

## 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*

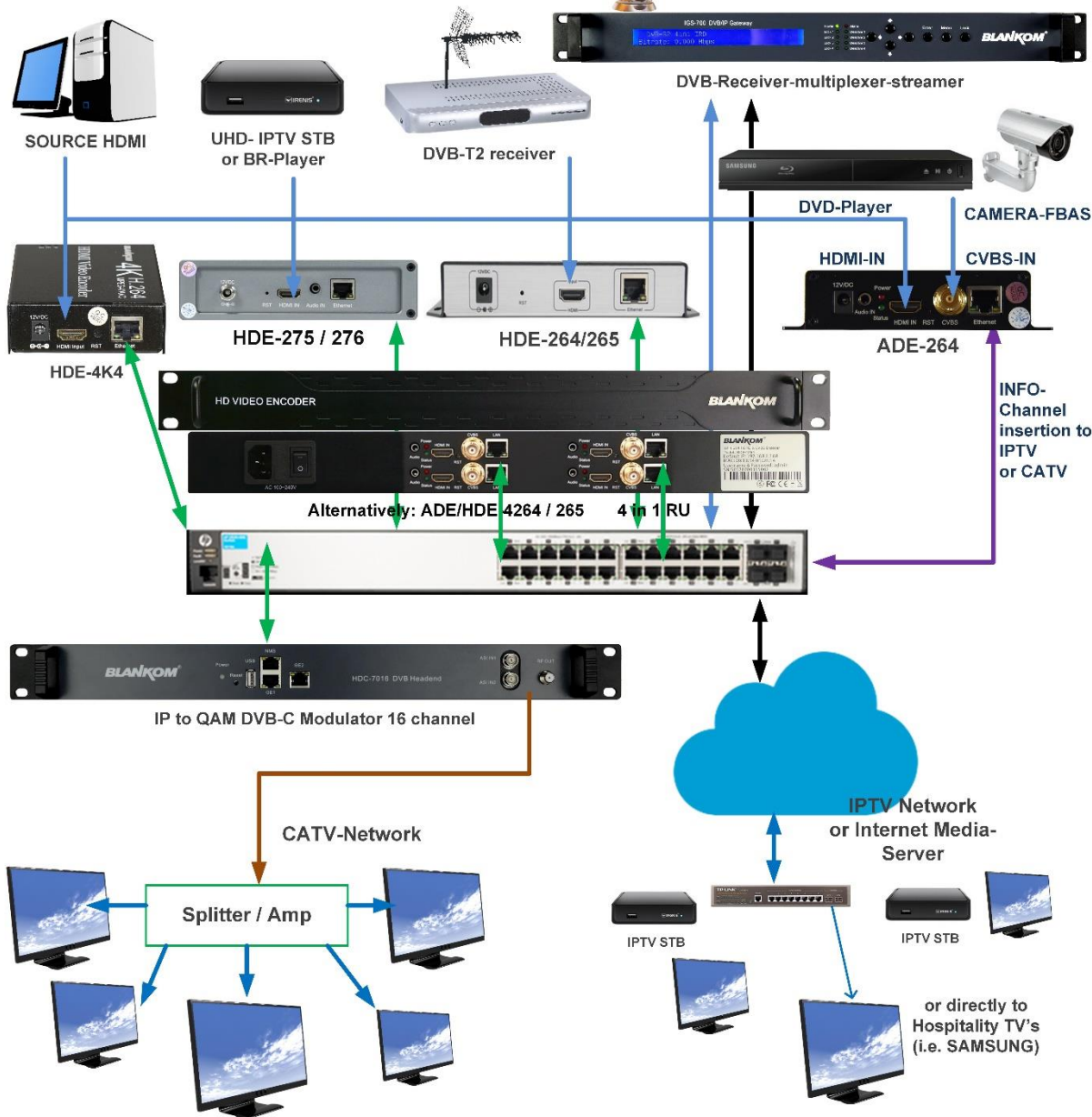
*by TV sets, with IPTV Set-Top Boxes,*

*with PC's and Tablets/Smartphones using i.e. VLC Player*



# Application Example

## Multiple Encodings to IPTV and CATV



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

### 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

Examples with HDMI- Inputs:

HDE-1265



HDE-4265



HDE-08265



HDE-16265





**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](http://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:



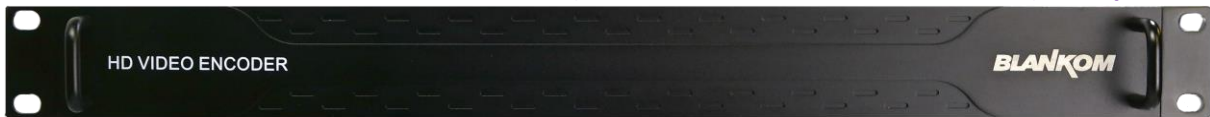
Variant with SDI Inputs: SDE-265 (no 264 available any more)



**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:

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** while the **HDE-265L** and new produced **HDE-1265** is actually **5.05**. 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.

### 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.

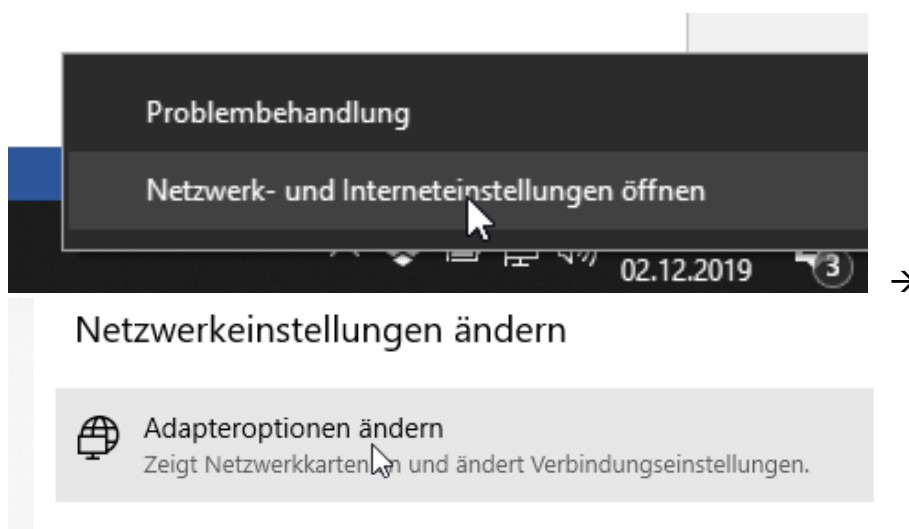
The Web-Interface lookalike may vary between different Versions but basically its self-explaining.

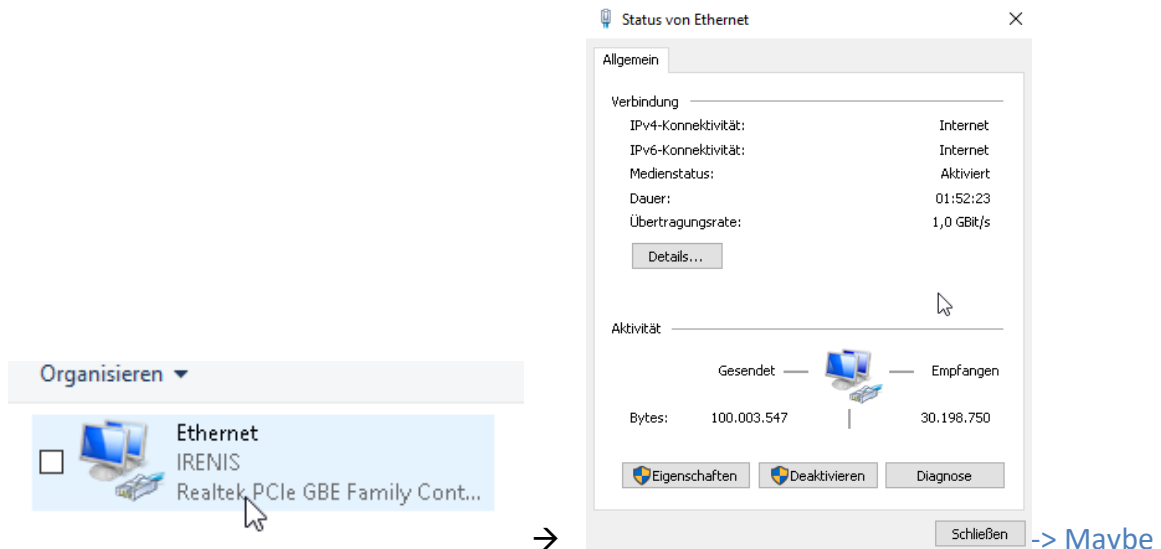
- The SDI versions supporting the first embedded Stereo-Audio-Pair to be encoded.

### **Setting up your PC/Laptop before connecting:**

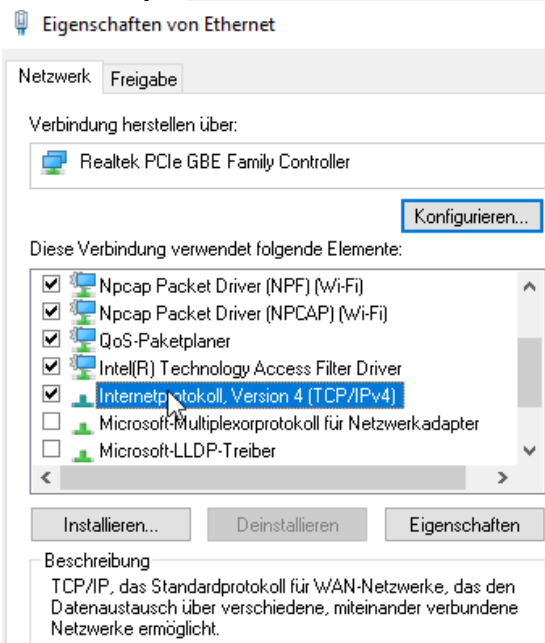
If you use a Windows based PC, you should assign its Ethernet adapter into the same range like the encoder: Use a static IP like follows:

1st: Open your network settings in System Menu:





-> Maybe



confirm Administrator access->

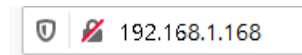
Change IPv4



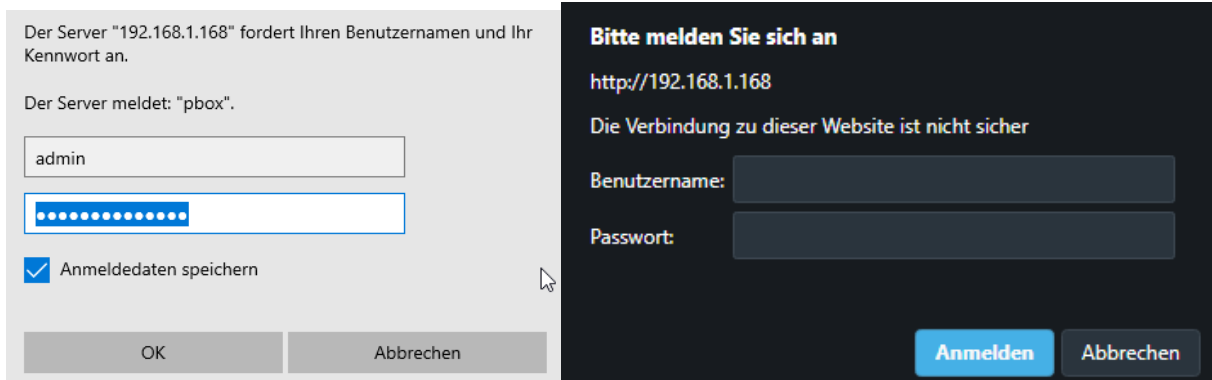
settings:

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 http<sup>s</sup>):

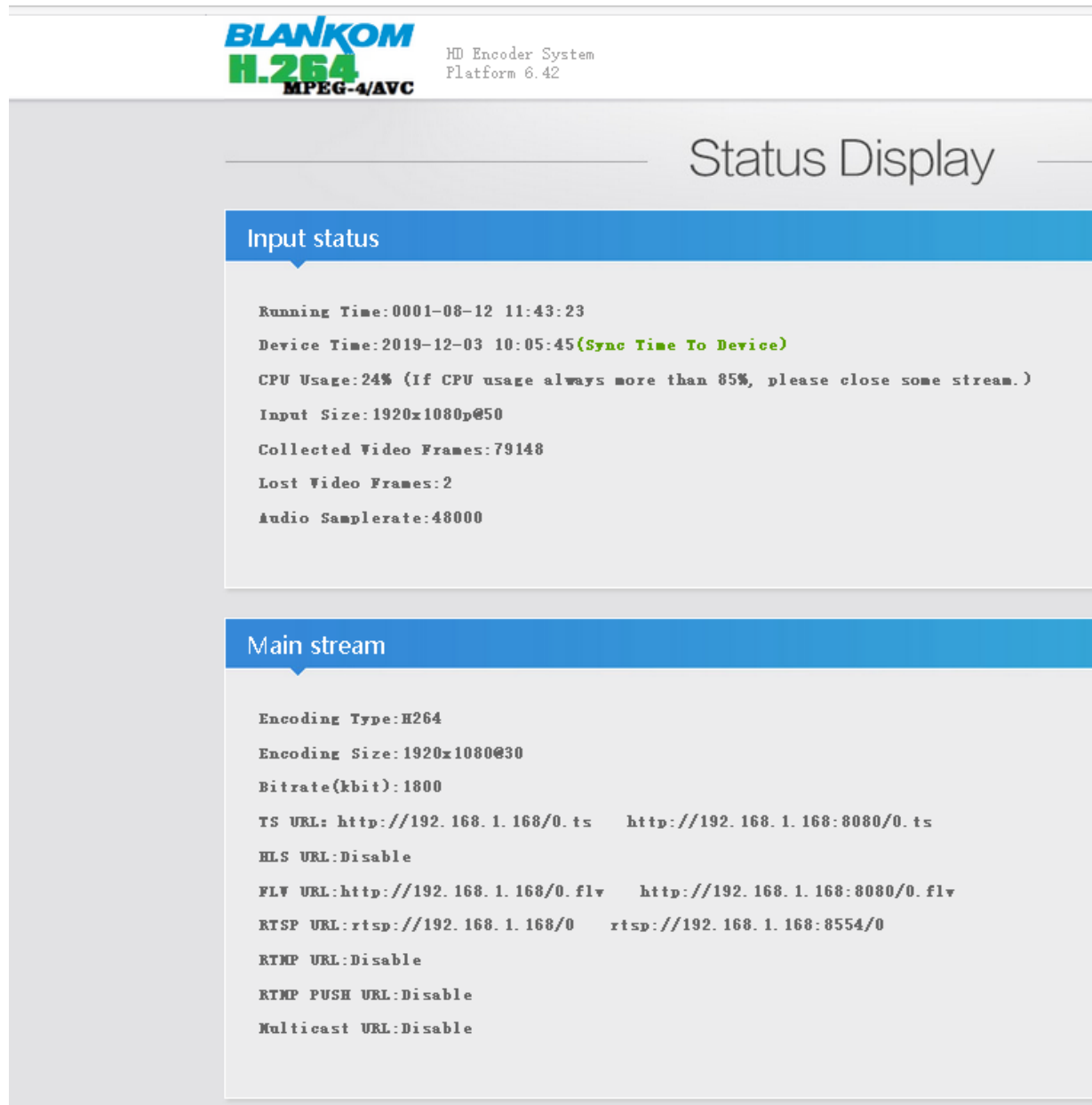


Depending on browser you'll get a log-in-screen window:



Enter the default username = admin, default password = admin .... and here we go:

192.168.1.168/indexE.html



**BLANKOM H.264 MPEG-4/AVC** HD Encoder System Platform 6.42

## Status Display

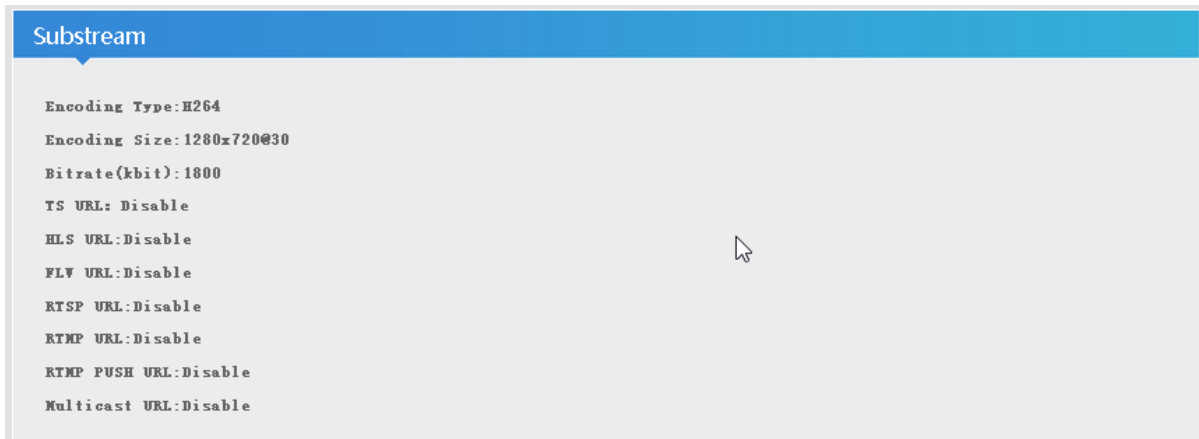
### Input status

Running Time: 0001-08-12 11:43:23  
 Device Time: 2019-12-03 10:05:45 (Sync Time To Device)  
 CPU Usage: 24% (If CPU usage always more than 85%, please close some stream.)  
 Input Size: 1920x1080p@50  
 Collected Video Frames: 79148  
 Lost Video Frames: 2  
 Audio Samplerate: 48000

### Main stream

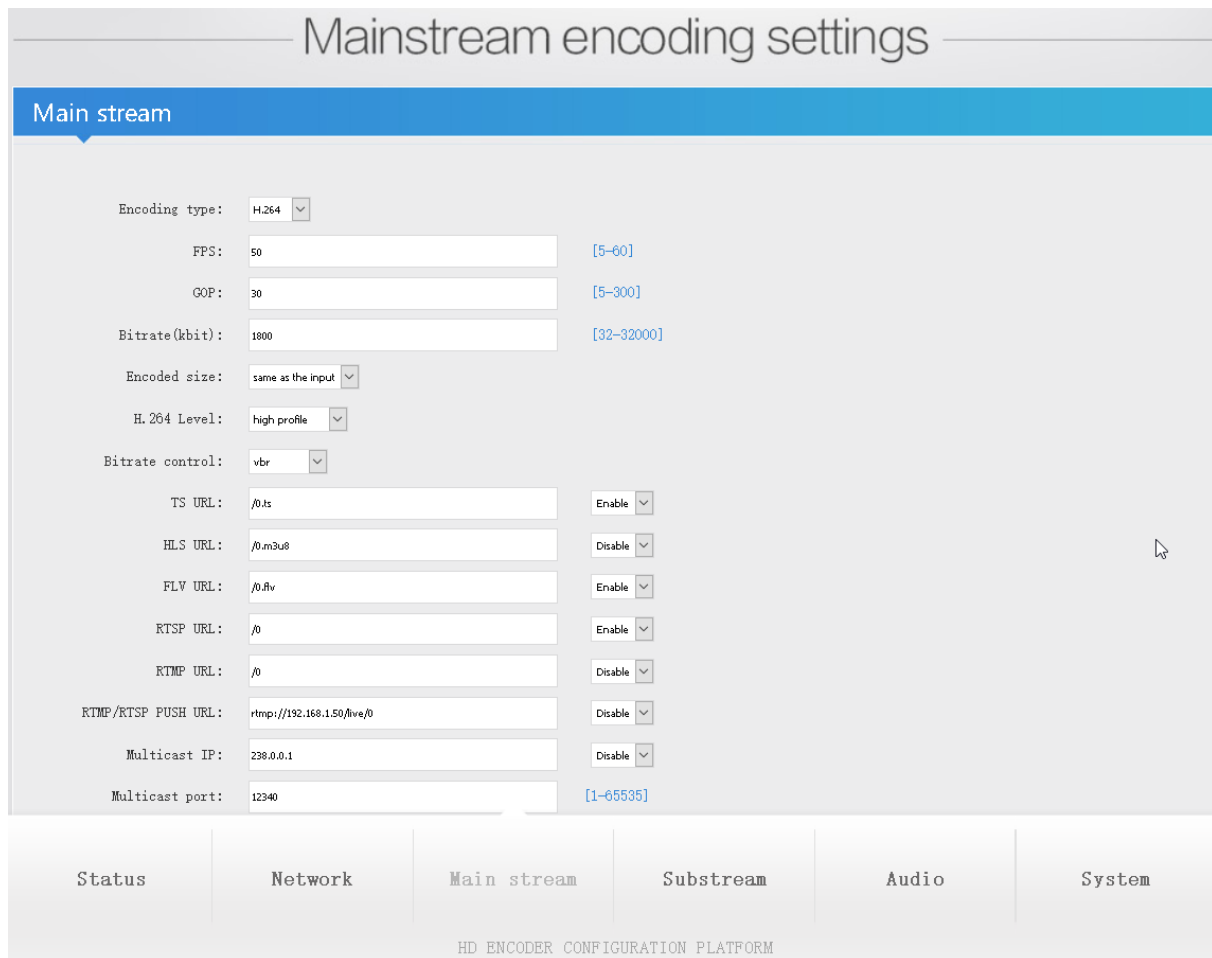
Encoding Type: H264  
 Encoding Size: 1920x1080@30  
 Bitrate(kbit): 1800  
 TS URL: http://192.168.1.168/0.ts    http://192.168.1.168:8080/0.ts  
 HLS URL: Disable  
 FLV URL: http://192.168.1.168/0.flv    http://192.168.1.168:8080/0.flv  
 RTSP URL: rtsp://192.168.1.168/0    rtsp://192.168.1.168:8554/0  
 RTMP URL: Disable  
 RTMP PUSH URL: Disable  
 Multicast URL: Disable





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

Parallel and different streamings 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)



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 this button:

Substream1

Encode Type: H.264  
 Encoding Type: 1920x1080@30  
 Bitrate (kbit): 1800  
 TS URL: Disable  
 HLS URL: Disable  
 FLV URL: Disable  
 RTSP URL: Disable  
 RTMP URL: Disable  
 RTMP PUSH URL: Disable  
 Multicast URL: Disable  
 Preview (Delay 1000ms)

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

Enabling it in the related Sub-Stream settings

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

Applying it by Set Up!

TS URL:	<input type="text" value="/1.ts"/>	
HLS URL:	<input type="text" value="/1.m3u8"/>	
FLV URL:	<input type="text" value="/1.flv"/>	
RTSP URL:	<input type="text" value="/1"/>	
RTMP URL:	<input type="text" value="/1"/>	Disable <input type="button" value="v"/>
RTMP/RTSP PUSH URL:	<input type="text" value="rtmp://192.168.1.50/live/1"/>	Disable <input type="button" value="v"/>
Multicast IP:	<input type="text" value="238.0.0.1"/>	Disable <input type="button" value="v"/>
Multicast prot:	<input type="text" value="1235"/>	[1-65535]

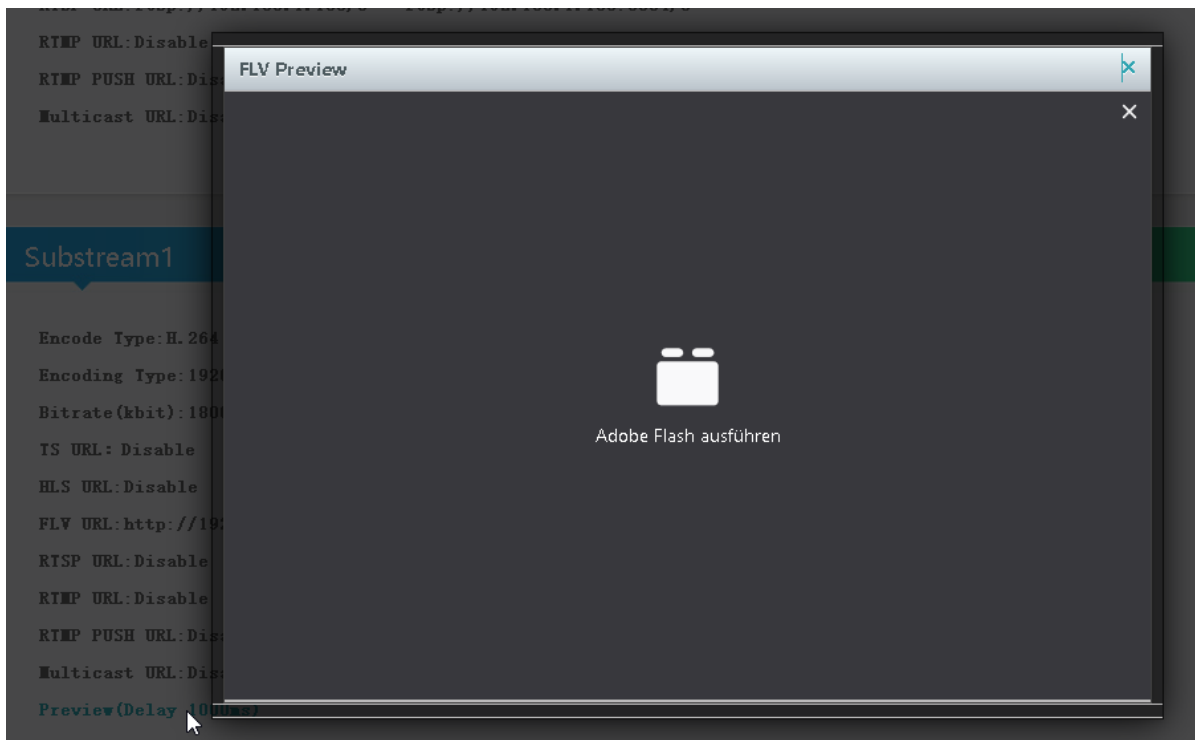
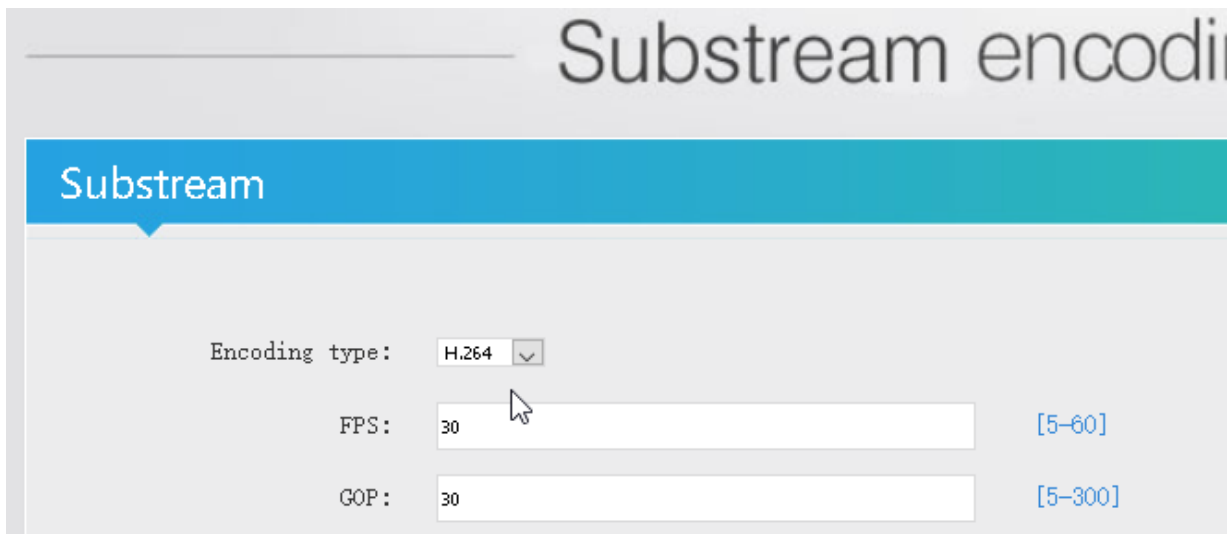
Set successfully, please restart your device!

**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):

192.168.1.168/indexE.html

Soll Adobe Flash auf dieser Website ausgeführt werden? Erlauben Sie Adobe Flash nur auf Websites, denen Sie vertrauen.

**Erlauben** Nicht erlauben

http://192.168.1.168:8080/0.ts  
http://192.168.1.168:8080/0.flv  
rtsp://192.168.1.168/0 rtsp://192.168.1.168:8554/0

RTMP URL: Disable  
RTMP PUSH URL: Dis  
Multicast URL: Dis

**FLV Preview**

Substream1

Encode Type: H.264  
Encoding Type: 192  
Bitrate (kbit): 180  
TS URL: Disable

Adobe Flash ausführen

**FLV Preview**

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00:00 | 00:00

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 its 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.

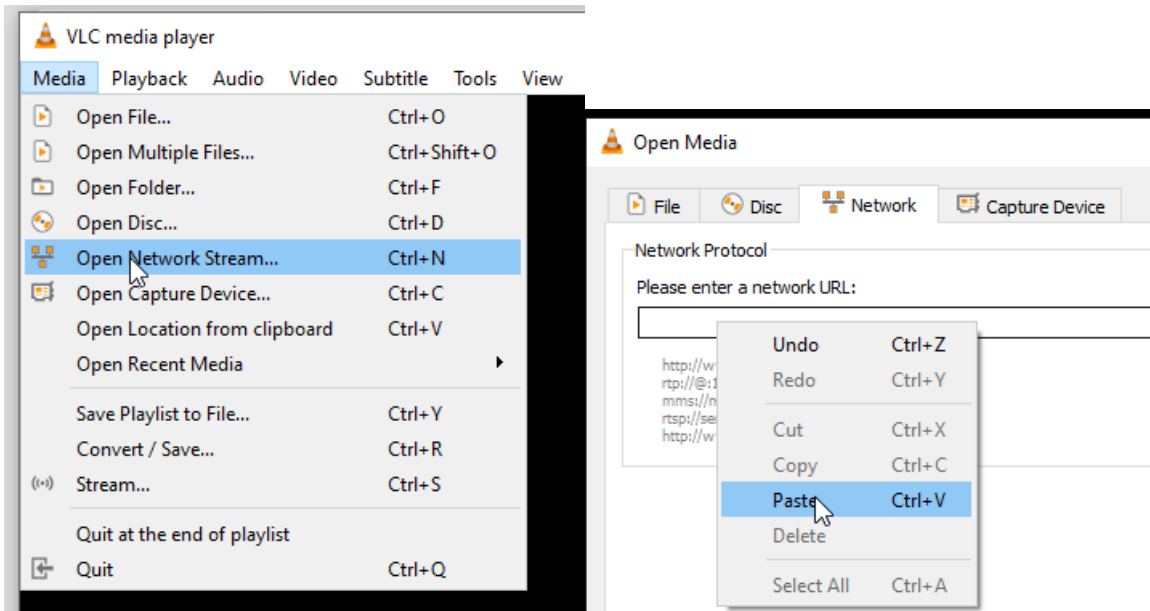
To also check your encoding streams you can copy the URI from the STATUS page:

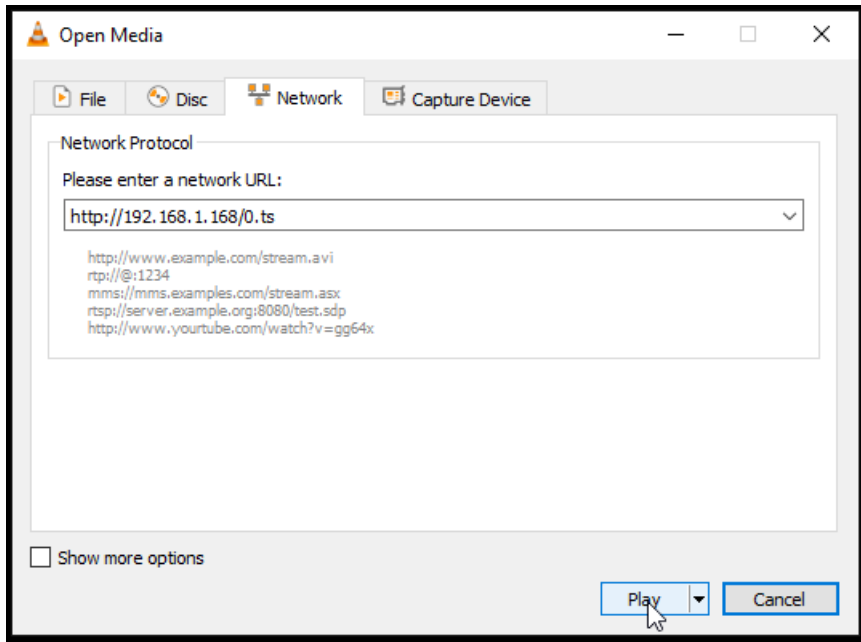
```

Main stream
Encode Type: H.265
Encoding Type: 1920x1080@50
Bitrate(kbit): 8000
TS URL: http://192.168.1.168/0.ts http://192.168.1.168:8080/0.ts
HLS URL: Disable
FLV URL: http://192.168.1.168/0.flv http://192.168.1.168:8080/0.flv
RTSP URL: rtsp://192.168.1.168/0 rtsp://192.168.1.168:9554/0

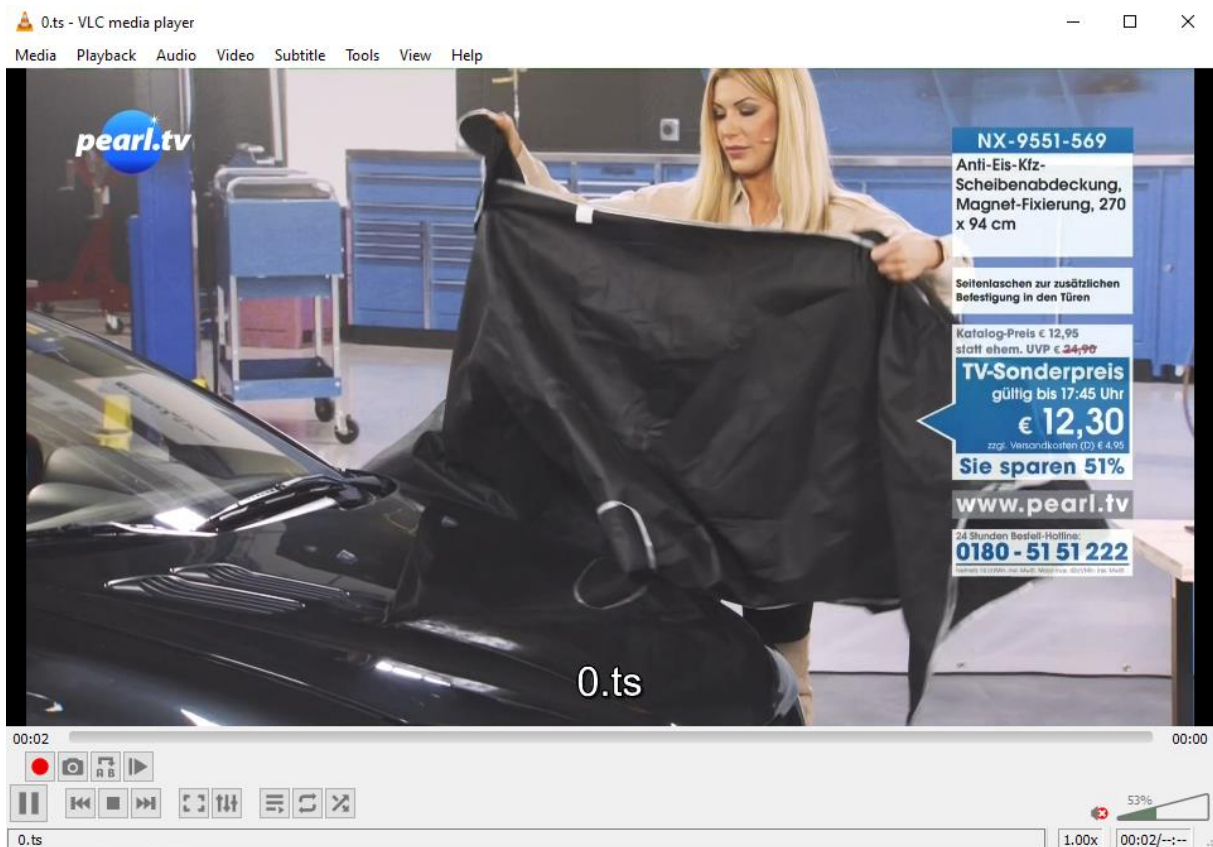
```

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

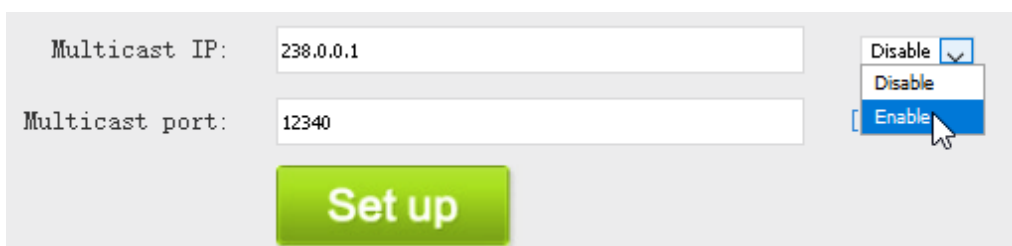


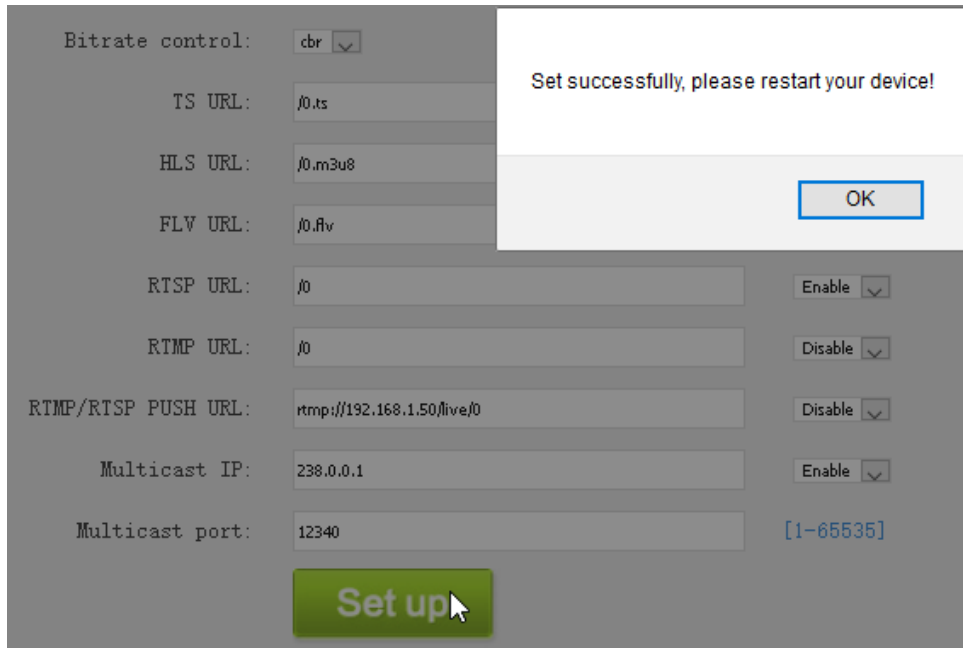


**Note:** If you more than one Network-Card in operation (like WIFI and GbE) in your receiving machine, VLC often doesn't recognize where to catch it from. Manually settings of METRIC Values for both can solve this issue.



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





AGAIN: You do not need to restart the encoder only the receivers you have in your network need to re-sync to the changed values!!!

## Multicasts:

RTP PUSH URL: Disable

Multicast URL: udp://@238.0.0.1:12340

Multicast URL: **udp://@238.0.0.1:12340**

Kopieren  
Alles auswählen

Open Media

File Disc Network Capture Device

Network Protocol

Please enter a network URL:

udp://@238.0.0.1:12340

http://www.example.com/stream.avi  
rtsp://@:1234  
mms://mms.example.com/stream.asx  
rtsp://server.example.org:8080/test.sdp  
http://www.youtube.com/watch?v=gg64x

Show more options

OK Cancel

udp://238.0.0.1:12340 - VLC media player

Media Playback Audio Video Subtitle Tools View Help

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udp://238.0.0.1:12340

00:00 00:00

53%

1.00x 00:00/00:00



**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.

The image shows two screenshots of a web interface. The top screenshot is titled "Network Settings" and has a blue header "Internet access". It contains the following fields: DHCP (a dropdown menu set to "Disable"), IP (192.168.1.168), Netmask (255.255.255.0), Gateway (192.168.1.1), and MAC (48:D7:FF:01:82:39). The bottom screenshot is titled "DNS" and has a blue header "DNS". It contains two fields: DNS1 (192.168.1.1) and DNS2 (9.9.9.9).

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

The image shows a screenshot of a web interface titled "PORT" with a teal header. It contains two fields: HTTP Port (8080) and RTSP Port (8554). To the right of each field is a link "[1-65500]". At the bottom of the form is a green "Set up" button.

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:  [v]

FPS:  [5-60]

GOP:  [5-300]

Bitrate(kbit):  [32-32000]

Encoded size:  [v]

H. 264 Level:  [v]

Bitrate control:  [v]

TS URL:   [v]

HLS URL:   [v]

FLV URL:   [v]

RTSP URL:   [v]

RTMP URL:   [v]

RTMP/RTSP PUSH URL:   [v]

Multicast IP:   [v]

Multicast port:  [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:  [0-128]

---

### Zone 1

Zone:

Type:

- Text**
- Graphic
- Scroll Text
- Time

X:  [0-1920]

Y:  [0-1080]

Text:

Font size:  [8-72]

Background color:

Color:  [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"/>	Disable <input type="text" value="v"/>
HLS URL:	<input type="text" value="/1.m3u8"/>	Disable <input type="text" value="v"/>
FLV URL:	<input type="text" value="/1.flv"/>	Disable <input type="text" value="v"/>
RTSP URL:	<input type="text" value="/1"/>	Disable <input type="text" value="v"/>
RTMP URL:	<input type="text" value="/1"/>	Disable <input type="text" value="v"/>
RTMP/RTSP PUSH URL:	<input type="text" value="rtmp://192.168.1.50/live/1"/>	Disable <input type="text" value="v"/>
Multicast IP:	<input type="text" value="238.0.0.1"/>	Disable <input type="text" value="v"/>
Multicast prot:	<input type="text" value="1235"/>	[1-65535]

**Set up**

Audio settings are common for both stream encoder parts:

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

Audio Channel:

Bitrate:  [48000~256000]

Digital Volume:  [-50~50]

**ONVIF audio**

G711A Over RTSP:

G711:

**Set up**

Self-explaining:

HD Encoder System  
Platform

## System Settings

**Change password**

Old password:

New password:

Confirm password:

**Modification**

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:

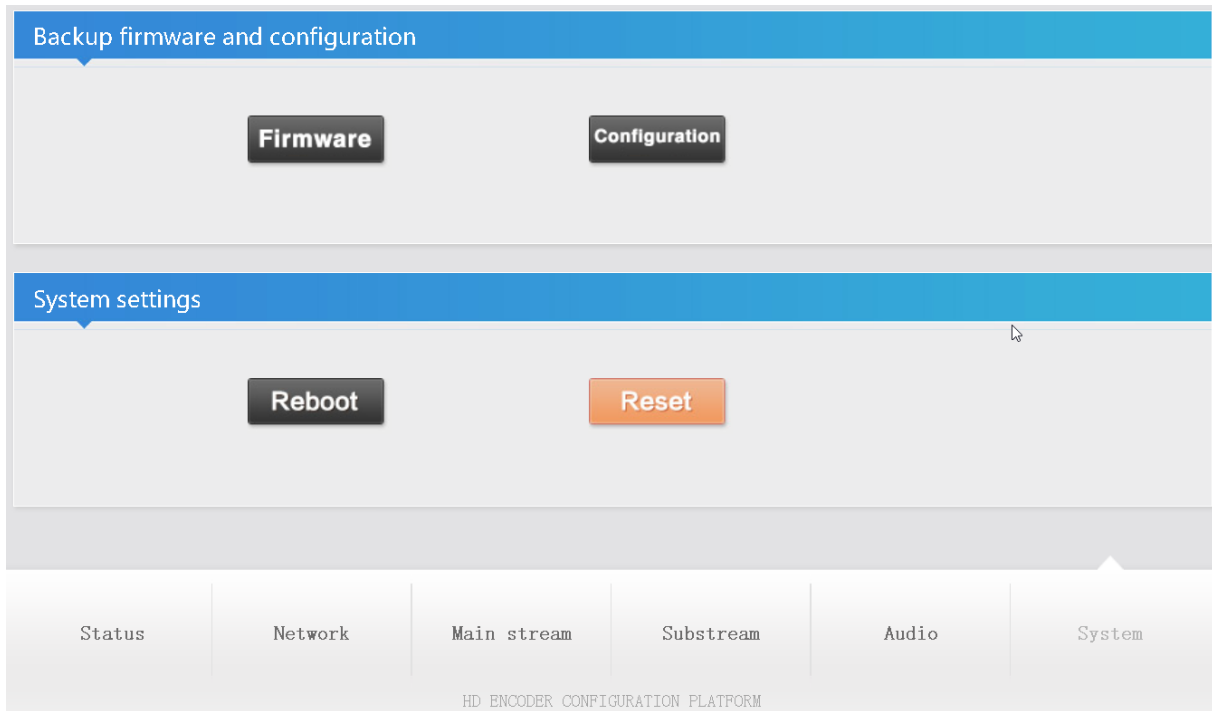
**Set up**

### 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.)

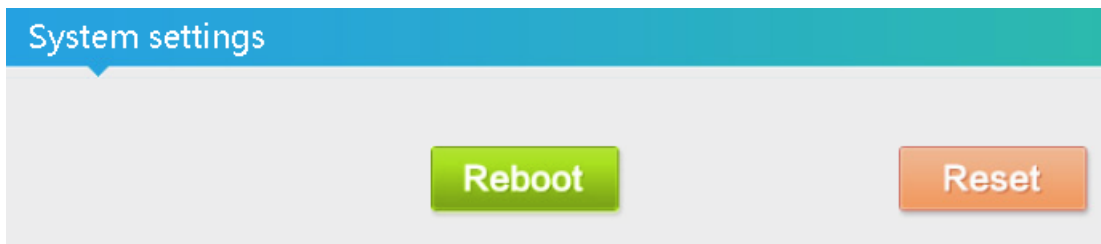
**Upload**

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...)

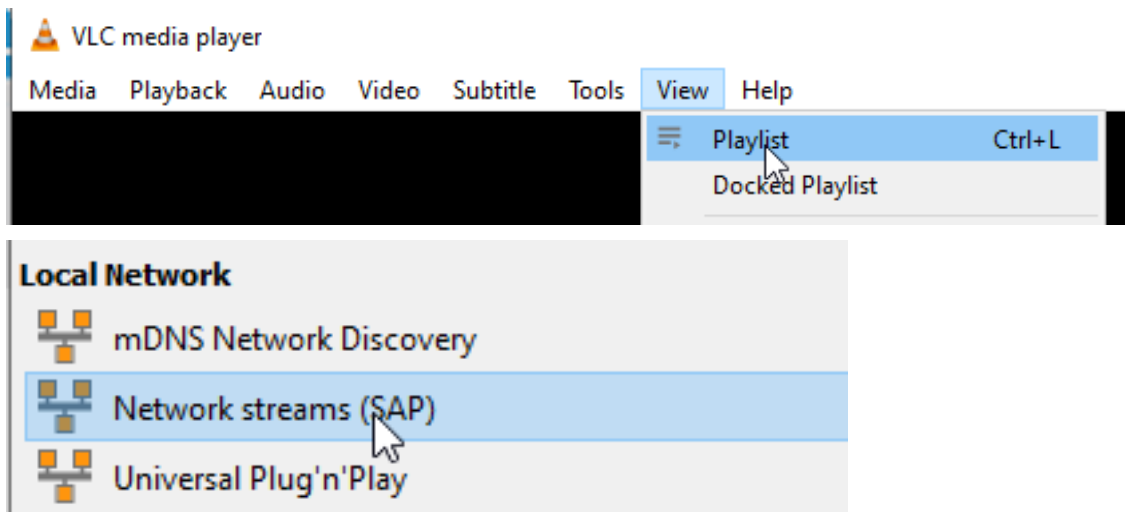
Finally i.e. after firmware update has been uploaded, the unit can be remotely reset to factory defaults or rebooted:

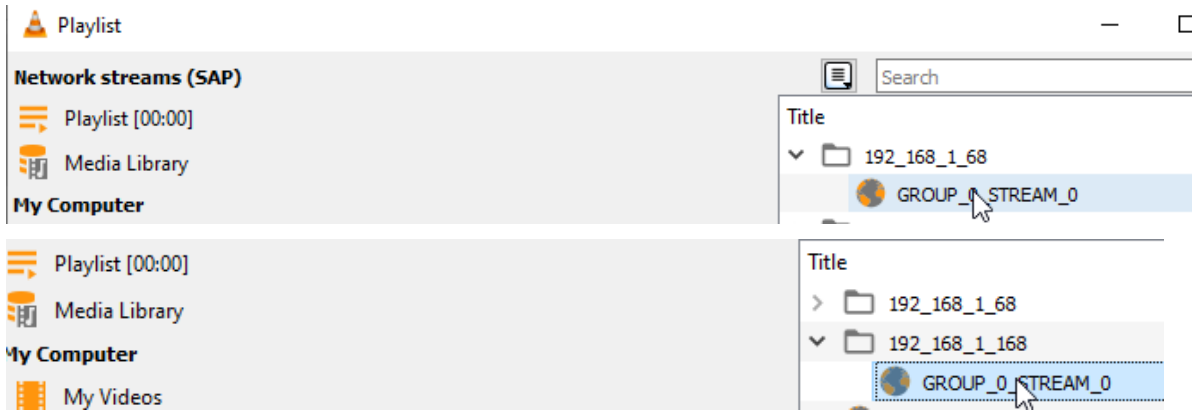


We recommend to make yourself familiar with 'What is Multicast and Unicast' and the corresponding IP-Ranges.

**Note:**

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

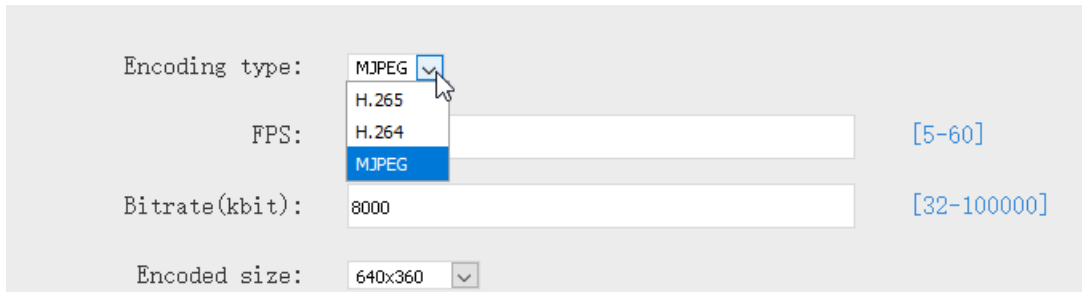




-> Will receive the stream. This works only with Multicast UDP / RTP!

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"/>	

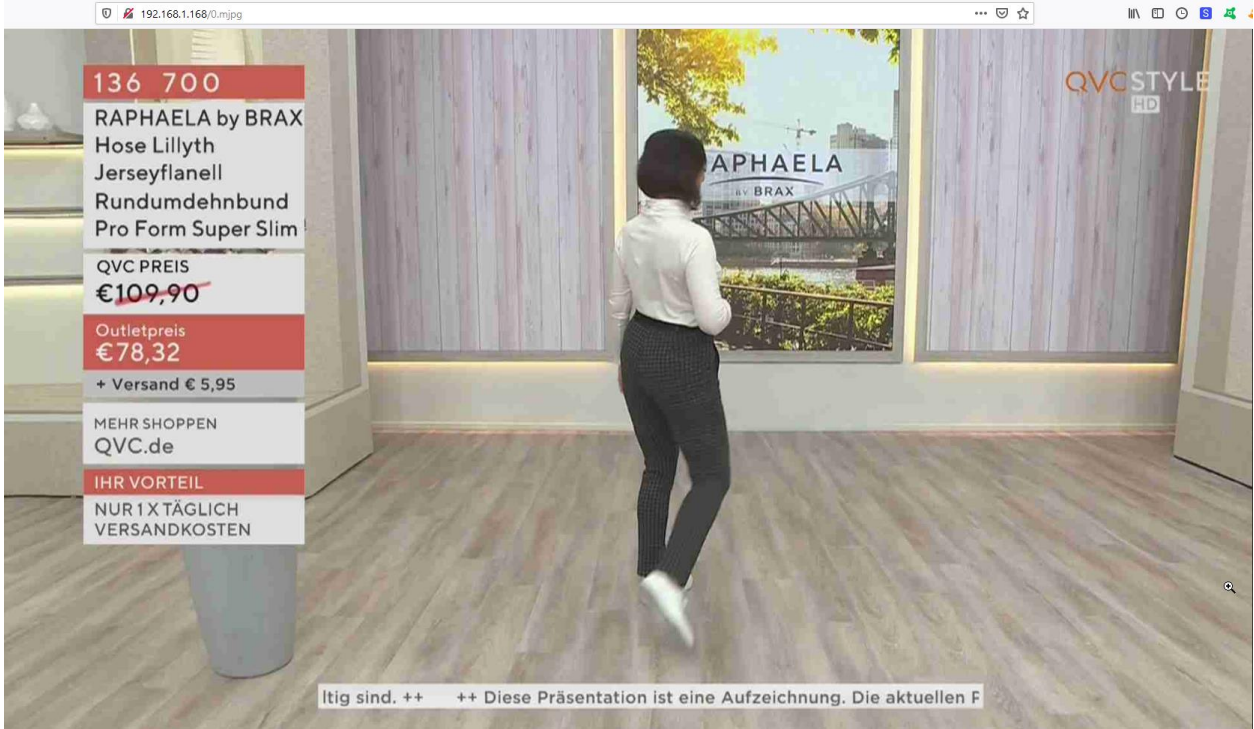
-> Status page... **PLEASE Note: RTSP has to be enabled for MJPG-stream:**

## Main stream

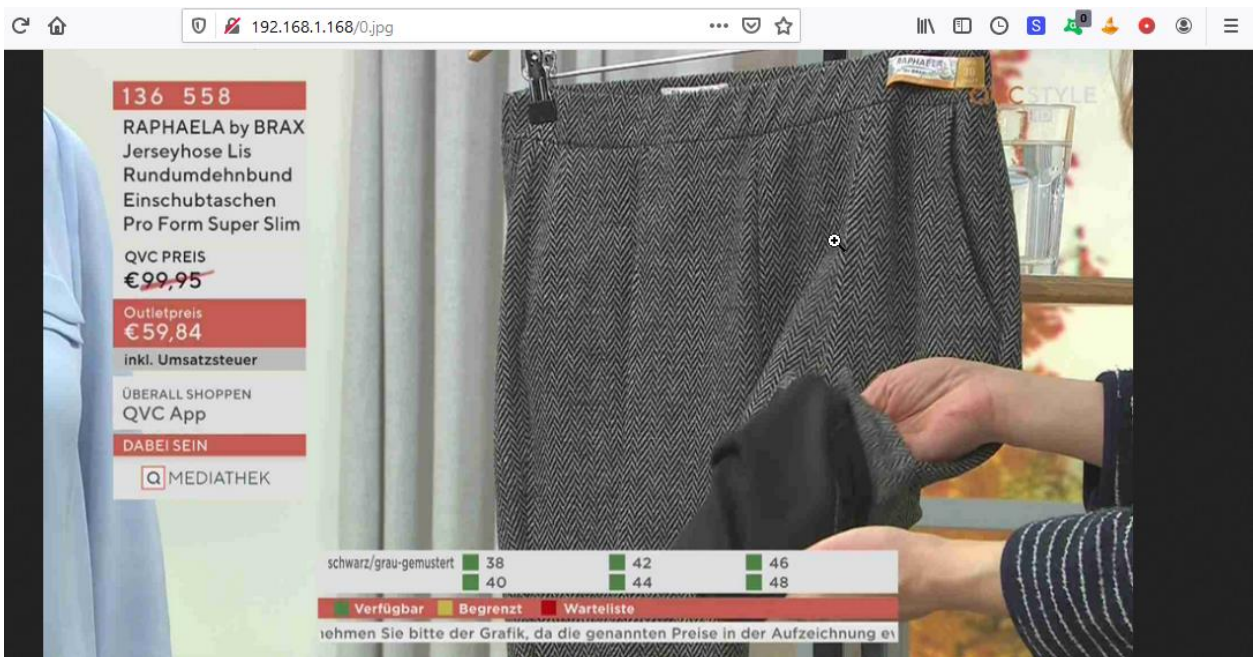
Encode Type: MJPEG  
Encoding Type: 1920x1080@25  
Bitrate(kbit): 5000  
MJPG URL: <http://192.168.1.168/0.mjpg>  
JPG URL: <http://192.168.1.168/0.jpg>  
TS URL: Disable  
HLS URL: Disable  
FLV URL: Disable  
RTSP URL: <rtsp://192.168.1.168/0>     <rtsp://192.168.1.168:8554/0>  
RTMP URL: Disable 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

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](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 section, which is highlighted with a blue header. The settings include:

- 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"/>	<a href="#">[1-65535]</a>
SRT URL Port:	<input type="text" value="9000"/>	<input type="button" value="Enable"/> ▾ <a href="#">[1-65535]</a>
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:>



# 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

HLS 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

HLS 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@192.168.1.170:9000  
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)
```





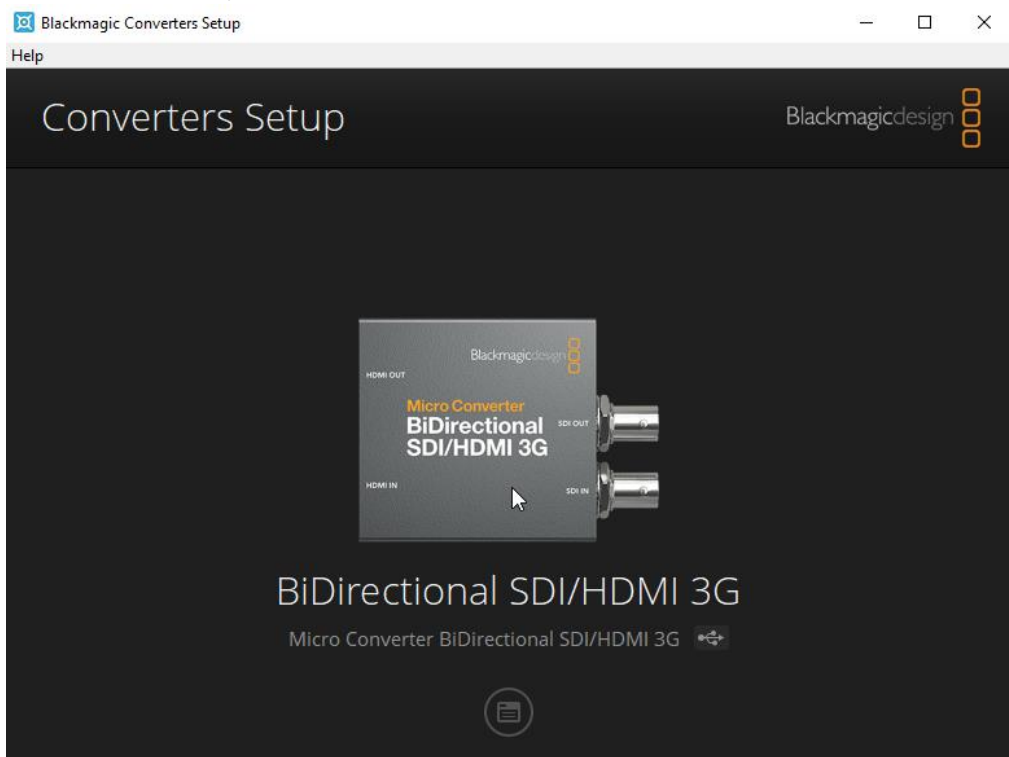
Full screen:



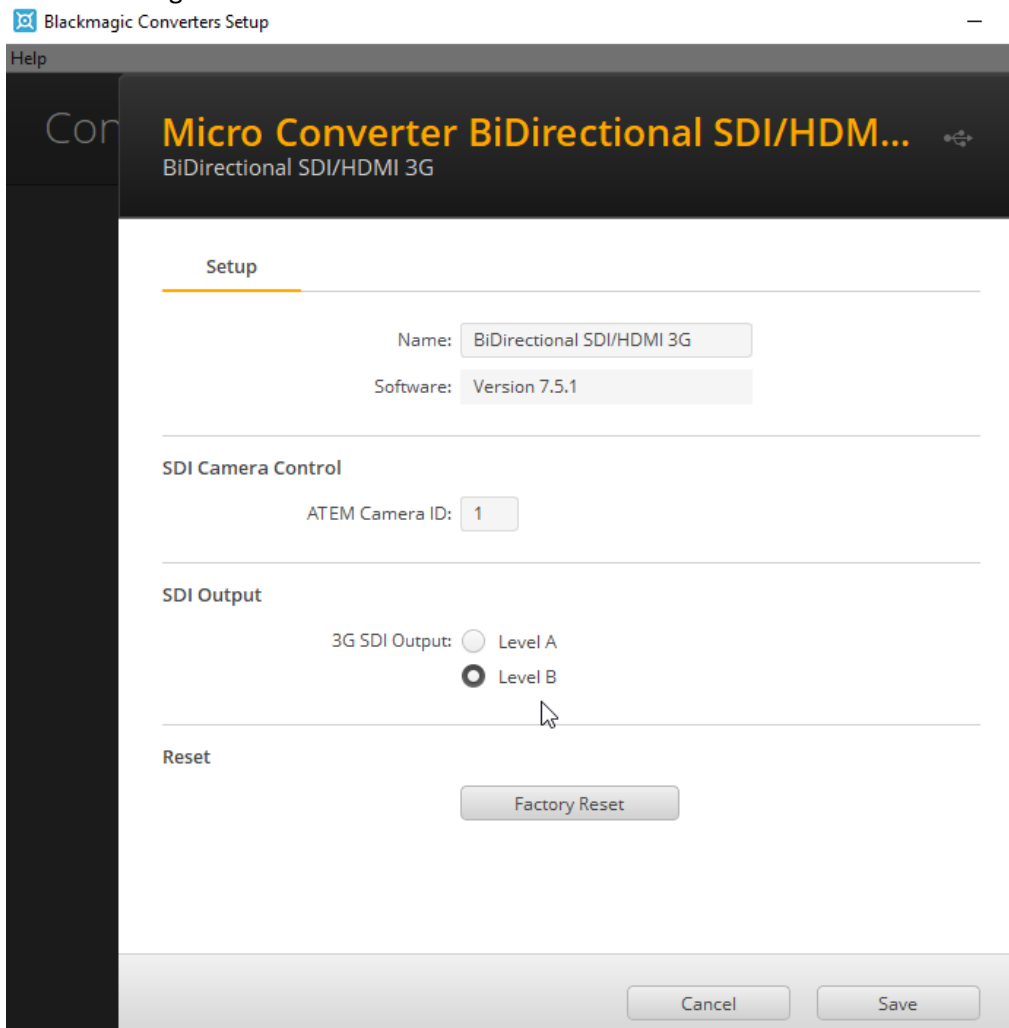
Go back with ESC Button

**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:

192.168.1.168/indexE.html

**BLANKOM H.265 HEVC** HD Encoder System Platform 5.07

### Status Display

**Input status**

Running Time:0000-00-00 00:16:04  
 Device Time:2018-03-22 22:38:26 (Sync Time To Device)  
 Device Name:Encoder\_54488  
 CPU Usage:4% (If CPU usage always more than 85%, please close some stream.)  
 Memory Usage:30.5M/247.1M  
 Input Size: 1920x1080p@0  
 Collected Video Frames:0  
 Lost Video Frames:0  
 Audio Samplerate:48000  
 Net Packet Sent:165274  
 Net Packet Dropped:0

**Main stream**

Encode Type:H.264  
 Encoding Type:1920x1080@30

*Note: The overlaid VLC media player window shows a test pattern with the text 'Check Input Signals' and 'BLANKOM ...Setting Signals'.*

**Set to Level A:**

192.168.1.168/indexE.html

**BLANKOM H.265 HEVC** HD Encoder System Platform 5.07

### Status Display

**Input status**

Running Time:0000-00-00 00:17:11  
 Device Time:2018-03-22 22:39:33 (Sync Time To Device)  
 Device Name:Encoder\_54488  
 CPU Usage:0% (If CPU usage always more than 85%, please close some stream.)  
 Memory Usage:30.6M/247.1M  
 Input Size: 1920x1080p@50  
 Collected Video Frames:1014  
 Lost Video Frames:4  
 Audio Samplerate:48000  
 Net Packet Sent:172925  
 Net Packet Dropped:0

**Main stream**

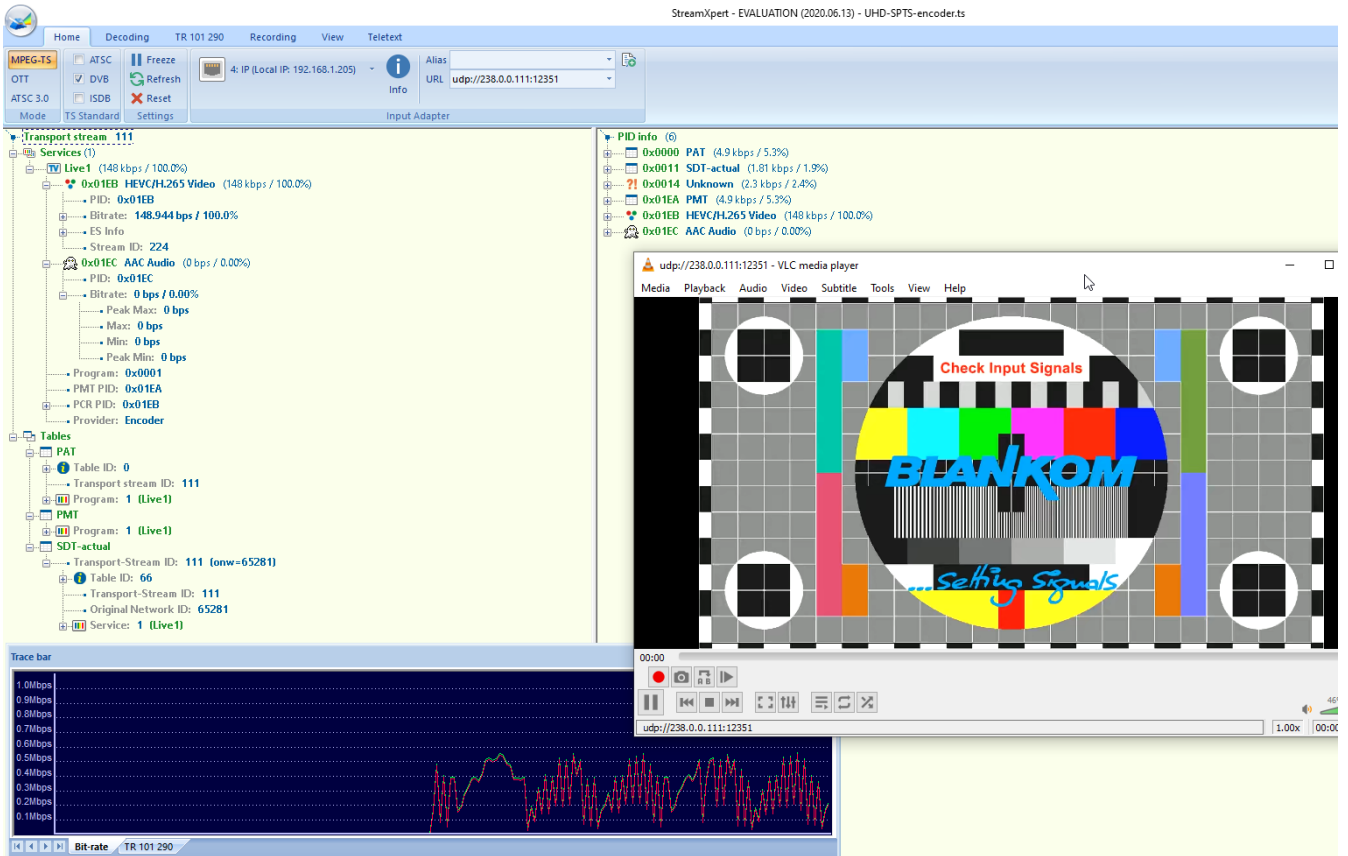
Encode Type:H.264  
 Encoding Type:1920x1080@30

*Note: The overlaid VLC media player window shows a video of a forest.*

**You need to refresh the web page several times after the encoder is showing the correct Input values 1920x1080p50 here.**

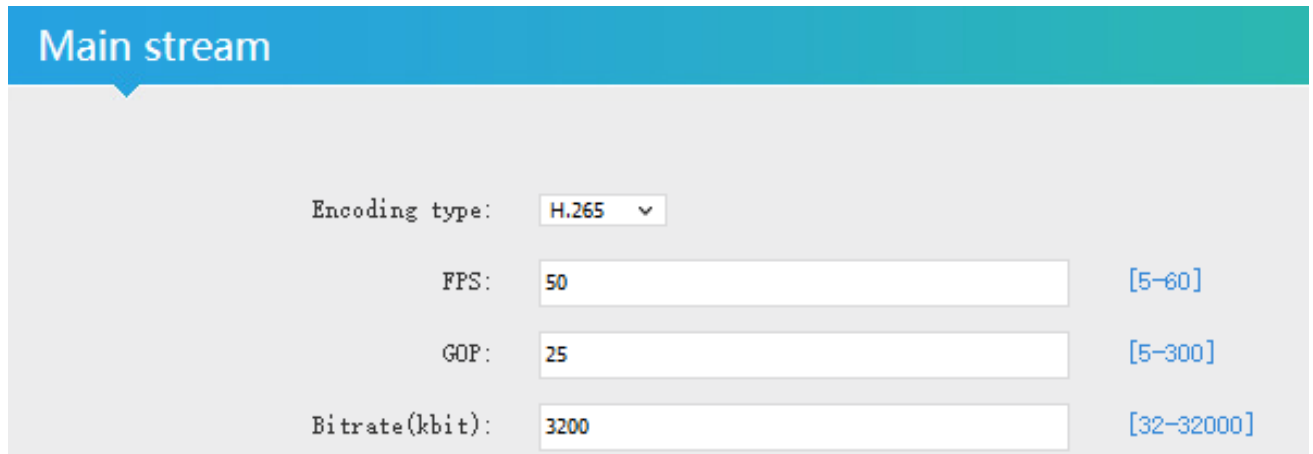
**BTW:** If no signal has been detected at the Input connector, the Test-picture will appear and the Stream output may 'pump' because the encoder check the input signal periodically – and in this periods', the output stream might fluctuate like:





**New feature added in Version 5.11:**

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



## Main stream

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 Transportstream-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:	<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]

**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.

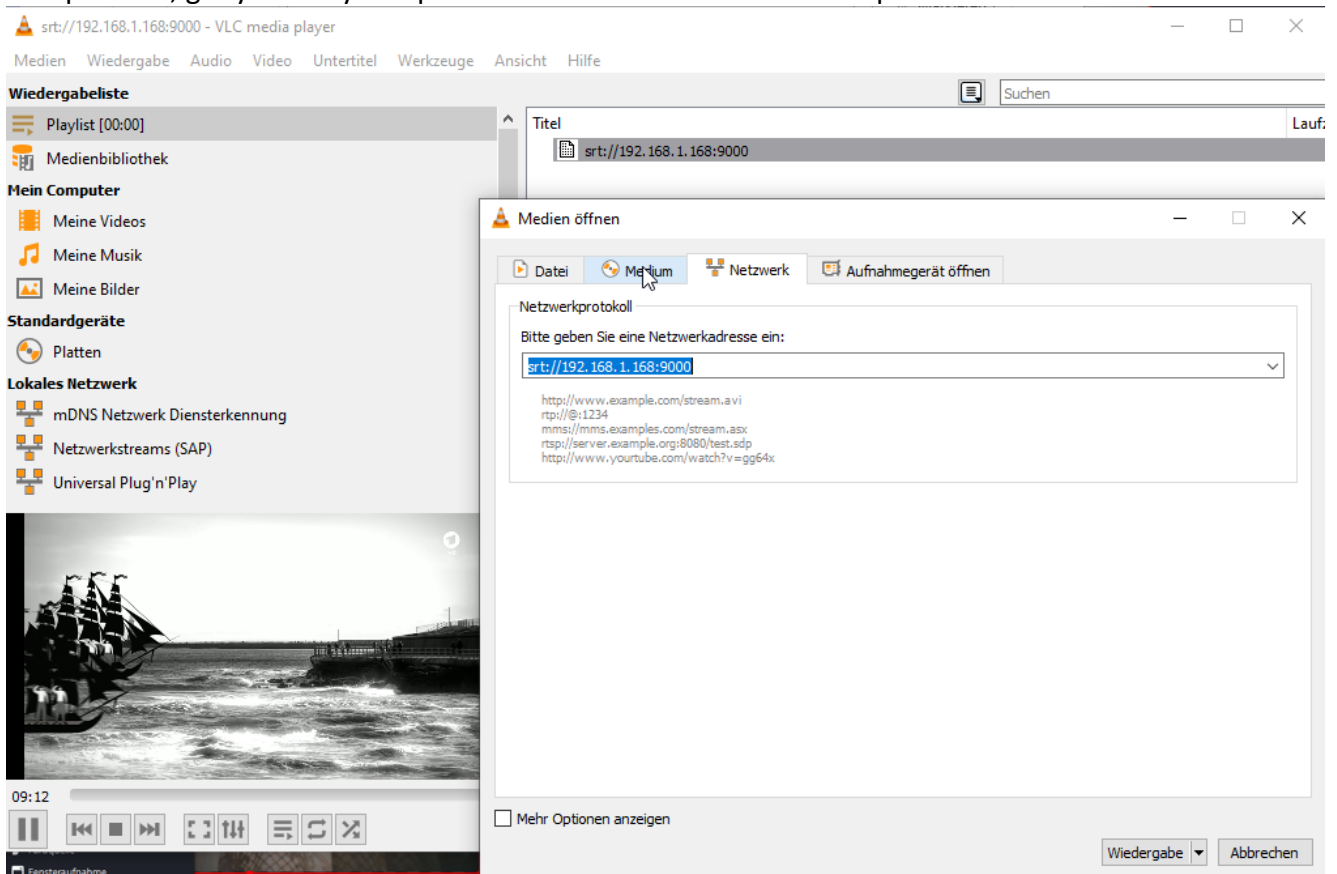
If the item "NDI source" is not displayed, the obs-ndi plug-in needs to be installed, you can download and install it from <https://github.com/Palakis/obs-ndi/releases/tag/4.6.2> or higher version:

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

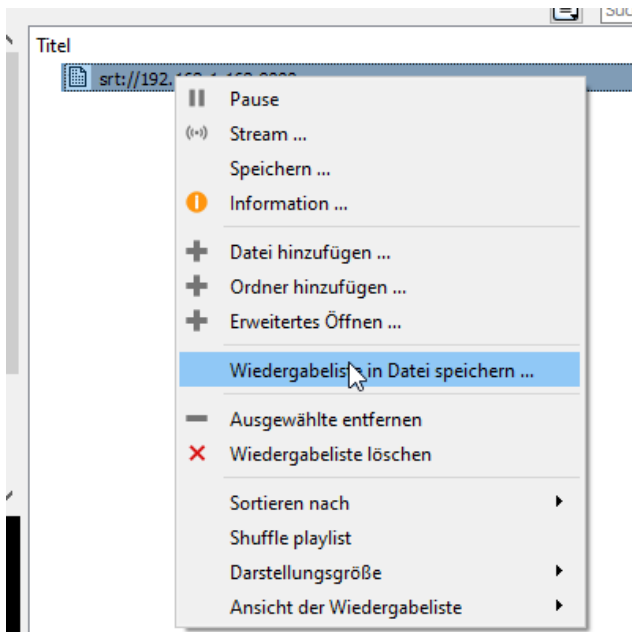
<https://github.com/Palakis/obs-ndi/releases/tag/dummy-tag-4.10.0>

### Installation the VLC Source as Playlist:

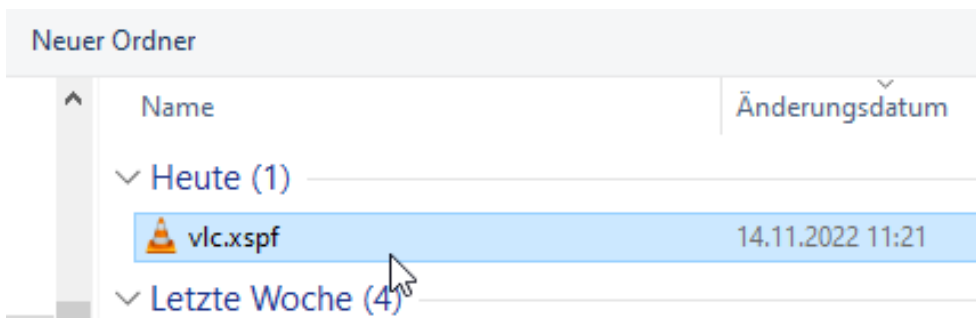
Open VLC, get your Playlist open and insert a network-stream input like UDP or here SRT:



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

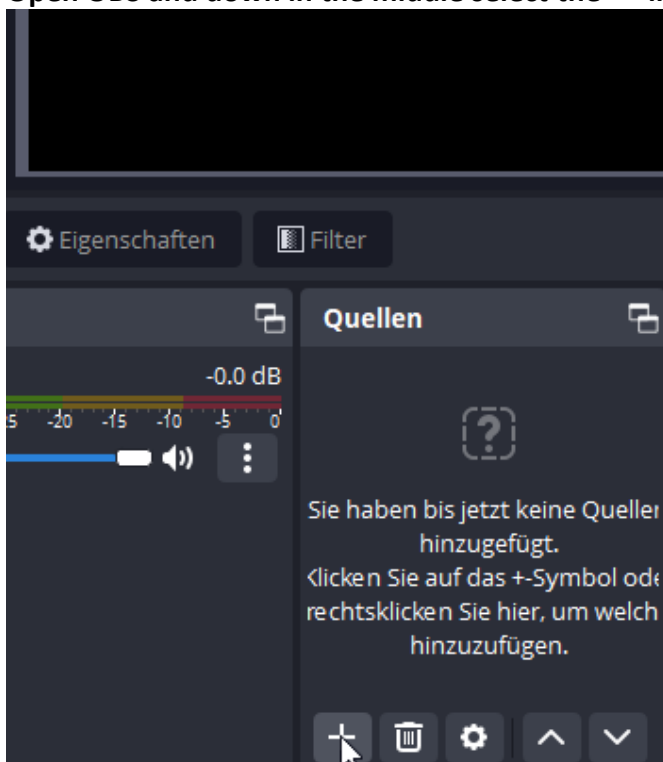


Safe it on your PC:

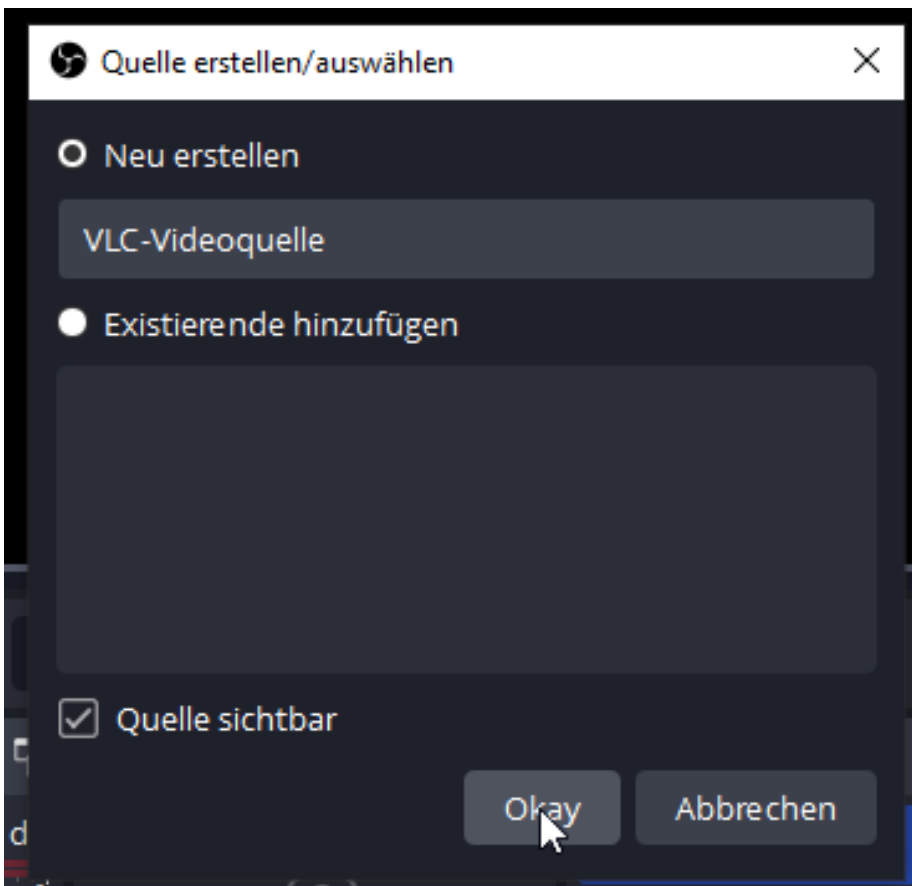
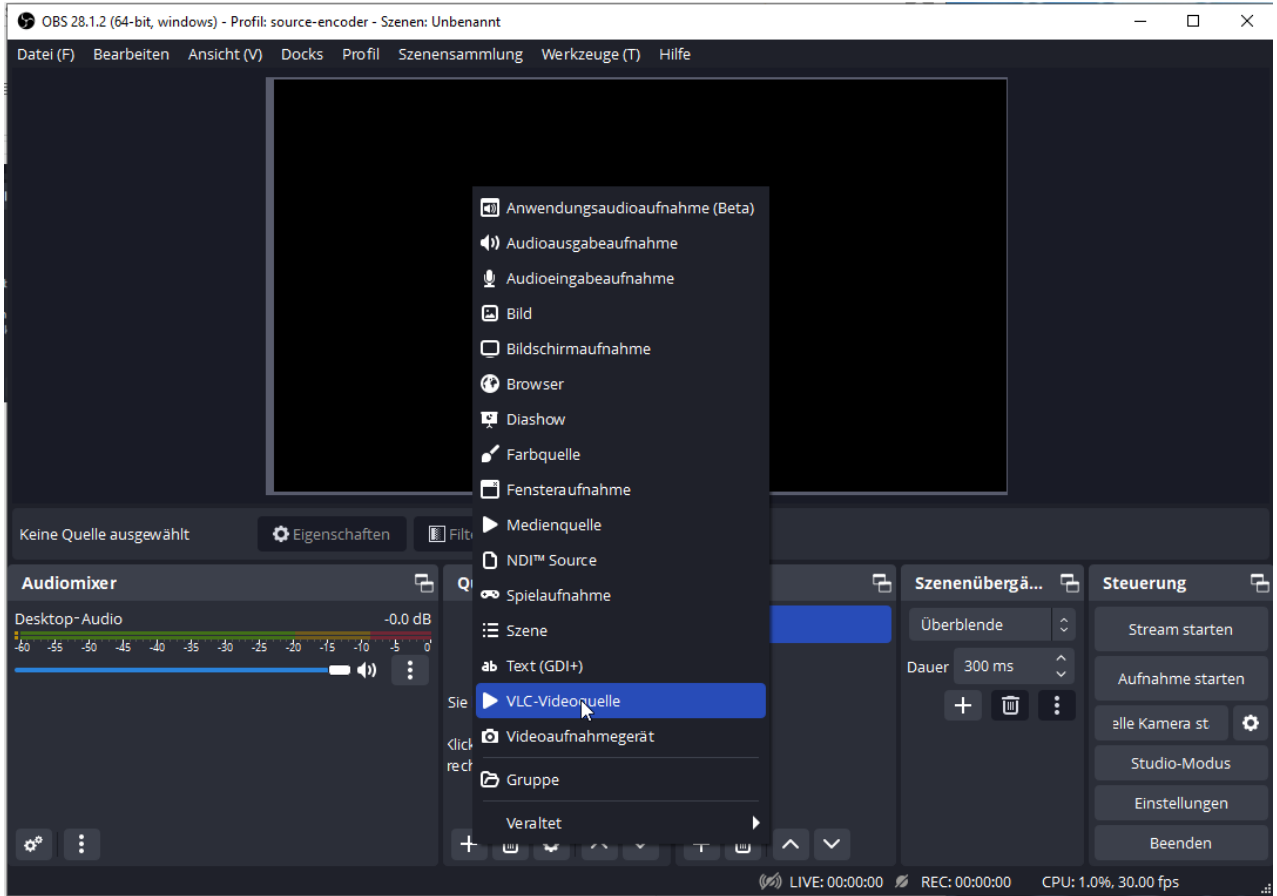


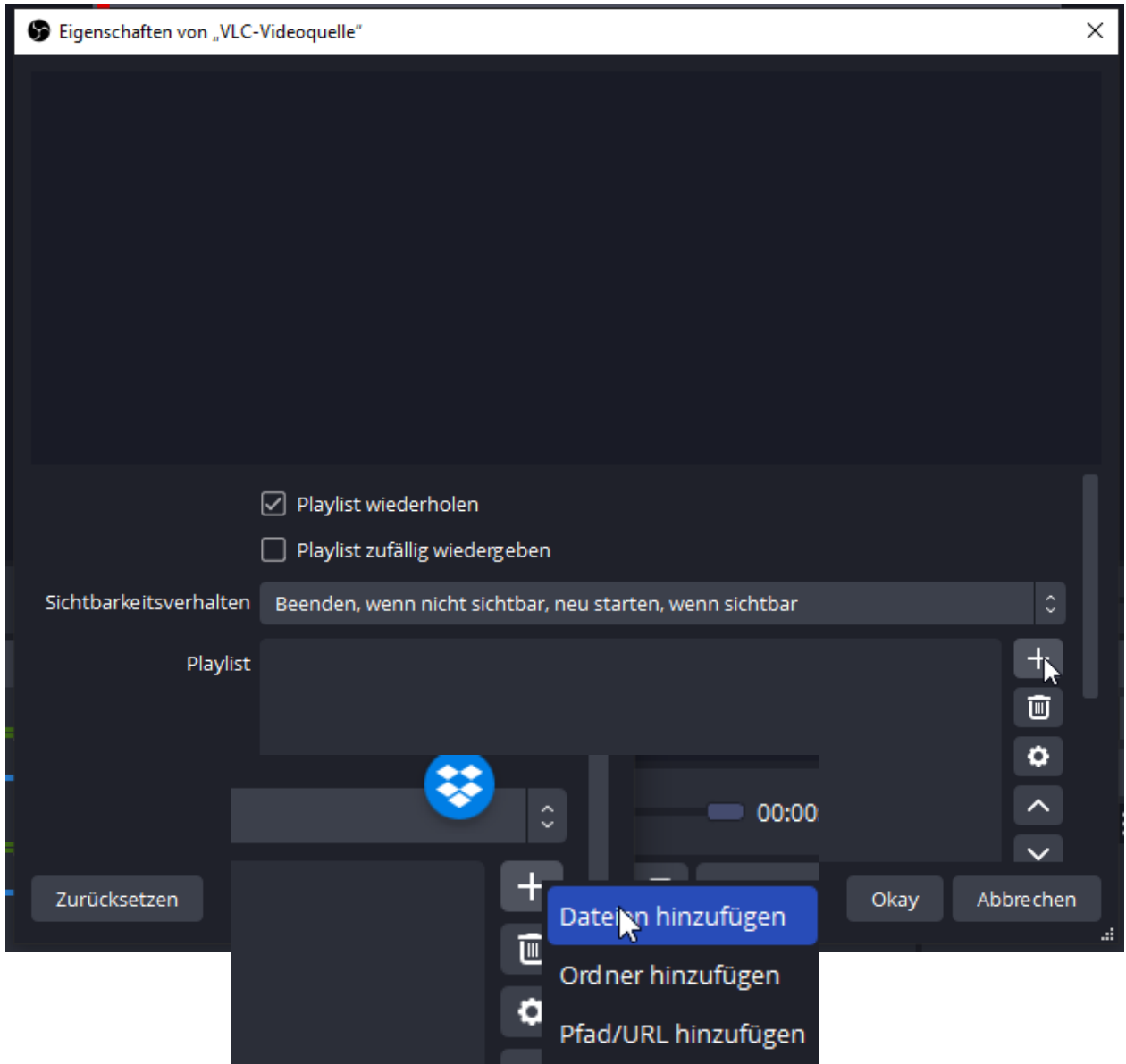
Ready.


Open OBS and down in the middle select the '+' in the source field:

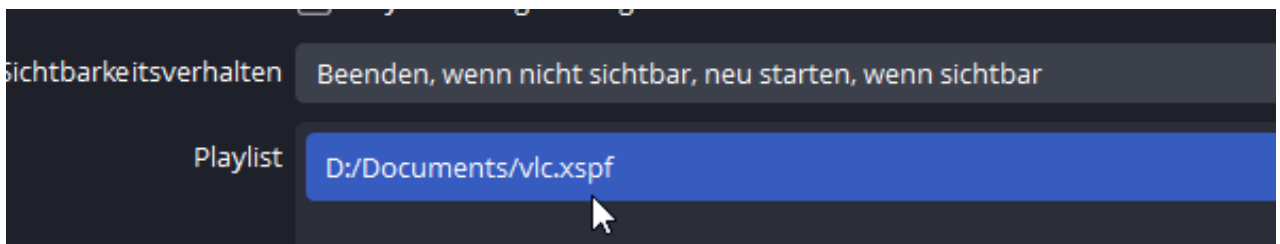




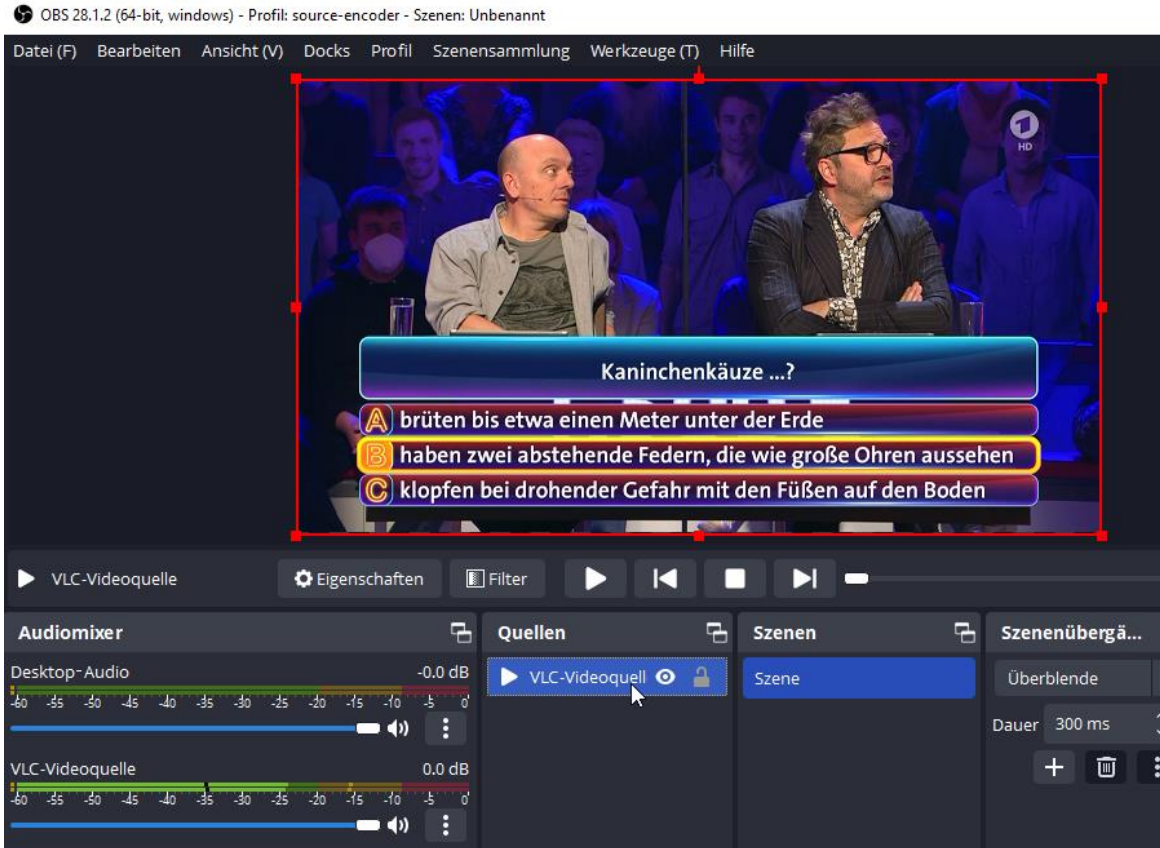




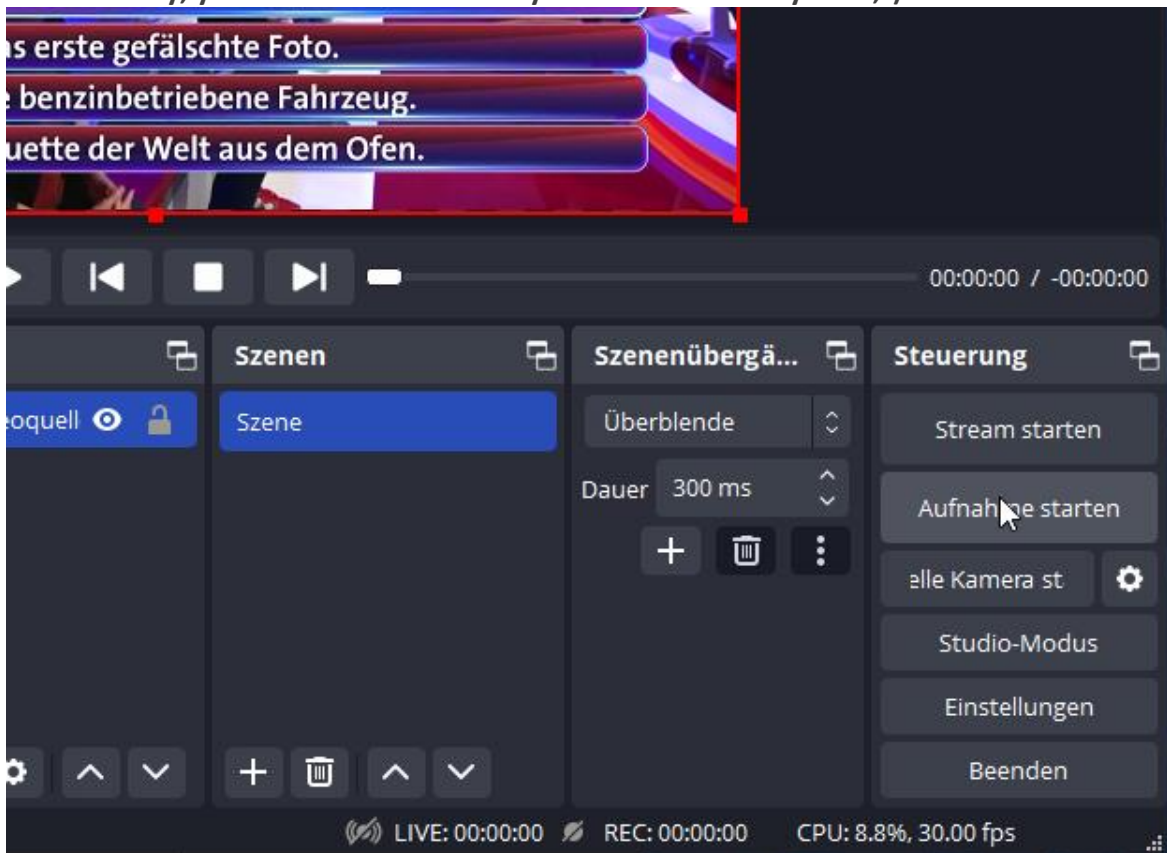
NAME	Änderungsdatum
Heute (1)	
 vlc.xspf	14.11.2022 11:21
Letzte Woche (4)	



**And Go:**



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

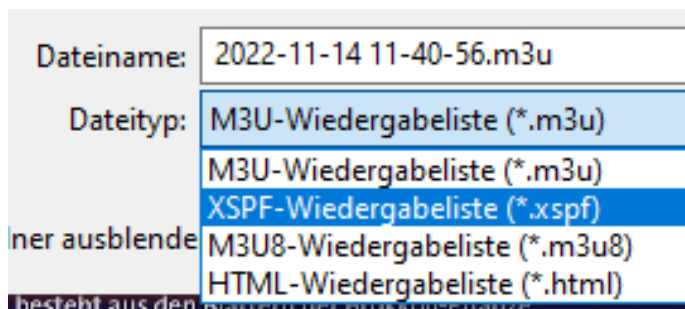
**Multicast URL:** udp://@238.0.0.1:1234

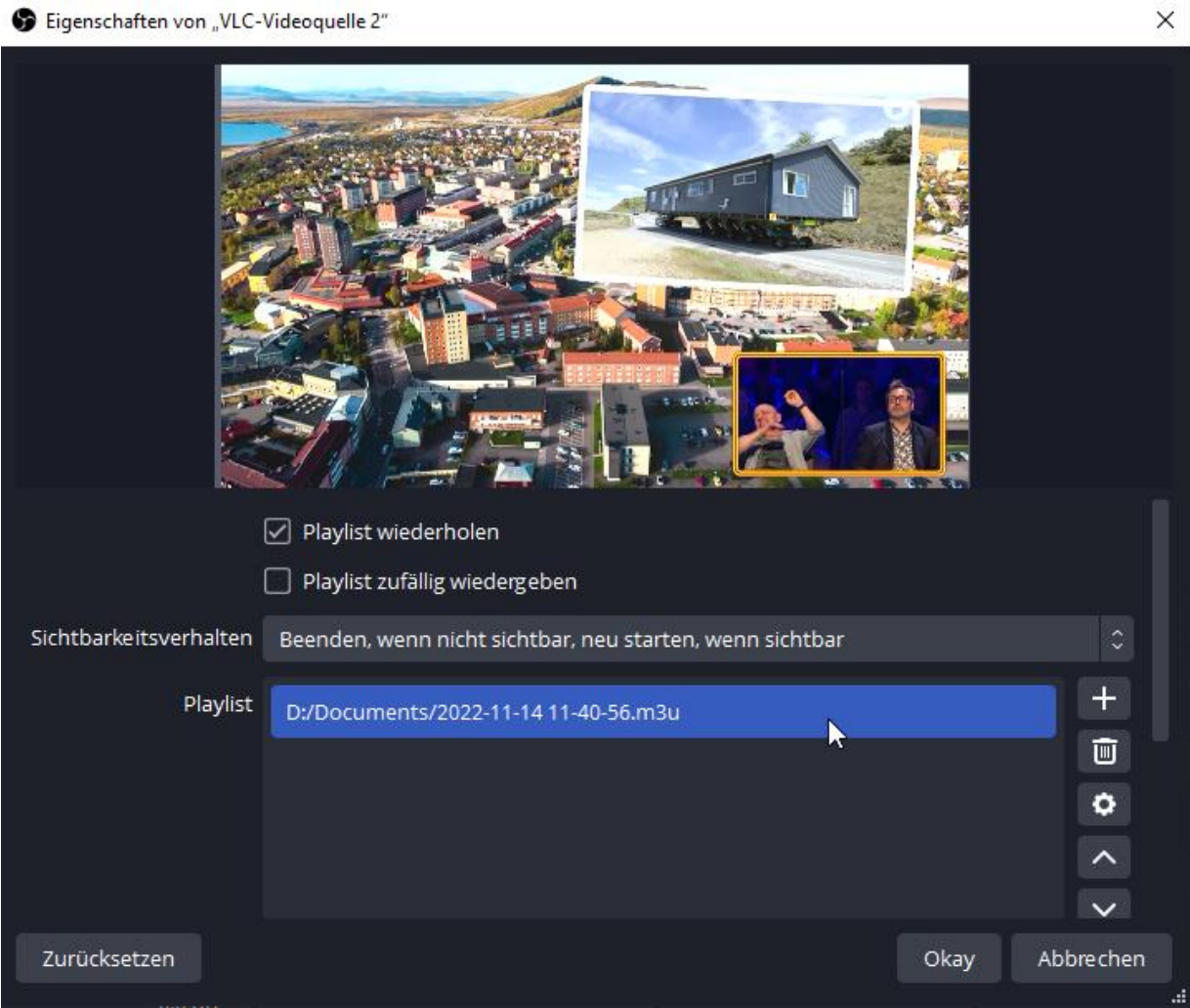
**SRT URL:** srt://192.168.1.168:9000

**SRT PUSH URL:** Disable

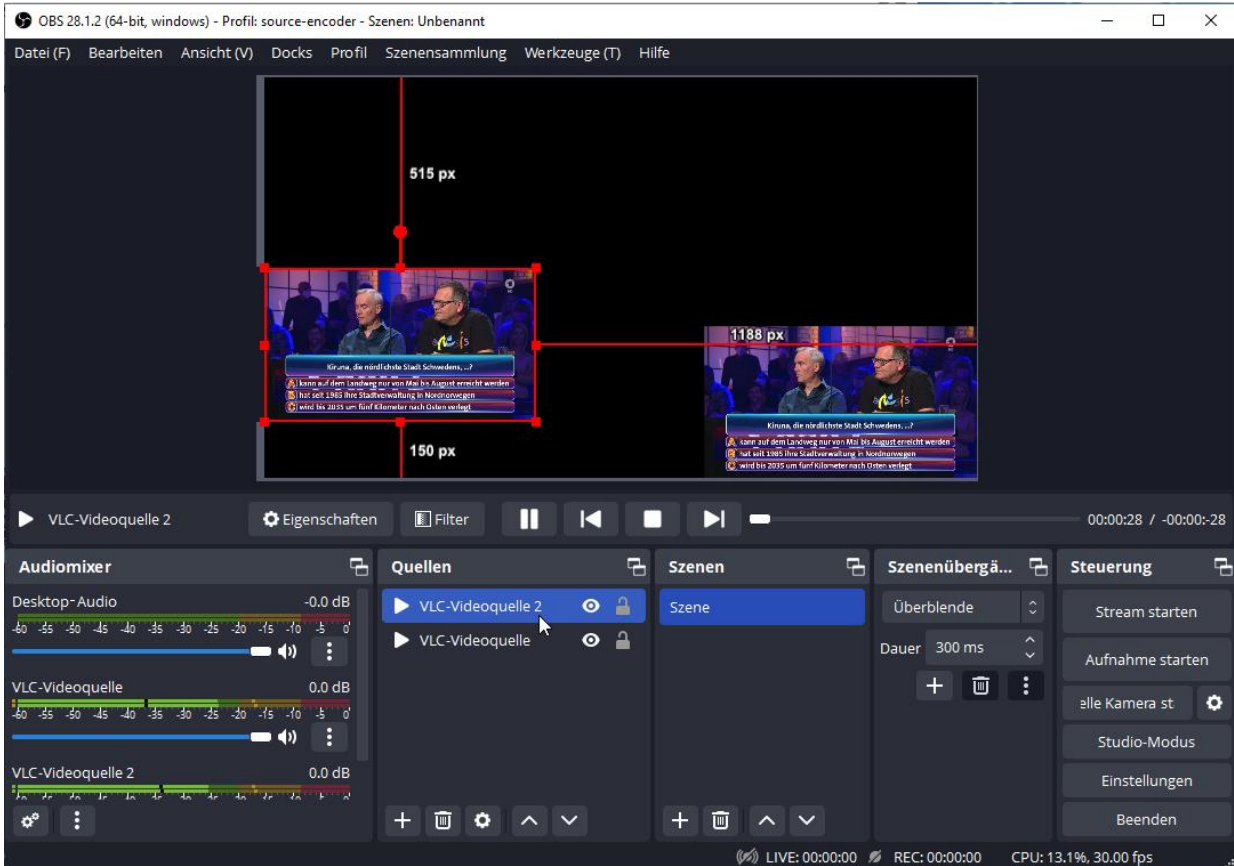
**Preview(HTML5)**

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





**To sample some streams and create a mosaic:**





## Addons 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)

Main stream

Encoding type:

FPS:  [5-60]

GOP:  [5-300]

Bitrate(kbit):  [32-32000]

Image Quality:

Encoded size:

H.264 Level:

Bitrate control:

TS Video PID:  [16-8190]

TS Audio PID:  [16-8190]

<small>ts_tables_version:</small>	<input type="text" value="6"/>	<small>[0-31]</small>
<small>ts_service_id:</small>	<input type="text" value="1"/>	<small>[1-65535]</small>
<small>ts_service_name:</small>	<input type="text" value="Live"/>	
<small>ts_service_provider:</small>	<input type="text" value="Encoder"/>	
<small>TS Emntv Packet:</small>	<input type="text" value="No Insert"/>	

Status
Network
Main stream
Substream1
Substream2
Substream3
Audio & Video
System

**BLANKOM**  
**H.265 HEVC** HD Encoder System Platform  
Version: 5.15

### 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: Encoder\_9896

EDID: 0.Default(1080P60) ▼

Video Only: Disable ▼

Audio Only: Disable ▼

AV Sync Strategy: Resample ▼

Hls Splitter Time(s): 10 [3-20]

Hls Number: 5 [3-20]

SRT Latency(ms): 150 [1-10000]

SRT Bandwidth(KByte, 0= nolimit): 0 [0-102400]

Deinterlaced: Bottom Only ▼

Net Drop Threshold: 5000 [50-50000]

TS muxer: Compatible with FFmpeg ▼

TS once pack: 7 [3-128]

TS TDT: Disable ▼

s\_transport\_stream\_id: 101 [1-65535]

ts\_nmt\_start\_pid: 180 [16-7936]

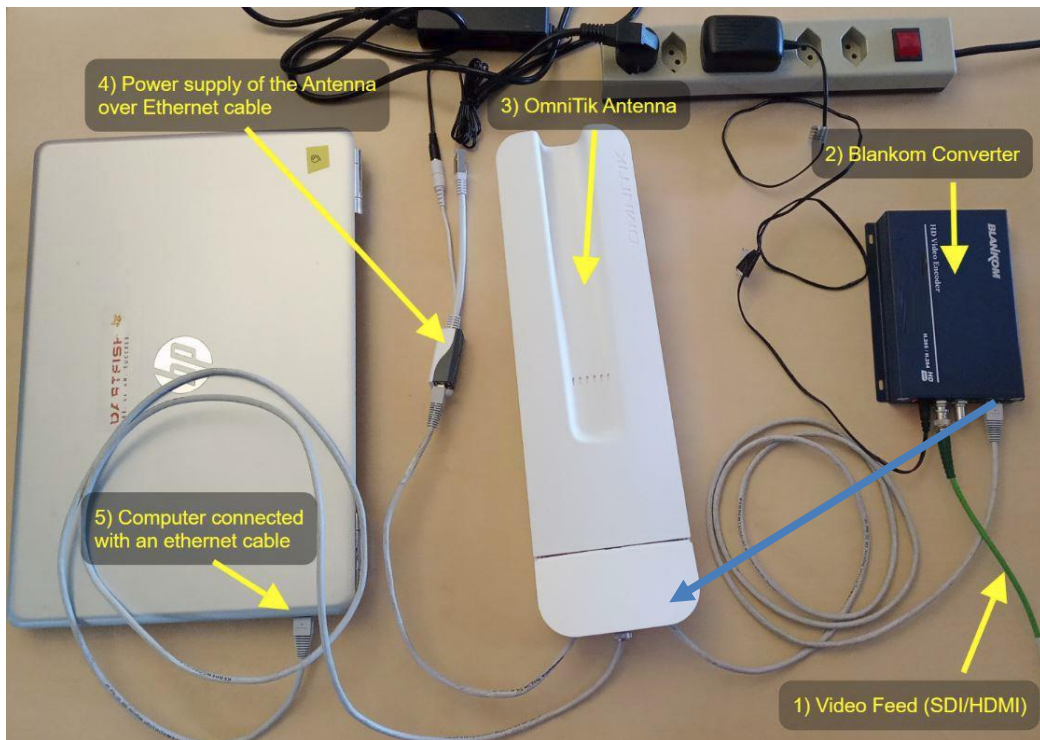
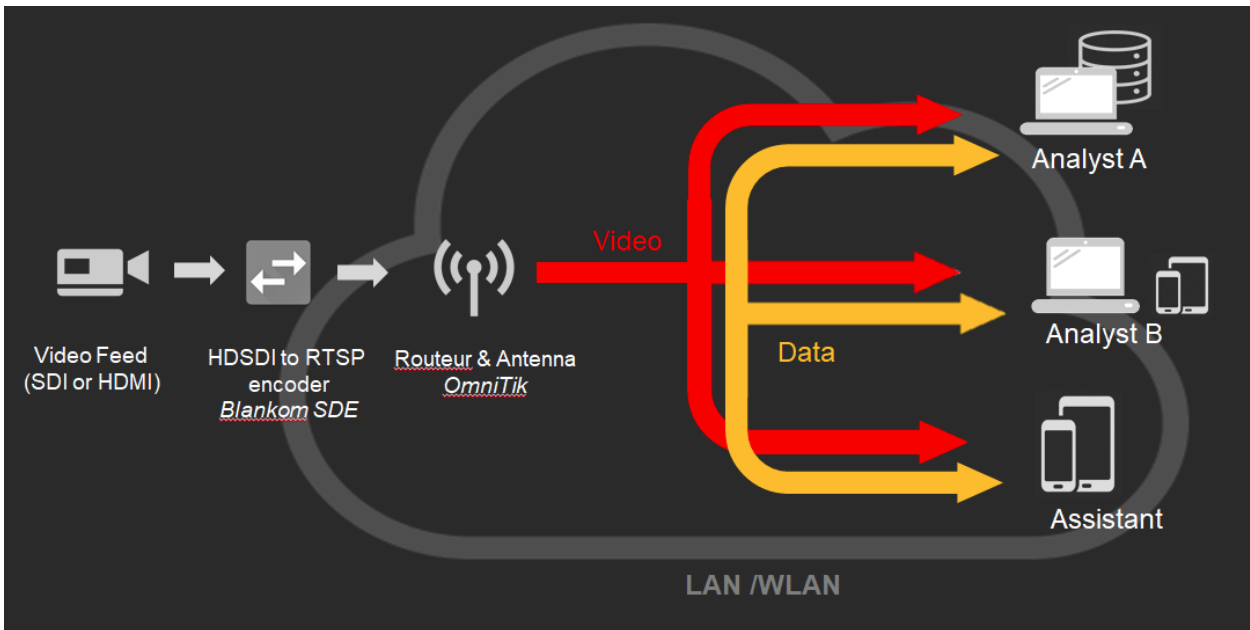
**Network**   Main stream   Substream1   Substream2   Substream3   Audio & Video   Sys

HD ENCODER CONFIGURATION PLATFORM

### Example Dartfish Setup:

Attention:

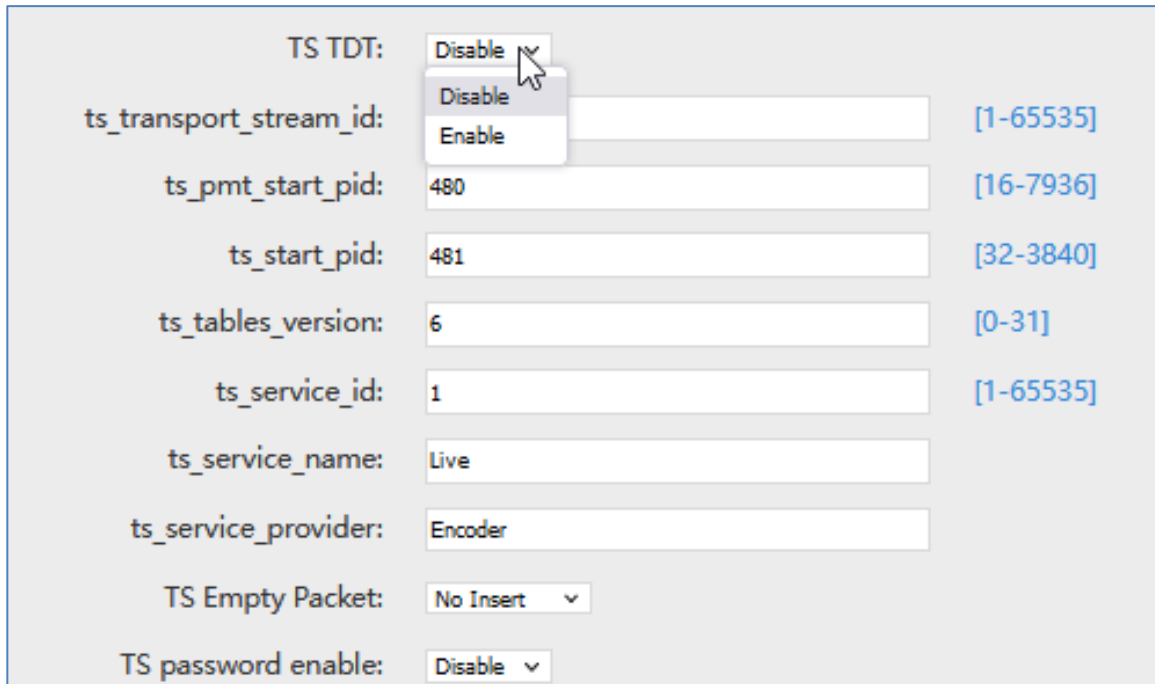
Do not connect the encoder before you have disabled PoE at the connection Ethernet-RJ45 of the Antenna:



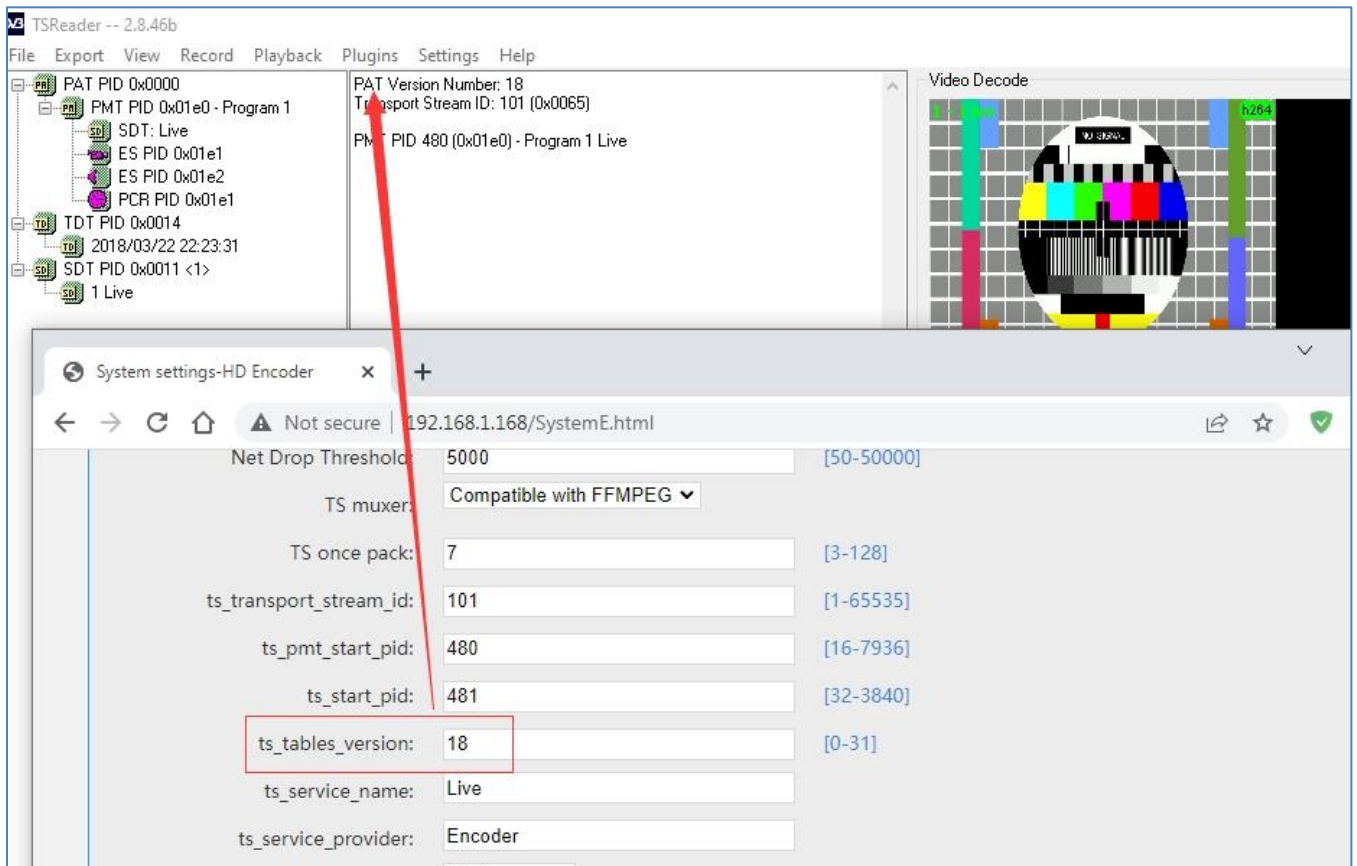
Please assure that the Ethernet port of the HDE-/SDE265 Encoder (Converter) does not get the Power over Ethernet (PoE) from the OmniTik Antenna. We recommend to first configuring the Antenna ports and avoid PoE forwarding on all other ports. Then connect the BLANKOM Converter with all connectors before 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 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](mailto: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 several settings windows open. The main window displays 'Netzwerkstreams (SAP)' with a tree view showing '192\_168\_1\_167' containing 'GROUP\_0\_STREAM\_0' and 'GROUP\_1\_STREAM\_0'. A 'Multicast SAP Name' dialog box is open, showing the name 'My-Chuckinger1' entered in the text field. Another dialog box is open showing 'Multicast type: UDP', 'Enable SAP: Enable', 'MTU Size: 64', and 'UDP TTL: 64'. The background interface also shows 'Device Name: Encoder\_20583', 'EDID: 0.Default(1080P60)', 'Video Only: Disable', 'Audio Only: Disable', and 'AV Sync Strategy: Resample'.

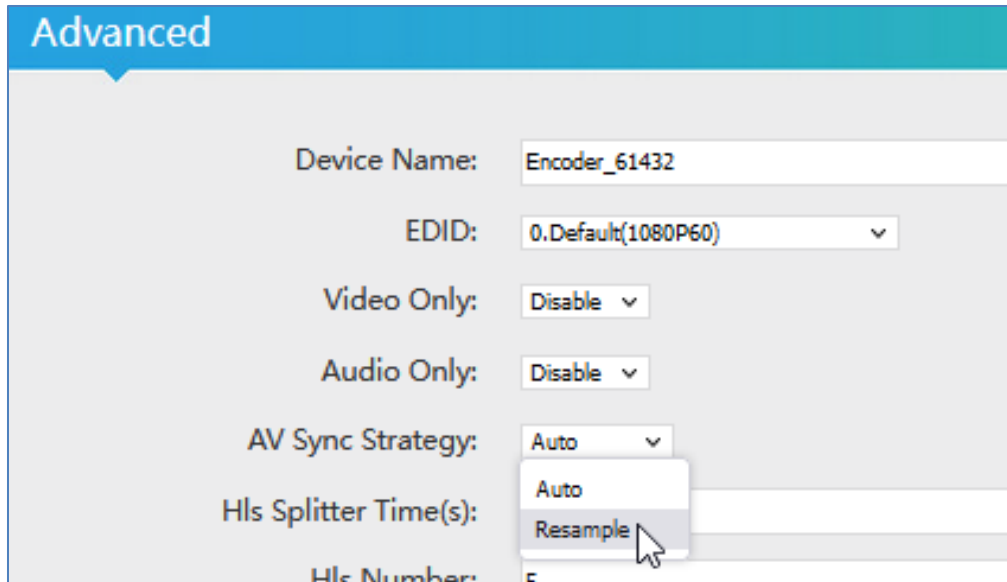
Version 5.17 (April 2022, June 2022)

**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 (Okt. 2022).

Version 5.23 is actual now- December-2022:

**GOP M-N improvements, added MP4 stream Playback in browser**

**Attention:**

*There is an intermediate version available (almost only used in SDI Version SDE-265):*

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

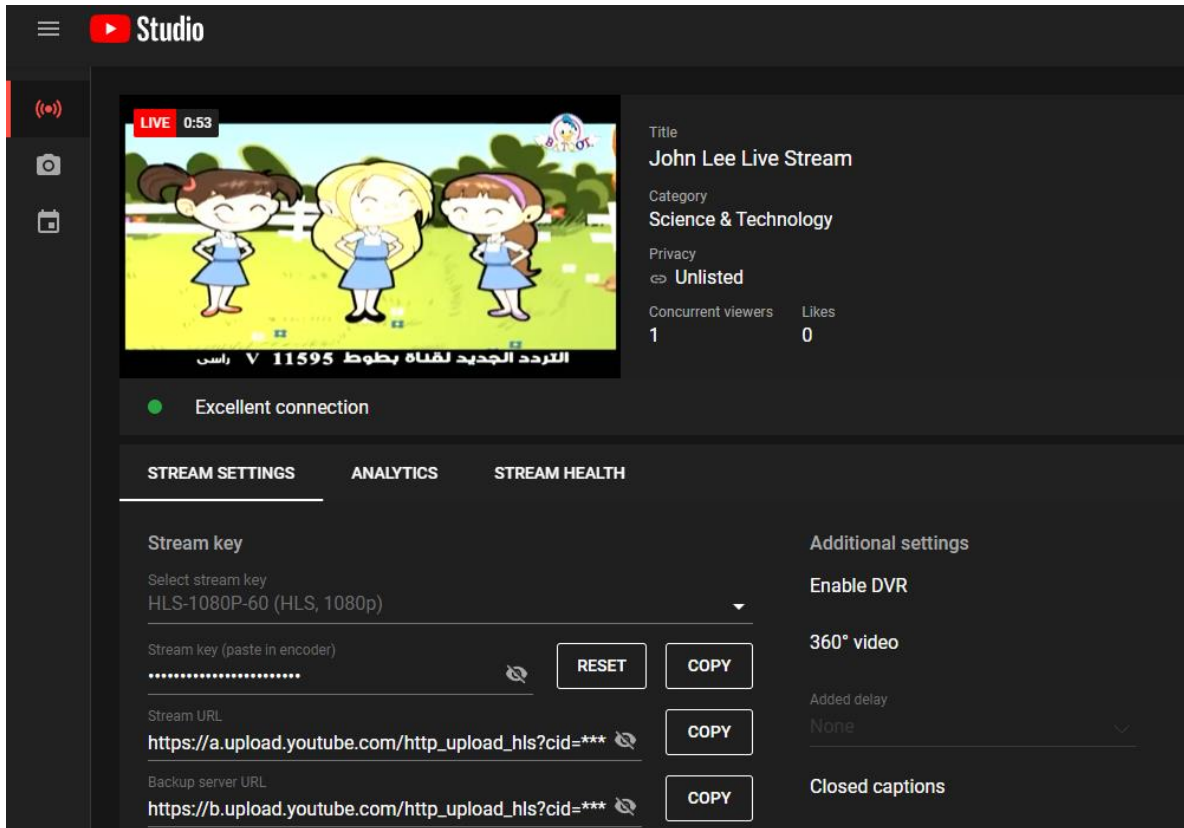
*Currently the Ambarella version is intermediate 2.xx... in SDI Encoders*

**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/oupree	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

**Finally:** To get more information about the deeper details of the encoder settings and configuration issues, please contact us. [www.blankom.de](http://www.blankom.de)