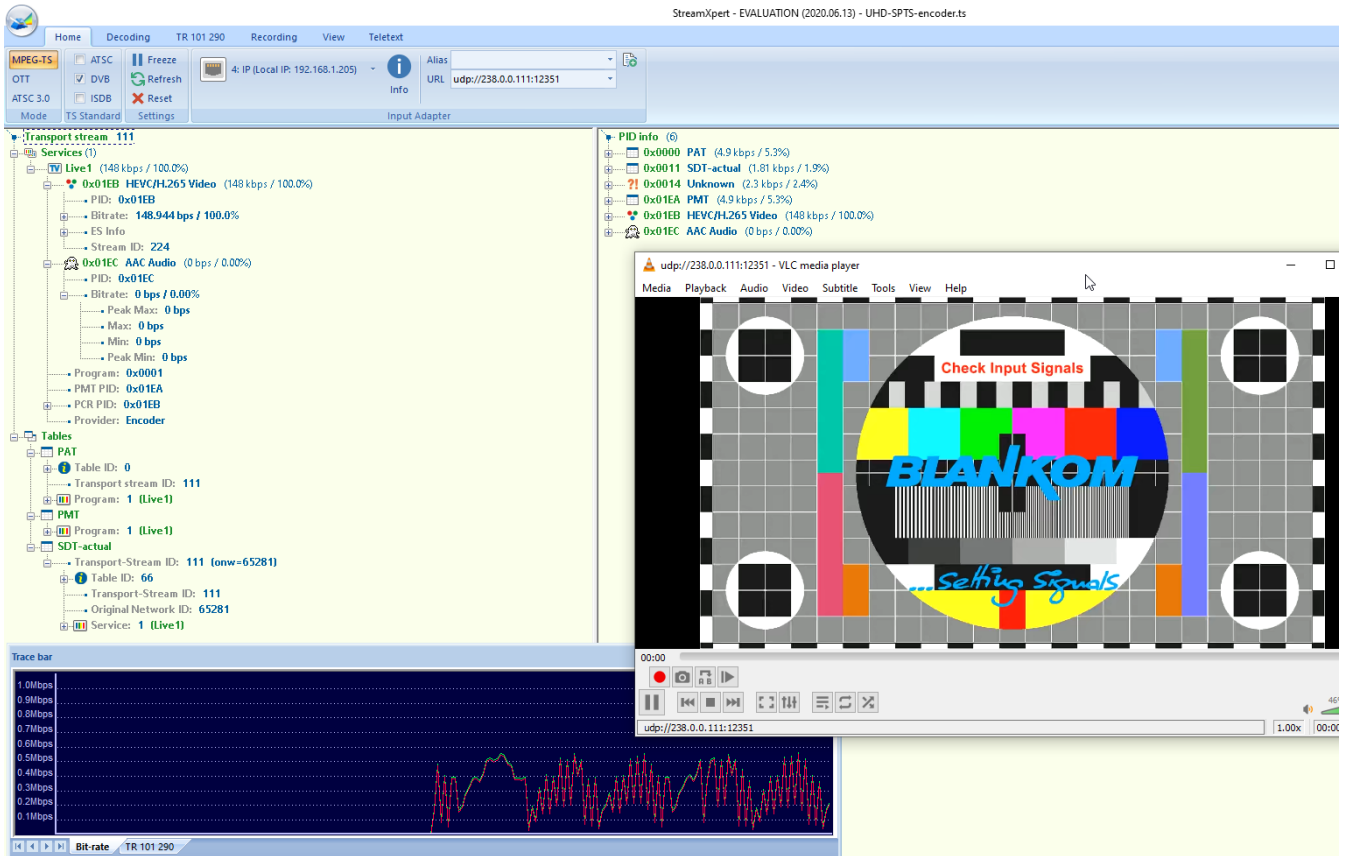


Set to Level A:



You need to refresh the web page several times after the encoder is showing the correct Input values 1920x1080p@50 here.

BTW: If no signal has been detected at the Input connector, the Test-picture will appear and the Stream output may 'pump' because the encoder check the input signal periodically – and in this periods', the output stream might fluctuate like:



New feature added in Version 5.11:

- HEVC h.265 Preview with inbuilt player (w/o pause/stop rew/fwd):

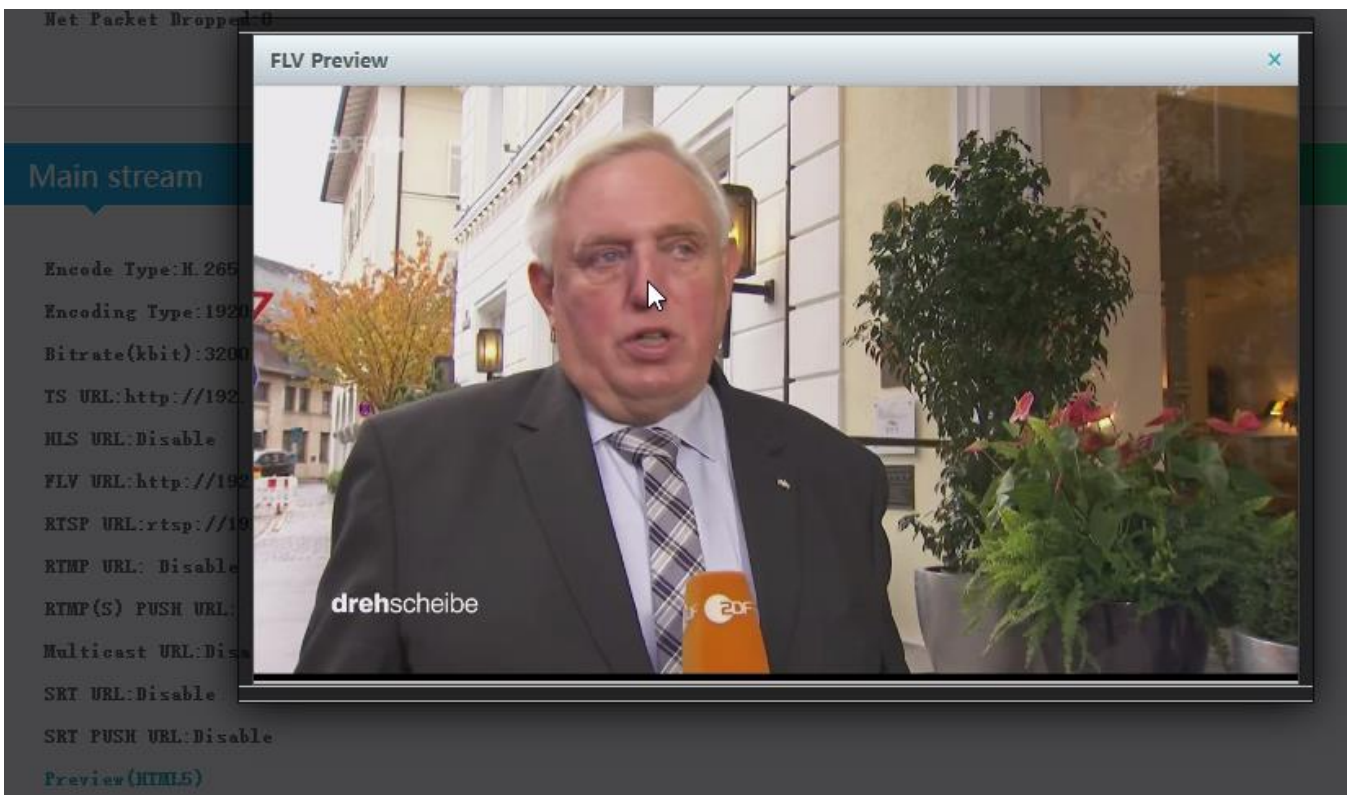
Main stream

Encoding type:	<input type="text" value="H.265"/>	
FPS:	<input type="text" value="50"/>	[5-60]
GOP:	<input type="text" value="25"/>	[5-300]
Bitrate(kbit):	<input type="text" value="3200"/>	[32-32000]

Main stream

```
Encode Type:H.265
Encoding Type:1920x1080@50
Bitrate(kbit):3200
TS URL:http://192.168.1.168/0.ts    http://192.168.1.168:8086/0.ts
HLS URL:Disable
FLV URL:http://192.168.1.168/0.flv    http://192.168.1.168:8086/0.flv
RTSP URL:rtsp://192.168.1.168/0    rtsp://192.168.1.168:8554/0
RTMP URL: Disable
RTMP(S) PUSH URL: Disable
Multicast URL:Disable
SRT URL:Disable
SRT PUSH URL:Disable
```

Preview (HTML5)



It can take several seconds until the preview starts but it highly depends on the receiving web-browser-PC hardware capabilities to decode that HEVC-PiP. SO be patient and

Changing possibility of the Transport stream (TS)-PID-ID-values to distinguish several encoders in a common network to finally use a multiplexer w/o PID-Remapping:

This is located in the System-settings:

TS once pack:	<input type="text" value="7"/>	[3-128]
ts_transport_stream_id:	<input type="text" value="101"/>	[1-65535]
ts_pmt_start_pid:	<input type="text" value="480"/>	[16-7936]
ts_start_pid:	<input type="text" value="481"/>	[32-3840]
ts_tables_version:	<input type="text" value="6"/>	[0-31]
ts_service_id:	<input type="text" value="1"/>	[1-65535]
ts_service_name:	<input type="text" value="Live"/>	
ts_service_provider:	<input type="text" value="Encoder"/>	
TS Empty Packet:	<input type="text" value="No Insert"/>	

In combination with:

Main stream

Encoding type:	<input type="text" value="H.265"/>	
FPS:	<input type="text" value="50"/>	[5-60]
GOP:	<input type="text" value="25"/>	[5-300]
Bitrate(kbit):	<input type="text" value="3200"/>	[32-32000]
Image Quality:	<input type="text" value="Low"/>	
Encoded size:	<input type="text" value="same as the input"/>	
Bitrate control:	<input type="text" value="vbr"/>	
TS Video PID:	<input type="text" value="100"/>	[16-8190]
TS Audio PID:	<input type="text" value="200"/>	[16-8190]

Please do not use PID's (here in Decimal instead of HEXadecimal in use) which are reserved in DVB, 0-18 are for special tables like PID 18= EIT. 8191 is for Zero-fillings to a CBR TS. Please check DVB-Norms if you are unsure.

Picture Quality: We recommend to let the default settings as they are:
Advanced Configuration Encoder Video Quality Settings

The quality of video can be set with encoder_min_qp. The higher this value is, the more 'blurred' the image will become. A value below 5 probably is not especially noticeable to the human eye and can increase latency significantly. The default value for this is 5. If you're still seeing blurry video, try increasing your max bandwidth in the settings tab of the encoder main/Sec..

encoder_min_qp=5 to be found in SYSTEM settings:

Slice split enable:	Disable ▾	
Slice size:	1024	[128-65535]
MIN_QP:	5	[1-35]
MAX_QP:	42	(MIN_QP-50)

MAX_QP can be 50 – Min_QP

Example: A part from the **FFMPEG-advisory:**
'max_qp'

Set the max qp for rate control from 1 to 63 (default 55).
'min_qp'

Set the min qp for rate control from 1 to 63 (default 20).

Sets the Number of slices to operate on at once within a core.

Slices are a fundamental part of the stream format. You can operate on slices in parallel to increase speed at which a stream is processed. However, operating on multiple “slices” of video at once will have a negative impact on video quality. This option must be used when encoding 4k streams to H.264 in order to sustain real-time performance. The maximum practical value for this option is 4 since there are 4 encoder cores in a device.

How to connect our Video Encoder to OBS? Open Broadcaster Software

<https://obsproject.com/download>

Our HDE- or SDE Video Encoder Hardware can send/connect video to OBS by NDI or VLC Video Source, 1. Open the OBS software, click in the free area of 'Source' on the right, or click "+" in the lower left corner to added, here you can add.

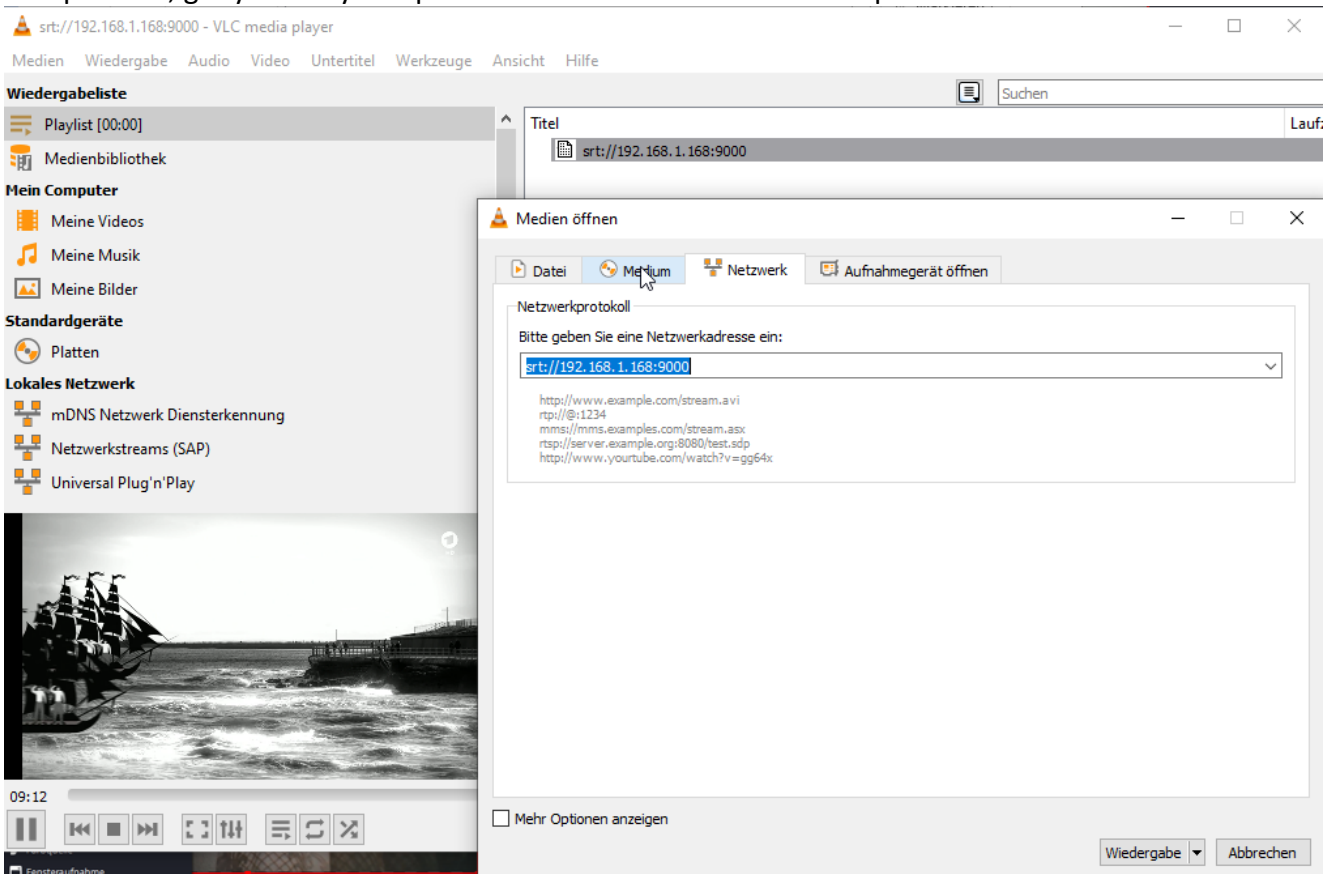
If the item "NDI source" is not displayed, the obs-ndi plug-in needs to be installed, you can download and install it from <https://github.com/Palakis/obs-ndi/releases/tag/4.6.2> or higher version:

<https://github.com/Palakis/obs-ndi/releases>:

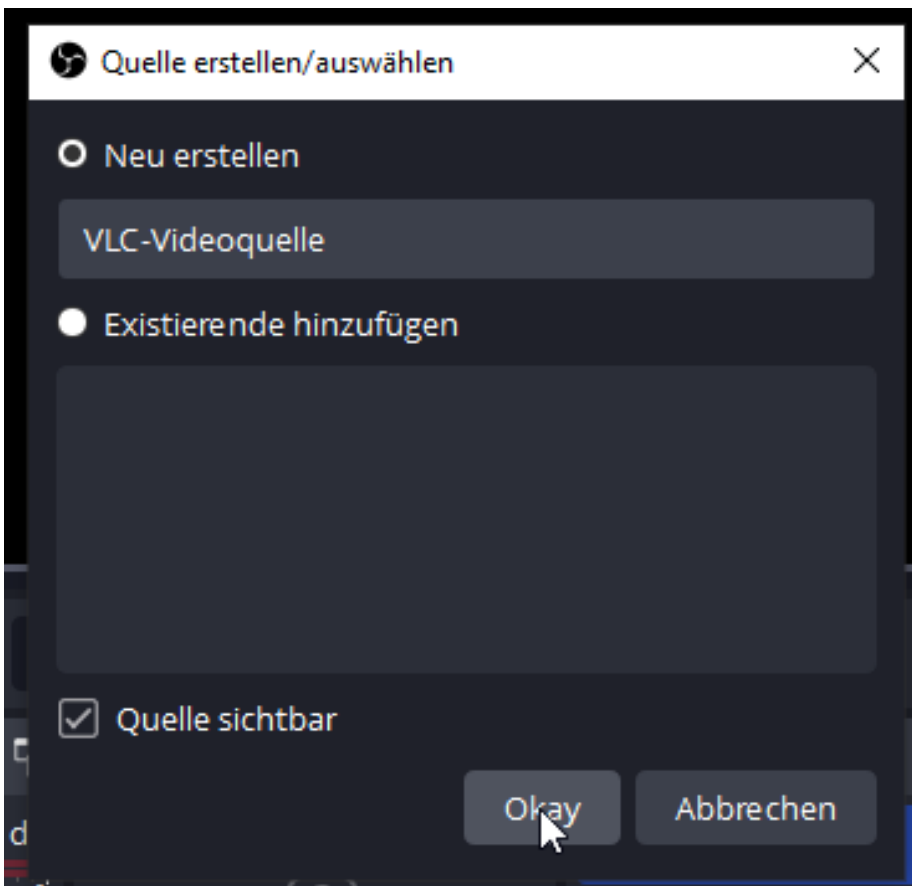
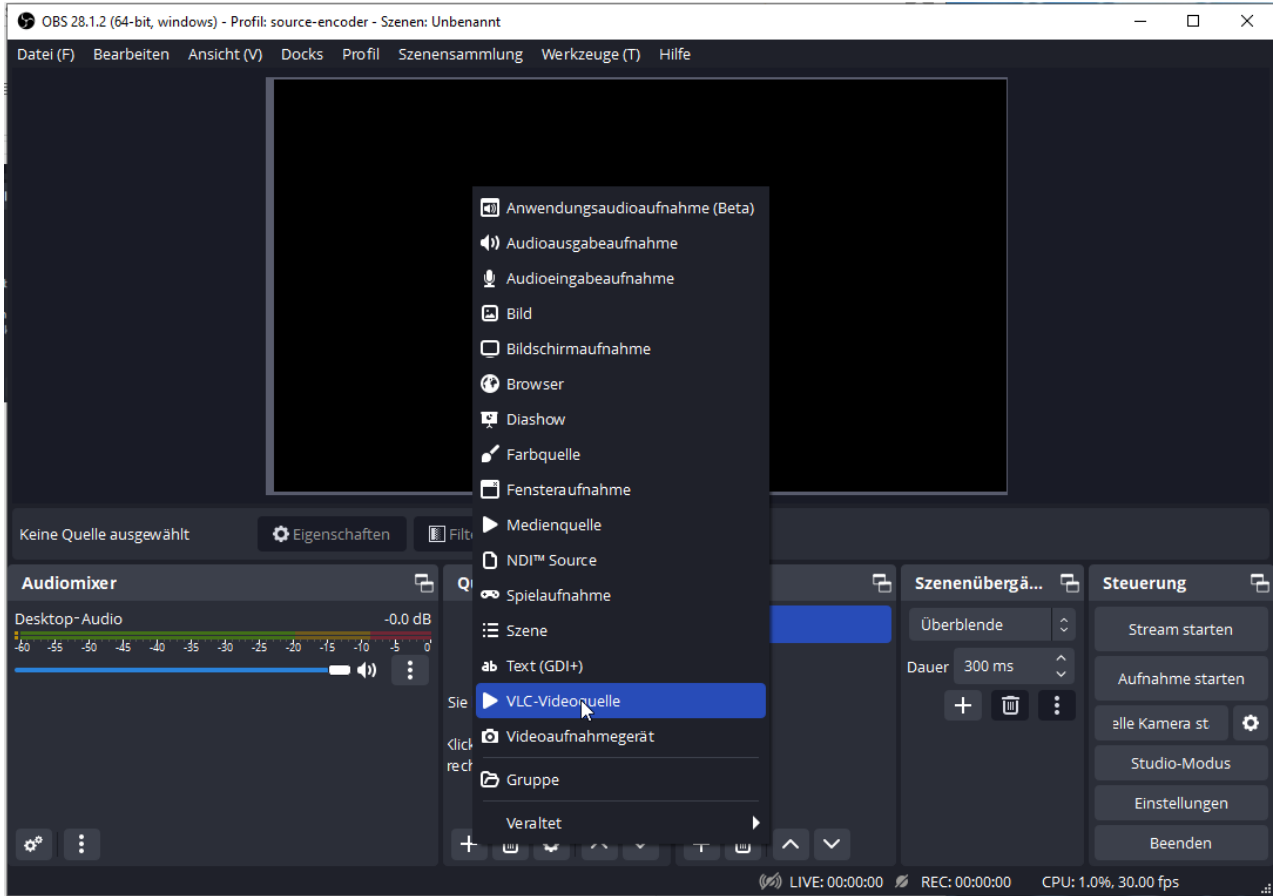
<https://github.com/Palakis/obs-ndi/releases/tag/dummy-tag-4.10.0>

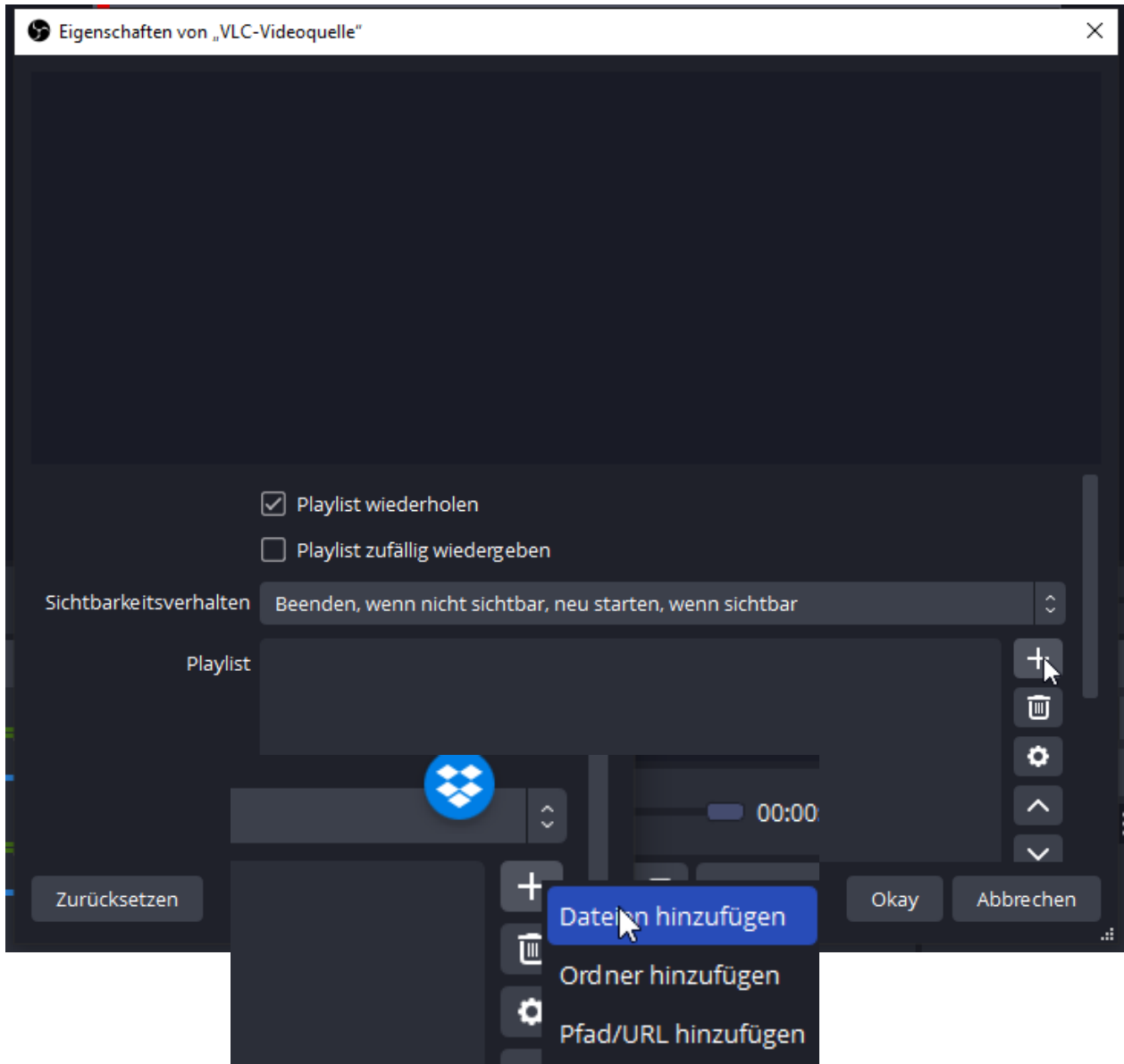
Installation the VLC Source as Playlist:

Open VLC, get your Playlist open and insert a network-stream input like UDP or here SRT:

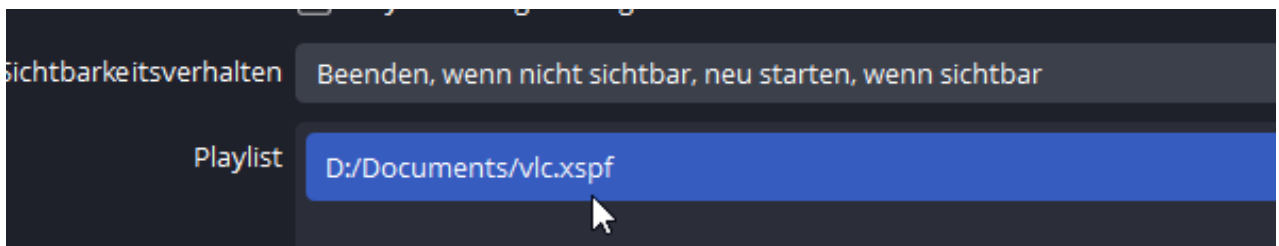


After the stream plays, use the right mouse button over:



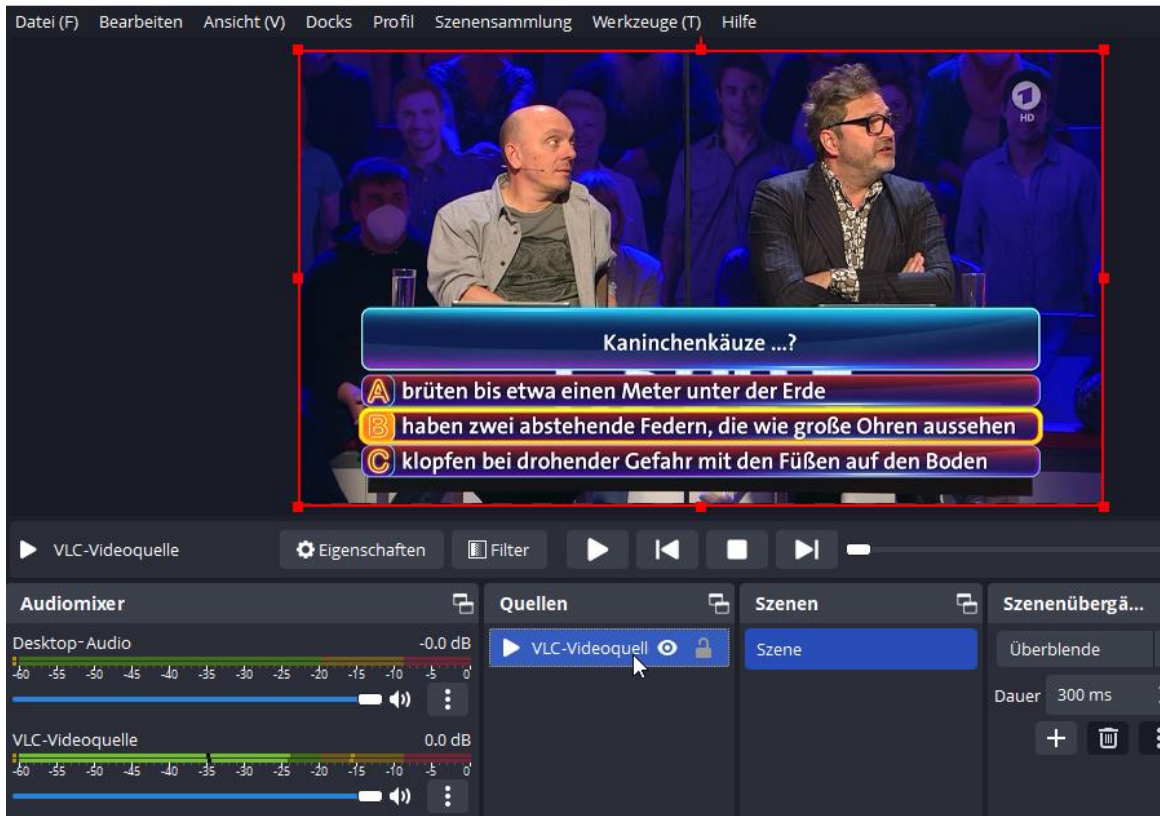


Name	Änderungsdatum
Heute (1)	
vlc.xspf	14.11.2022 11:21
Letzte Woche (4)	

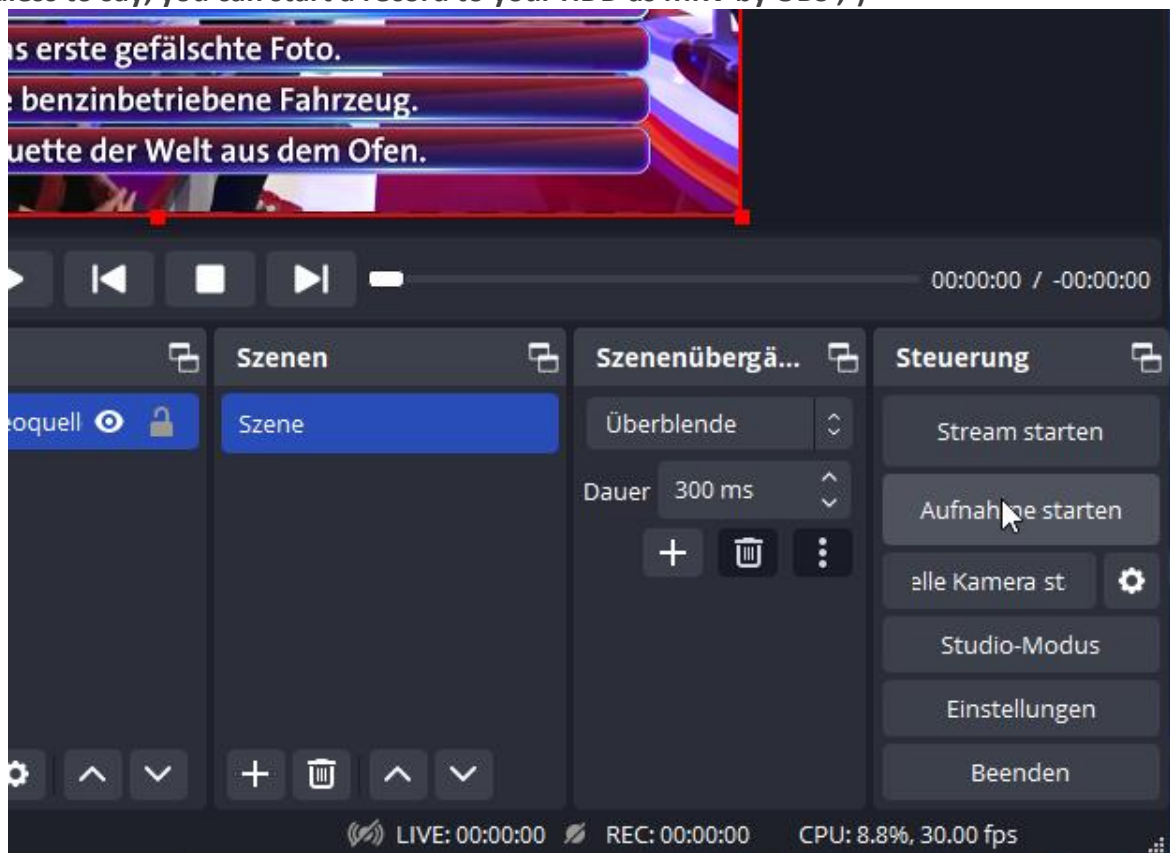


And Go:

OBS 28.1.2 (64-bit, windows) - Profil: source-encoder - Szenen: Unbenannt



Needless to say, you can start a record to your HDD as MKV by OBS ;-)



UDP-Multicasts are supported as well: here with

Main stream

Encode Type: H.265

Encoding Type: 1920x1080@25

Bitrate(kbit): 5000

TS URL: http://192.168.1.168/0.ts http://192.168.1.168:8086/0.ts

HLS URL: Disable

FLV URL: http://192.168.1.168/0.flv http://192.168.1.168:8086/0.flv

RTSP URL: rtsp://192.168.1.168/0 rtsp://192.168.1.168:8554/0

RTMP URL: Disable

RTMP(S) PUSH URL: Disable

Multicast URL: udp://@238.0.0.1:1234

SRT URL: srt://192.168.1.168:9000

SRT PUSH URL: Disable

Preview(HTML5)

Open VLC- playlist and save - as before - and you can also chose a different format:

Dateiname:	2022-11-14 11-40-56.m3u
Dateityp:	M3U-Wiedergabeliste (*.m3u)
	M3U-Wiedergabeliste (*.m3u)
	XSPF-Wiedergabeliste (*.xspf)
ner ausblende	M3U8-Wiedergabeliste (*.m3u8)
besteht aus den	HTML-Wiedergabeliste (*.html)

Eigenschaften von „VLC-Videoquelle 2“



To sample some streams and create a mosaic:

Add-ons December 2021 FW version 5.15:

Cosmetic improvements,

- 1. Added TS video & audio pid, ts_service_id can be adjusted
- 2. Added RTSP multicast
- 3. Added multicast SAP name option
- 4. Added switch for TS TDT - System - Advanced settings (default is disabled)

Status Network **Main stream** Substream1 Substream2 Substream3 Audio & Video System

HD ENCODER CONFIGURATION PLATFORM

Main stream

Encoding type:	H.264	
FPS:	30	[5-60]
GOP:	30	[5-300]
Bitrate(kbit):	3200	[32-32000]
Image Quality:	Low	
Encoded size:	same as the input	
H.264 Level:	high profile	
Bitrate control:	vbr	
TS Video PID:	100	[16-8190]
TS Audio PID:	200	[16-8190]
TS URL:	/0.ts	Enable
HLS URL:	/0.m3u8	Disable
FLV URL:	/0.flv	Enable
RTSP URL:	/0	Multicast
RTSP Multicast IP:	238.0.0.2	Disable
RTSP Multicast port:	1234	Enable
RTMP URL:	/0	Disable

Status Network Main stream Substream1 Substream2 Substream3 Audio&Video System

RTSP Multicast port:	1234	[1-65535]
RTMP URL:	/0	Disable
RTMP(S)/RTSP PUSH URL:	rtmp://192.168.1.169/live/0	Disable
Multicast IP:	238.0.0.1	Disable
Multicast port:	1234	[1-65535]
Multicast SAP Name:	GROUP0_STREAM0	
SRT URL Port:	9000	Disable [1-65535]
SRT PUSH URL:	srt://192.168.1.169:9000	Disable
SRT Encryption Password:	0123456789	Disable
HLS PUSH URL:	https://a.upload.youtube.com/http_uploa	Disable

Status Network Main stream Substream1 Substream2 Substream3 Au

d

Device Name:	<input type="text" value="Encoder_9896"/>	
EDID:	<input type="text" value="0.Default(1080P60)"/>	▼
Video Only:	<input type="text" value="Disable"/>	▼
Audio Only:	<input type="text" value="Disable"/>	▼
AV Sync Strategy:	<input type="text" value="Resample"/>	▼
Hls Splitter Time(s):	<input type="text" value="10"/>	[3-20]
Hls Number:	<input type="text" value="5"/>	[3-20]
SRT Latency(ms):	<input type="text" value="150"/>	[1-10000]
SRT Bandwidth(KByte, 0=nolimit):	<input type="text" value="0"/>	[0-102400]
Deinterlaced:	<input type="text" value="Bottom Only"/>	▼
Net Drop Threshold:	<input type="text" value="5000"/>	[50-50000]
TS muxer:	<input type="text" value="Compatible with FFMPEG"/>	▼
TS once pack:	<input type="text" value="7"/>	[3-128]
TS TDT:	<input type="text" value="Disable"/>	▼
s_transport_stream_id:	<input type="text" value="101"/>	[1-65535]
ts_nmt_start_pid:	<input type="text" value="480"/>	[16-7936]

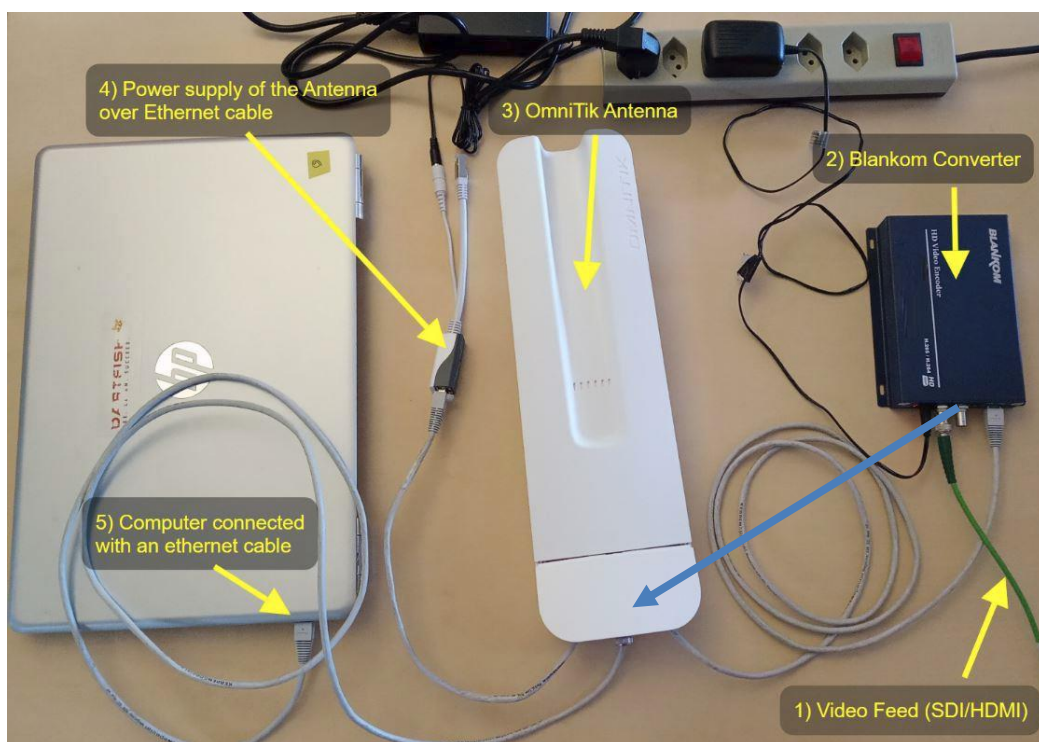
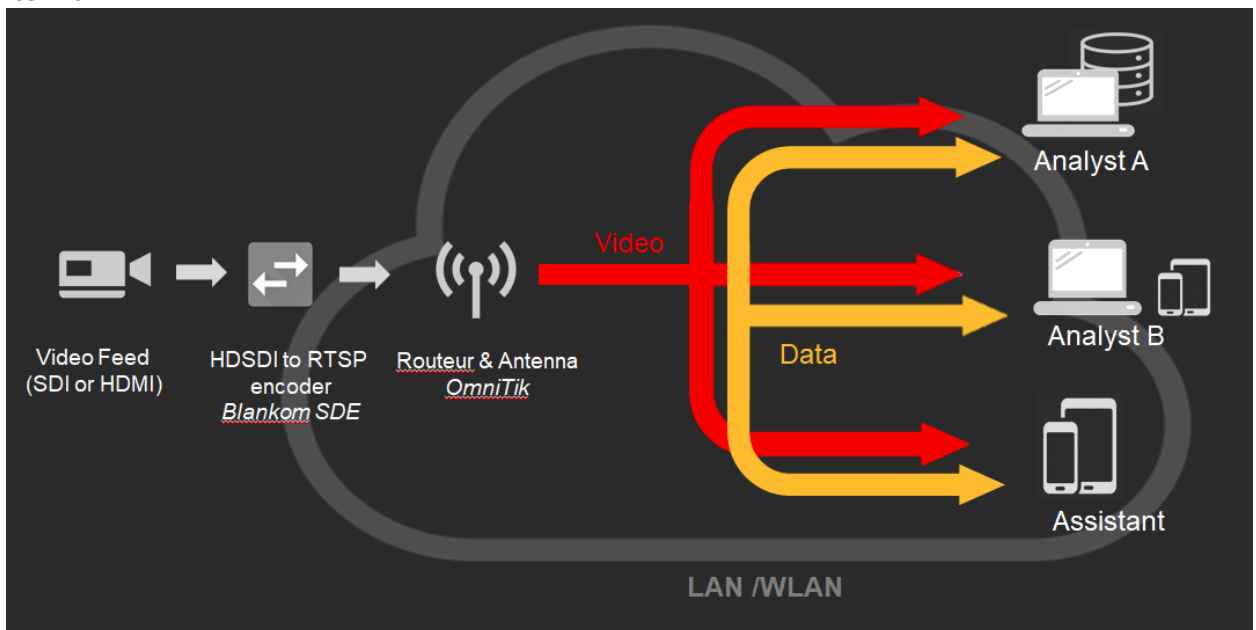
Network **Main stream** **Substream1** **Substream2** **Substream3** **Audio & Video** **Sys**

HD ENCODER CONFIGURATION PLATFORM

Example Dartfish Setup:

Attention:

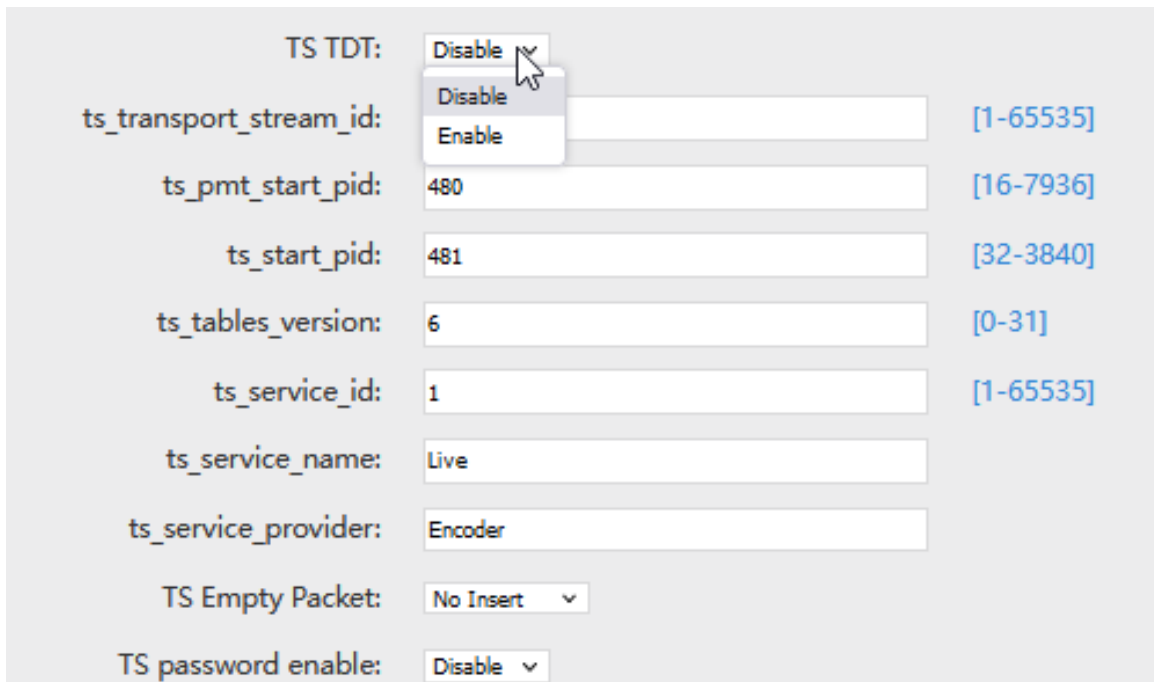
Do not connect the encoder before you have disabled PoE at the connection Ethernet-RJ45 of the Antenna:



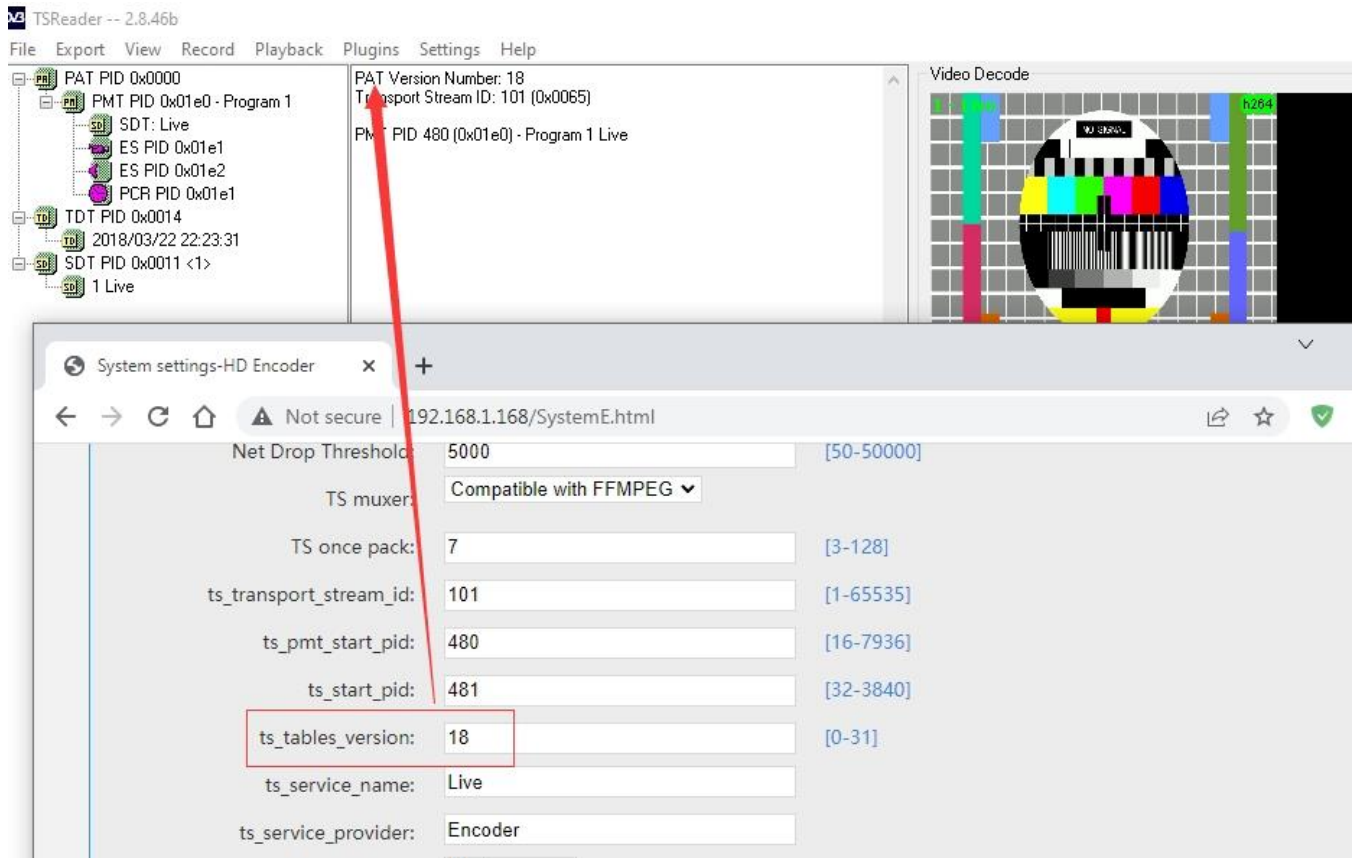
Please assure that the Ethernet port of the HDE-/SDE265 Encoder (Converter) does not get the Power over Ethernet (PoE) from the OmniTik Antenna. We recommend to first configuring the Antenna ports and avoid PoE forwarding on all other ports. Then connect the BLANKOM Converter with all connectors before powering on the whole system.

Changing possibility of the Transport Stream-PID-ID-values to distinguish several encoders in a common network to finally use a DVB multiplexer w/o PID-Remapping:

Points to this in System-settings



TS Tables Version is related to the PAT (See MPEG-DVB):



In combination with:

Main stream

Encoding type:	<input type="text" value="H.265"/>	
FPS:	<input type="text" value="50"/>	[5-60]
GOP:	<input type="text" value="25"/>	[5-300]
Bitrate(kbit):	<input type="text" value="3200"/>	[32-32000]
Image Quality:	<input type="text" value="Low"/>	
Encoded size:	<input type="text" value="same as the input"/>	
Bitrate control:	<input type="text" value="vbr"/>	
TS Video PID:	<input type="text" value="100"/>	[16-8190]
TS Audio PID:	<input type="text" value="200"/>	[16-8190]

Please do not use PID's (here in Decimal instead of HEXadecimal in use) which are reserved in DVB, 0-18 are for special tables like PID 18= EIT. 8191dec is for Zero-fillings to a CBR TS. Please check DVB-Norms if you are unsure.

SDE-265 and HDE-265L intermediate new Version 5.15...20 ADD-ONS:

- New User Interface lookalike
- Inventing a Windows tool to search for your en- decoder if you lost IP Address: Find Your Encoder_Decoder.exe -> If you need that- ask us at info@blankom.de
- Changing possibility of TS Video & Audio PID and TS_service_id
- added RTSP- multicast support
- Changing of multicast stream SAP name option -> See below
- Added a checkbox/switch for TS TDT - System -> Advanced settings

The screenshot shows the VLC media player interface with the following settings highlighted:

- Device Name:** Encoder_20583
- EDID:** 0.Default(1080P60)
- Video Only:** Disable
- Audio Only:** Disable
- AV Sync Strategy:** Resample
- Multicast type:** UDP
- Enable SAP:** Enable
- MTU Size:** Enable
- UDP TTL:** 64
- Multicast SAP Name:** My-Chuckinger1
- SRT URL:** 192_168_1_167
- Port:** 8000

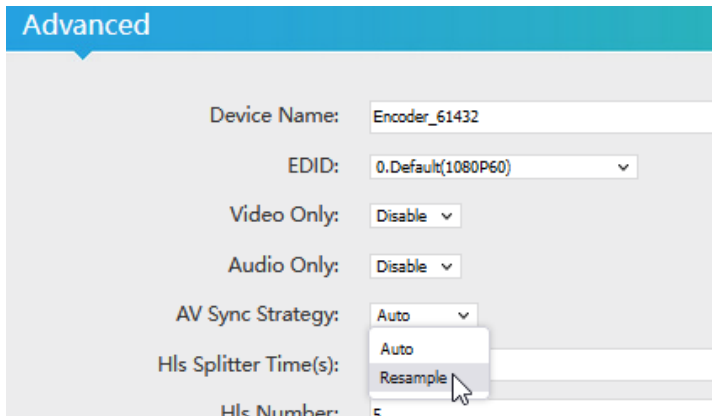
Version 5.17 (April 2022, June 2022)

Step1: fixing Preview Window when HDMI contained no Audio signal

Step2: adds the SDI-Input detection of Level A and B automatically.

Because of some SDI-devices are using Level A and the SDE-265 needed Level B. Example:

Version 5.17 lip sync option added:



Version 5.20 is actual the best (Okt. 2022).

5.32 is actually the one (July 2023) for the standard Chipset Version.

We have intermediately changed the chipset and also the firmware must be adapted ...

Currently the *Ambarella* Chip-version has 2.xx... in h.265 HDMI-Loop and SDI Encoders:

20230721-V2.28A:

New added and fixed video encoding:

Video Resolution and rotation perfections

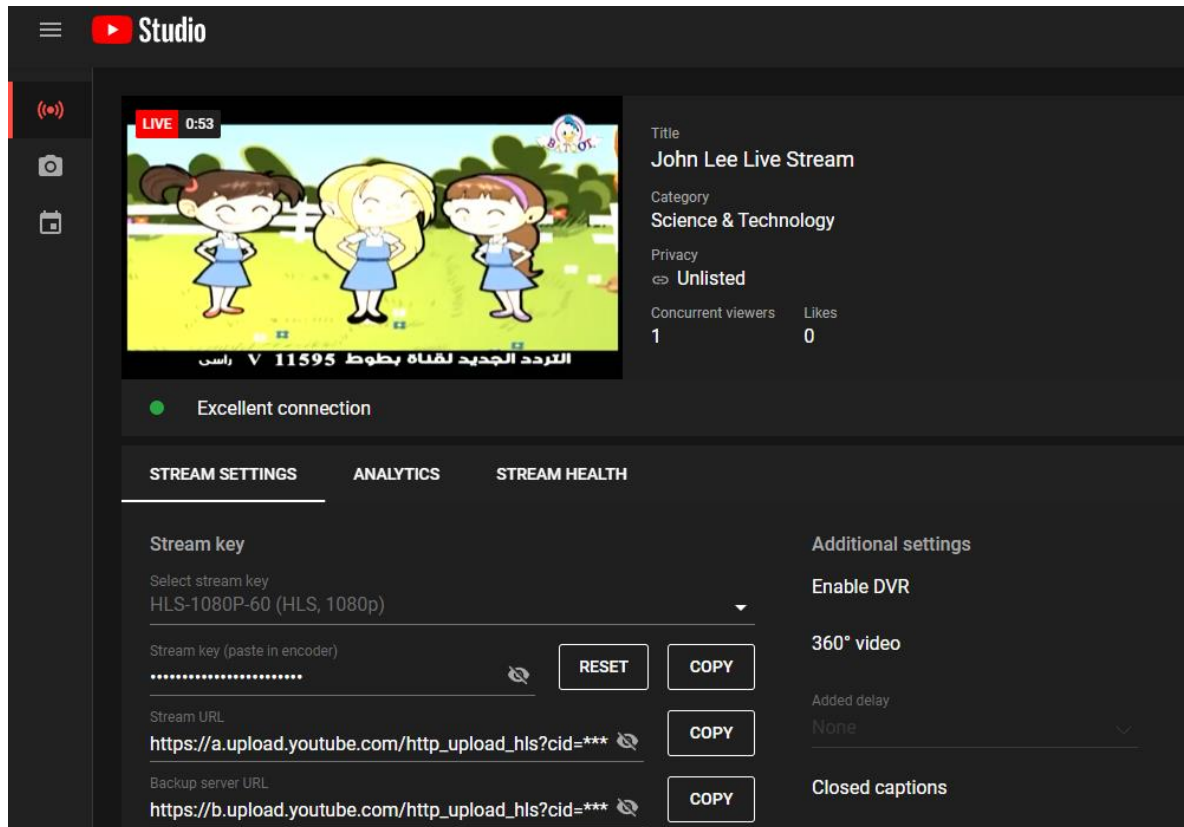
Because of customer demands.

How to stream h265 encoded video to YouTube using HLS?

Do you want to **stream H.265 to YouTube**? Yes, our [H265 Video Encoder](#) supports HLS push to YouTube since the year 2021.

How to setup?

Step 1, get the **hls stream url** from YouTube, if you can't find the HLS stream settings, maybe you need read here: <https://support.google.com/youtube/answer/10349430>,



Step 2,

copy the YouTube https-HLS streamURL and paste it to our [H265 Video Encoder](#),

TS URL:	/0.ts	Enable	▼
HLS URL:	/0.m3u8	Disable	▼
FLV URL:	/0.flv	Enable	▼
RTSP URL:	/0	Enable	▼
RTMP URL:	/0	Disable	▼
RTMP(S)/RTSP PUSH URL:	rtmp://113.118.195.11/live/oupre	Enable	▼
Multicast IP:	238.0.0.1	Disable	▼
Multicast port:	1234	[1-65535]	
Multicast SAP Name:	GROUP0_STREAM0		
SRT URL Port:	9000	Disable	▼ [1-65535]
SRT PUSH URL:	srt://192.168.1.169:9000	Disable	▼
SRT Encryption Password:	0123456789	Disable	▼
HLS PUSH URL:	https://a.upload.youtube.com/http_uploa	Enable	▼
Apply			

Status	Network	Main stream	Substream1	Substream2	Substream3	Audio&Video	System
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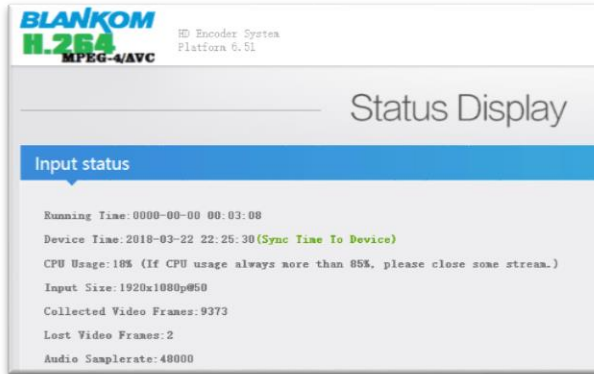
Finally: To get more information about the deeper details of the encoder settings and configuration issues, please contact us. www.blankom.de

Changelog:

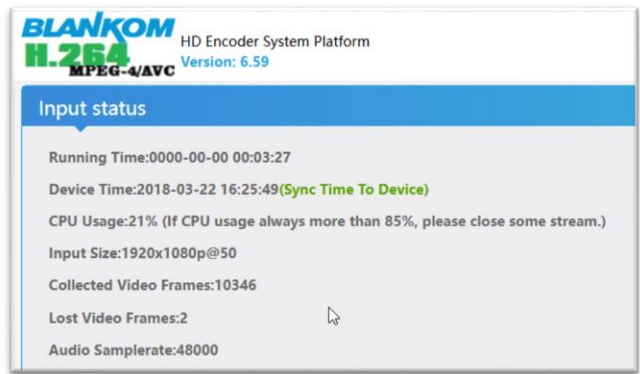
Firmware **HDE-264** update available to 6.59, July 2023 (send us an email if needed)

- Improved User Interface, Audio selection disabled (No external Stereo Input)
- Cosmetic bug still might be seen: SAP enabled but does not shown in the status menu

Before:



Now:



Please be confused:

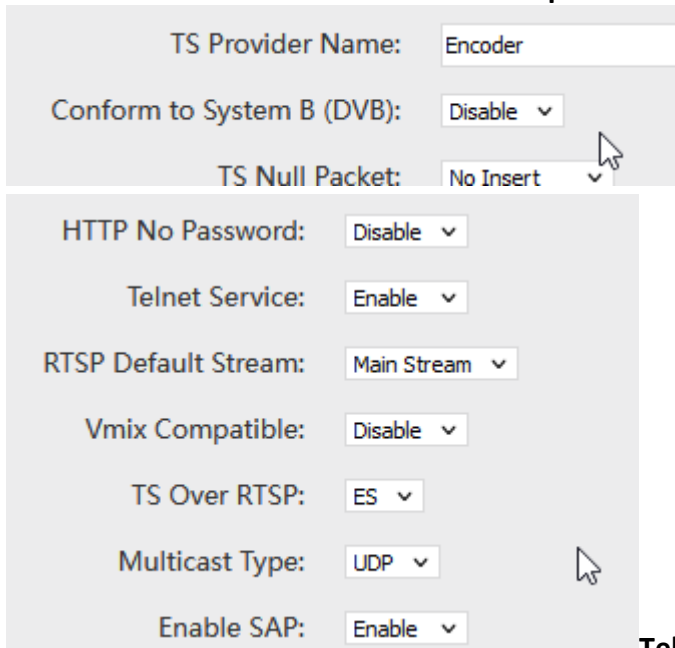
The h.264 only encoders (only HDMI versions available) starts with a 6 in the firmware version. The h.265 (and h.264) starts with a 5 (standard chip) or with a 2 (Ambarella chip).

This is important to know for our service if you are asking for an actual Firmware.

Easiest method: Log into the encoder-web interface. And you'll get the status page:



New Features in HDE-265L Ambarella chip: Version starting with 2.xy:



TS tables also for american ITU – B norm.

Telnet off switching, SAP ON/OFF

Please check also the SDE-265 manual and tips and tricks as PDF's from our website (Download section).

Questions:

Please contact us:

info@blankom.de