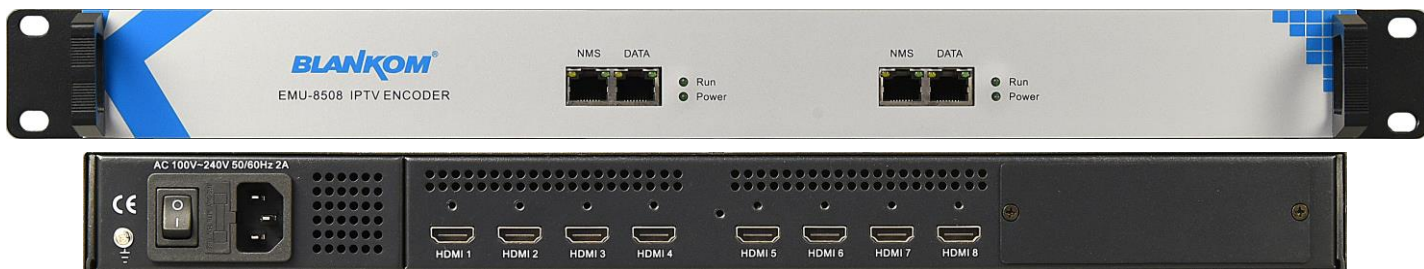


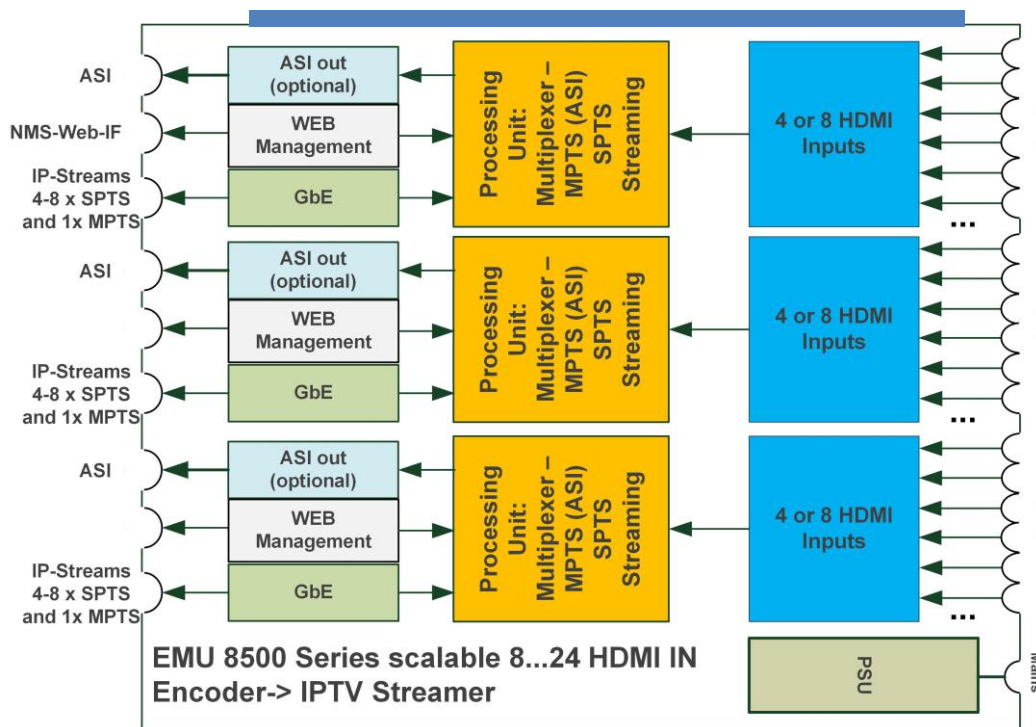
## IPTV Encoder with 8/16/24 Inputs



Example EMU-8508 with 2 Modules and 2x4=8 HDMI Inputs

- 8 HDMI\* input, 2x4 SPTS IPTV and 2 MPTS output (EMU 8508)
- 12 HDMI\* input, 3x4 SPTS IPTV and 3 MPTS output (EMU 8512)
- 16 HDMI\* input, 2x8 SPTS IPTV and 2 MPTS output (EMU 8516)
- 24 HDMI\* input, 2x8 SPTS IPTV and 3 MPTS output (EMU 8524)
- 1 ASI output (optional) (Copy of the MPTS)
- On-Screen Graphics, Scrolling Text, QR Code insertion
- Accurate PCR adjusting
- PID filtering and re-mapping
- PSI/SI rebuilding and editing
- "Null PKT Filter" function
- Remote control by a modern Web based management
- Updates via Web-interface

### 8 ... 24 HDMI input IPTV Encoder with Text or Graphic Logo-Insertion



### BLANKOM EMU 8500 series:

**MPEG4 AVC/H.264 HD IP Encoder** is a professional HD audio & video encoding and multiplexing device. Input: 8 ... 24 HDMI compatible Video input interfaces, supporting MPEG-4 Video encoding and MPEG 1 Layer 2 audio encoding.

This very compact Encoder simultaneously encodes up to 8 ... 24 HDMI compatible HD Audio & Video channels to IP output as a multiplexed 1 MPTS and 8 ... 24 SPTS IP SPTS output streams as UDP/RTP Multicast. Every encoded Video-picture can be added with Text, Graphic or QR-code overlays. High integrated and cost effective design fits perfect into widely use cases in varieties of digital distribution systems such as cable TV digital head-end, satellite digital TV broadcasting etc.

## Technical specifications\*:

|                 |                                                                                                                                                             |                                           |                                                                                                                  |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Input           | 8 / 12/ 16 / 24 HDMI compatible inputs                                                                                                                      |                                           |                                                                                                                  |
| Video           | Resolution                                                                                                                                                  | input                                     | 1920×1080_60P, 1920×1080_60i, 1920×1080_50P, 1920×1080_50i, 1280×720_60P, 1280×720_50P, 720×576_50i,720×480_60i, |
|                 |                                                                                                                                                             | output                                    | 1920×1080_30P, 1920×1080_25P, 1280×720_30P, 1280×720_25P, 720×576_25P,720×480_30P,                               |
|                 | Encoding                                                                                                                                                    |                                           | MPEG-4 AVC/H.264 or h.265 HEVC                                                                                   |
|                 | Bitrate                                                                                                                                                     |                                           | 1Mbps...13Mbps each channel                                                                                      |
|                 | Encoding Rate Control                                                                                                                                       |                                           | CBR/VBR                                                                                                          |
|                 | GOP Structure                                                                                                                                               |                                           | IPPP, IBBP                                                                                                       |
| Audio           | Encoding                                                                                                                                                    |                                           | MPEG-1 L2, LC-AAC, HE-AAC, HE-V2 and AC3 Pass through                                                            |
|                 | Sampling rate                                                                                                                                               |                                           | 48KHz- 384KHz dep. on codec                                                                                      |
|                 | Resolution                                                                                                                                                  |                                           | 24-bit                                                                                                           |
|                 | Audio Gain adjustable                                                                                                                                       |                                           | 0...255                                                                                                          |
|                 | HE-AAC Bitrate V2:                                                                                                                                          |                                           | 24/48/56/64/80/96/112/128 kbps<br>18...56kbps                                                                    |
|                 | LC-AAC Bitrate                                                                                                                                              |                                           | 48/56/64/80/96/112/128/160/192/224/256/320/384 kbps                                                              |
|                 | MPEG-1 L2 Bitrate                                                                                                                                           |                                           | 48/56/64/80/96/112/128/160/192/224/256/320/384 kbps                                                              |
| Multiplexing    | Maximum PID Remapping                                                                                                                                       |                                           | 180 input per channel                                                                                            |
|                 | Function                                                                                                                                                    | PID remapping (automatically or manually) |                                                                                                                  |
|                 |                                                                                                                                                             | PCR adjusting                             |                                                                                                                  |
|                 |                                                                                                                                                             | Generation of PSI/SI table automatically  |                                                                                                                  |
| Stream output   | 4 or 8 SPTS and 1MPTS output over UDP or RTP (per each Module)<br>1x 1000Base-T Ethernet interface<br>ASI output (optional) as copy of the multiplexed MPTS |                                           |                                                                                                                  |
| System function | Network management (WEB-IF)                                                                                                                                 |                                           |                                                                                                                  |
|                 | English language menu                                                                                                                                       |                                           |                                                                                                                  |
|                 | Firmware upgrade by Web-Browser                                                                                                                             |                                           |                                                                                                                  |
| Miscellaneous   | Dimension(W×L×H)                                                                                                                                            |                                           | 482mm×410mm×44mm *                                                                                               |
|                 | Approx weight                                                                                                                                               |                                           | 8kg *                                                                                                            |
|                 | Environmental cond.                                                                                                                                         |                                           | 0...45℃ (work) ; -20...80℃ (Storage)                                                                             |
|                 | Power requirements                                                                                                                                          |                                           | AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz                                                                     |
|                 | Power consumption                                                                                                                                           |                                           | 70W *                                                                                                            |

\*) depending on Model, every detail might be subject to change w/o notifications

### Corresponding products:

- IP to 16 QAM DVB-C Modulator HDC-5016
- HDC-5004 IP to QAM Modulator with remuxed TV services i.e. for hospitality content addons to existing networks
- Digital Signage: IP Decoder HDD-275
- IPTV Middleware Server OMNISCREENTV + SetTopBoxes or Hospitality TV Sets from tested vendors
- BLANKOM IPTV STB: 6800+
- OmniscreenTV STB M15 (h.264/MPEG2, FullHD, Multicast UDP only)

# THIS IS A PRELIMINARY QUICKSTART-MANUAL.

Attention: The NMS-ports of each Module have same IP address: 192.168.0.36 for login

The screenshot shows the BLANKOM EMU-8508 web interface. The browser address bar shows 192.168.0.136. The page title is EMU-8508. A sidebar on the left contains a menu with sections: Summary (Status), Parameters (Encoder, IP Stream, OSD), and System (Network, Account, Configuration, Firmware, Date | Time, Log). The main content area is titled 'Network' and contains two sections: NMS and DATA. The NMS section has fields for IP Address (192.168.0.136), Subnet Mask (255.255.255.0), Gateway (192.168.0.1), Web Management Port (80), and MAC Address (2a:c3:42:1a:00:85). The DATA section has fields for IP Address (192.168.1.138), Subnet Mask (255.255.255.0), Gateway (192.168.1.1), and MAC Address (2a:d3:42:1a:00:85). Both sections have an 'Apply' button at the bottom right.

So please change one or both before connecting bot to a switch!  
admin/admin is default user/pw.

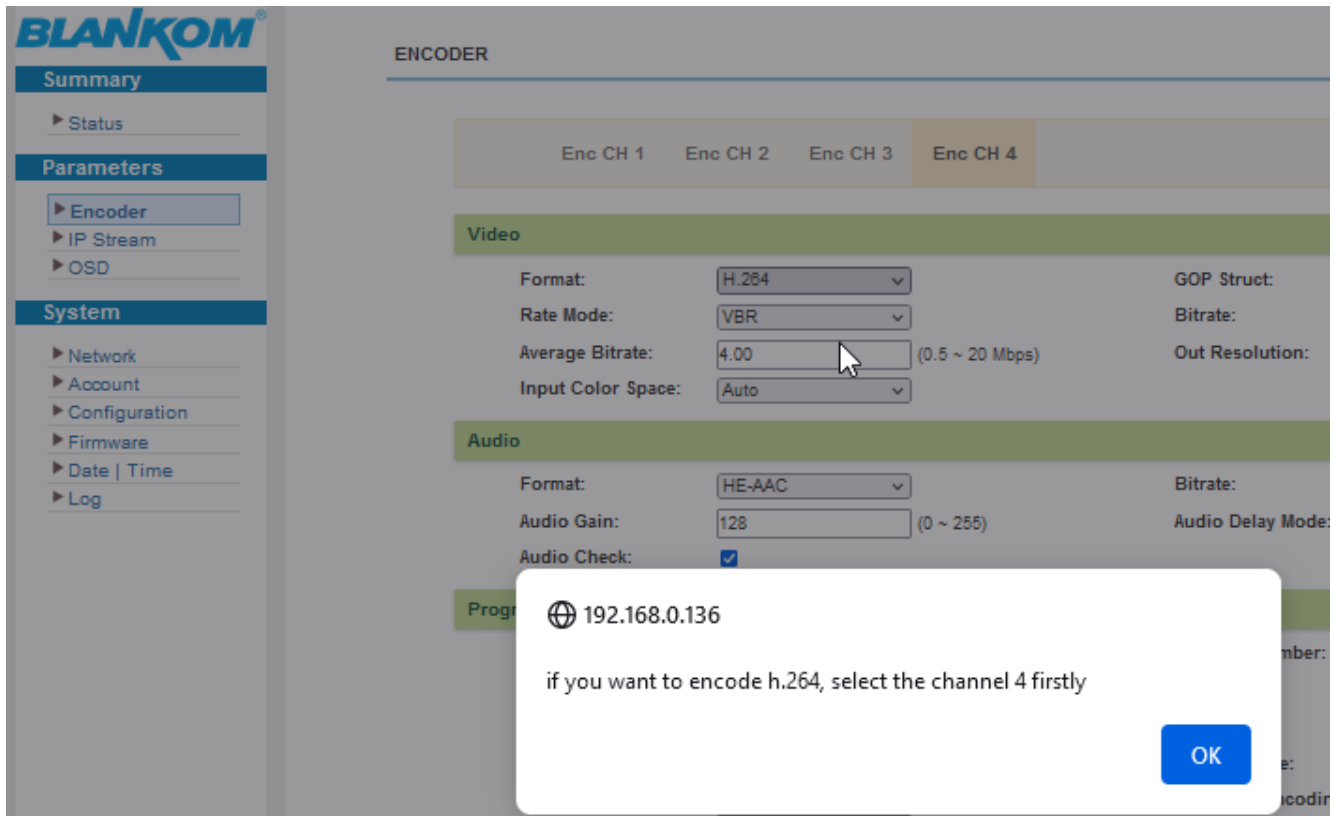
**Attention: This encoder is optimized for HEVC-h.265 Codec usage.**

Therefore, the capacity of this Quad-encoder chipset is limited to only 2 Encoding processes when you need to go for MPEG4 (**h.264 AVC**): **Only Input 3 and 4** are working. The other (1+2) can only forward the Audio PID.

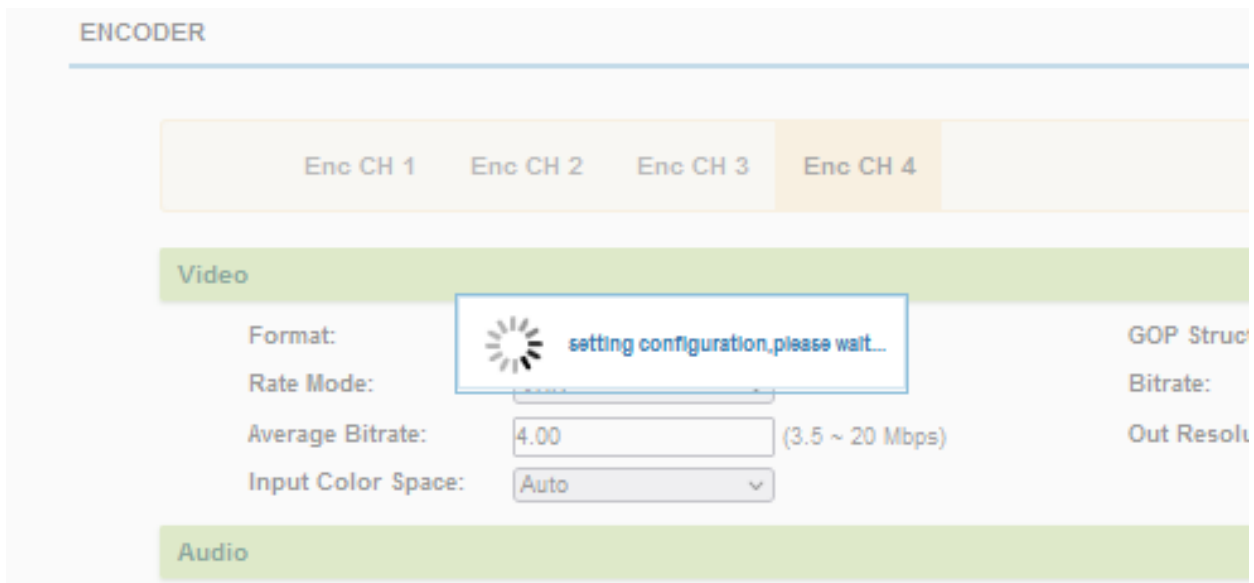
This is different if your mayor encoding channel is in 720 mode, all others will be downscaled but than all Inputs are working again even with h.264.

Please note, that this Encoder modules have a **common encoding Chipset** for four channels but this limits the HDMI Input to an always common value:

HDMI 1-4 must have the same resolution. All settings will be valid for all 4 encoding channels like:



So, Channel 4 is the mayor: Example change to h.264 Codec:



This describes the setting per Module, so you have to do it for every module finally.

## ENCODER

Enc CH 1
Enc CH 2
Enc CH 3
Enc CH 4

**Video**

Format: H.264

Rate Mode: VBR

Average Bitrate: 4.00 (3.5 ~ 20 Mbps)

Input Color Space: Auto

GOP Struct: IBBP

Bitrate: 8.00 (4 ~ 20 Mbps)

Out Resolution: 1920 x 1080 50p Auto ☒

**Audio**

Format: HE-AAC

Audio Gain: 128 (0 ~ 255)

Audio Check: ☒

Bitrate: 128 Kbps

Audio Delay Mode: Mode 1

Now all are in h.264:

Enc CH 1
Enc CH 2
Enc CH 3
Enc CH 4

**Video**

Format: H.264

Rate Mode: VBR

Average Bitrate: 4.00 (3.5 ~ 20 Mbps)

Input Color Space: Auto

GOP Struct: IBBP

Bitrate: 8.00 (4 ~ 20 Mbps)

Out Resolution: 1920 x 1080 50i Auto ☒

**EMU-8512**

me to use Web Management
2022-03-14 12:05:50

**BLANKOM**<sup>®</sup>

**Summary**

► Status

**Parameters**

► Encoder

► IP Stream

► OSD

**System**

► Network

► Account

► Configuration

► Firmware

► Date | Time

► Log

**IP STREAM**

| #      | IP Address   | Port  | Protocol | Pkt Length | Null PKT Filter                     | Status                               | Bit(Act/Max) |  |
|--------|--------------|-------|----------|------------|-------------------------------------|--------------------------------------|--------------|--|
| MPTS 1 | 224.2.2.22   | 20002 | UDP      | 7          | <input checked="" type="checkbox"/> | <span style="color: green;">●</span> | 18.7/32.0 M  |  |
| SPTS 1 | 224.22.22.22 | 30002 | UDP      | 7          | <input checked="" type="checkbox"/> | <span style="color: green;">●</span> | 3.9/10.0 M   |  |
| SPTS 2 | 224.2.2.2    | 3002  | UDP      | 7          | <input checked="" type="checkbox"/> | <span style="color: green;">●</span> | 3.9/12.0 M   |  |
| SPTS 3 | 224.2.2.2    | 3004  | UDP      | 7          | <input checked="" type="checkbox"/> | <span style="color: green;">●</span> | 3.9/12.0 M   |  |
| SPTS 4 | 224.2.2.2    | 3006  | UDP      | 7          | <input checked="" type="checkbox"/> | <span style="color: green;">●</span> | 3.9/12.0 M   |  |

channel config.

Attention: The max bitrate has to be calculated as for an MPTS including PID8191dec Null packets (CBR-Stream). If you stream w/o Null Packets PID8191dec, the **Max bitrate** must be set higher than the act. Bitrate configured in the menu:

To separate them: There is an Encoding bitrate related to the encoding process and a streaming bitrate:

## Video

|                    |                      |                 |                     |
|--------------------|----------------------|-----------------|---------------------|
| Format:            | H.264                | GOP Struct:     | IBBP                |
| Rate Mode:         | VBR                  | Bitrate:        | 12.00 (4 ~ 20 Mbps) |
| Average Bitrate:   | 3.50 (3.5 ~ 20 Mbps) | Out Resolution: |                     |
| Input Color Space: | Auto                 |                 |                     |

## Audio

|              |                                     |                   |          |
|--------------|-------------------------------------|-------------------|----------|
| Format:      | HE-AAC                              | Bitrate:          | 128 Kbps |
| Audio Gain:  | 128 (0 ~ 255)                       | Audio Delay Mode: | Mode 1   |
| Audio Check: | <input checked="" type="checkbox"/> |                   |          |

## Program

|                   |                                     |                     |        |
|-------------------|-------------------------------------|---------------------|--------|
| Program Output:   | <input checked="" type="checkbox"/> | Program Number:     | 101    |
| PMT PID:          | 0x0064                              | PCR PID:            | 0x0067 |
| Video PID:        | 0x0065                              | Audio PID:          | 0x0068 |
| VCT Insert:       | <input type="checkbox"/>            | Service Name:       | servus |
| Service Provider: | test1                               | Character Encoding: | UCS-2  |

## Status

|                       |                                     |                    |                                     |
|-----------------------|-------------------------------------|--------------------|-------------------------------------|
| Encoder Chip Version: | 00.0E.01.28                         | Interface Version: | HDMI 08.06VA                        |
| Input Lock:           | <input checked="" type="checkbox"/> | Encode Status:     | <input checked="" type="checkbox"/> |
| Input Information:    | 1920 x 1080i 50fps                  | Bitrate:           | 4.814 Mbps                          |

Bitrate: 3.435Mbps



The DVB/MPEG-Tables and content characters can be changed i.e. to support German ÖÄÜ:

## Program

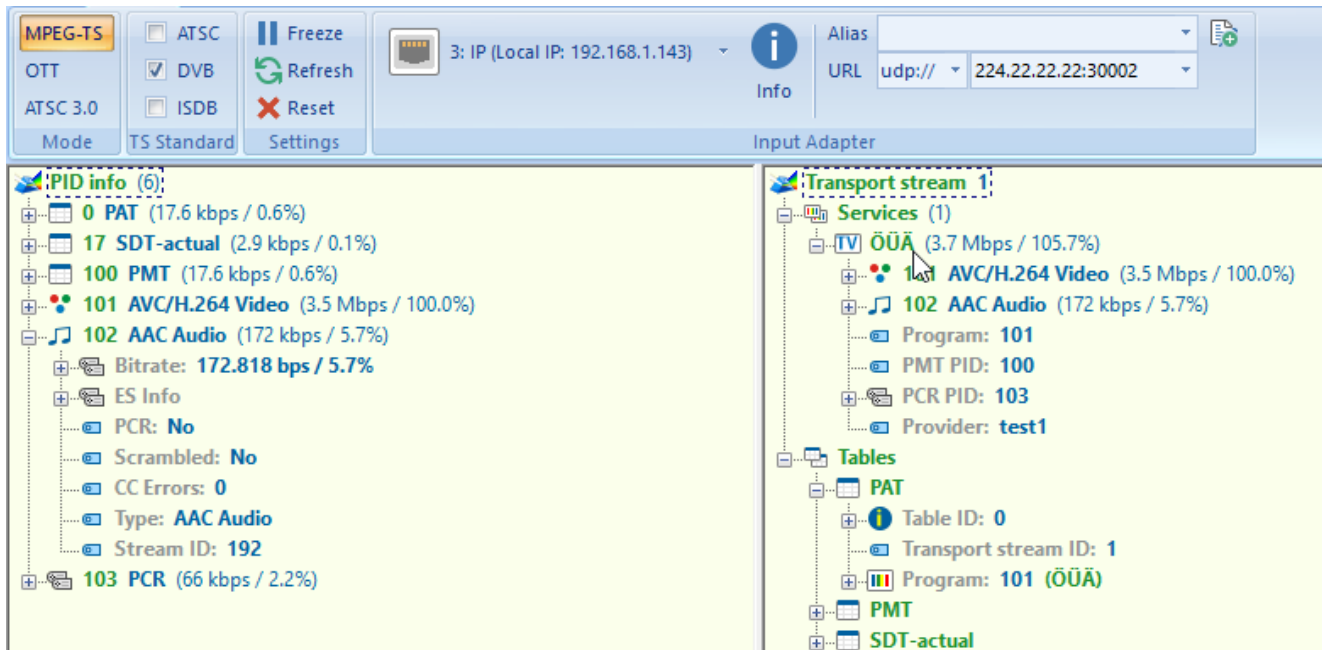
|                   |                                     |                     |        |
|-------------------|-------------------------------------|---------------------|--------|
| Program Output:   | <input checked="" type="checkbox"/> | Program Number:     | 101    |
| PMT PID:          | 0x0064                              | PCR PID:            | 0x0067 |
| Video PID:        | 0x0065                              | Audio PID:          | 0x0068 |
| VCT Insert:       | <input type="checkbox"/>            | Service Name:       | ÖÄÜ    |
| Service Provider: | test1                               | Character Encoding: | UCS-2  |

## Status

Encoder Chip Version: 00.0E.01.28

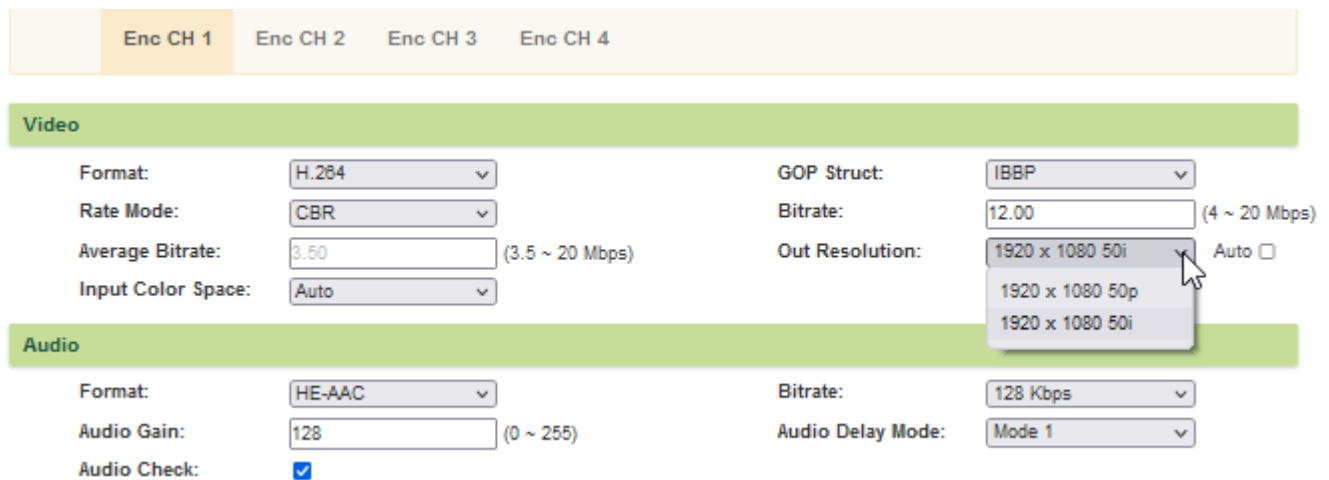
Interface Version:

UCS-2  
GBK  
ISO-8859-5



The output resolution follows the HDMI-Input.

But you can make P(rogressiv) out of an I(nterlaced) Picture:



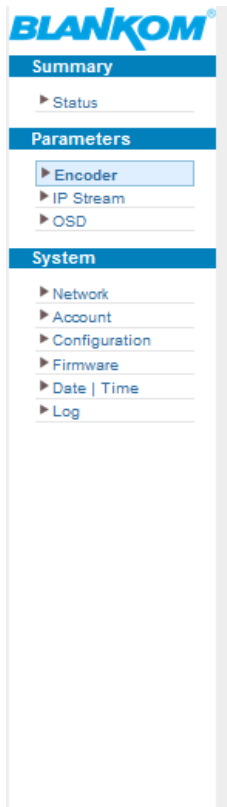
Average Bitrate settings applies only for the VBR-encoding method!

| Enc CH 1                                            | Enc CH 2 | Enc CH 3                                                      | Enc CH 4 |
|-----------------------------------------------------|----------|---------------------------------------------------------------|----------|
| <b>Video</b>                                        |          |                                                               |          |
| Format: H.264                                       |          | GOP Struct: IBBP                                              |          |
| Rate Mode: CBR                                      |          | Bitrate: 12.00 (4 ~ 20 Mbps)                                  |          |
| Average Bitrate: 3.50 (3.5 ~ 20 Mbps)               |          | Out Resolution: 1920 x 1080 50p Auto <input type="checkbox"/> |          |
| Input Color Space: Auto                             |          |                                                               |          |
| <b>Audio</b>                                        |          |                                                               |          |
| Format: HE-AAC                                      |          | Bitrate: 128 Kbps                                             |          |
| Audio Gain: 128 (0 ~ 255)                           |          | Audio Delay Mode: Mode 1                                      |          |
| Audio Check: <input checked="" type="checkbox"/>    |          |                                                               |          |
| <b>Program</b>                                      |          |                                                               |          |
| Program Output: <input checked="" type="checkbox"/> |          | Program Number: 103                                           |          |
| PMT PID: 0x008c                                     |          | PCR PID: 0x008f                                               |          |
| Video PID: 0x008d                                   |          | Audio PID: 0x008e                                             |          |
| VCT Insert: <input type="checkbox"/>                |          | Service Name: TV-103                                          |          |
| Service Provider: TV-Provider                       |          | Character Encoding: UCS-2                                     |          |
| <b>Status</b>                                       |          |                                                               |          |
| Encoder Chip Version: 00.0E.01.28                   |          | Interface Version: HDMI 08.06VA                               |          |
| Input Lock: <span style="color: green;">●</span>    |          | Encode Status: <span style="color: green;">●</span>           |          |
| Input Information: 1920 x 1080i 50fps               |          | Bitrate: 10.893 Mbps                                          |          |
| Bitrate: 10.799Mbps                                 |          |                                                               |          |
|                                                     |          |                                                               |          |

Audio delays can be adjusted:

|                                                  |  |                             |  |
|--------------------------------------------------|--|-----------------------------|--|
| <b>Audio</b>                                     |  |                             |  |
| Format: HE-AAC                                   |  | Bitrate: 128 Kbps           |  |
| Audio Gain: 128 (0 ~ 255)                        |  | Audio Delay Mode: Custom    |  |
| Audio Check: <input checked="" type="checkbox"/> |  | Audio PTS Offset: (0~90000) |  |
| Audio Delay: 40 (0 ~ 50)                         |  |                             |  |
| <b>Program</b>                                   |  |                             |  |

This is like Try & Error... to find the best fitting Audio / Video LipSync combination.



## ENCODER

| Enc CH 1                                            | Enc CH 2 | Enc CH 3                                                                 | Enc CH 4 |
|-----------------------------------------------------|----------|--------------------------------------------------------------------------|----------|
| <b>Video</b>                                        |          |                                                                          |          |
| Format: H.265                                       |          | GOP Struct: IBBP                                                         |          |
| Rate Mode: VBR                                      |          | Bitrate: 8.00 (0.5 ~ 20 Mbps)                                            |          |
| Average Bitrate: 4.00 (0.5 ~ 20 Mbps)               |          | Out Resolution: 1920 x 1080 50p Auto <input checked="" type="checkbox"/> |          |
| Input Color Space: Auto                             |          |                                                                          |          |
| <b>Audio</b>                                        |          |                                                                          |          |
| Format: HE-AAC                                      |          | Bitrate: 128 Kbps                                                        |          |
| Audio Gain: 128 (0 ~ 255)                           |          | Audio Delay Mode: Mode 1                                                 |          |
| Audio Check: <input checked="" type="checkbox"/>    |          |                                                                          |          |
| <b>Program</b>                                      |          |                                                                          |          |
| Program Output: <input checked="" type="checkbox"/> |          | Program Number: 101                                                      |          |
| PMT PID: 0x0064                                     |          | PCR PID: 0x0067                                                          |          |
| Video PID: 0x0065                                   |          | Audio PID: 0x0068                                                        |          |
| VCT Insert: <input type="checkbox"/>                |          | Service Name: servus                                                     |          |
| Service Provider: test1                             |          | Character Encoding: UCS-2                                                |          |
| <b>Status</b>                                       |          |                                                                          |          |
| Encoder Chip Version: 00.0E.01.28                   |          | Interface Version: HDMI 08.08VA                                          |          |
| Input Lock: <span style="color: green;">●</span>    |          | Encode Status: <span style="color: green;">●</span>                      |          |
| Input Information: 1920 x 1080i 50fps               |          | Bitrate: 6.372 Mbps                                                      |          |

The encoder tries to keep the average bitrate in VBR-Mode. As higher than better picture quality ...

**Attention again:** This encoder is **optimized for HEVC-h.265** Codec usage.

Therefore, the capacity of this Quad-encoder chipset is limited to only 2 Encoding processes when you need to go for MPEG4 (h.264 AVC): Only Input 3 and 4 are working. The other (1+2) can only forward the Audio PID.

This is different if your mayor encoding channel is in 720 modes, all others will be downscaled but then all Inputs are working again even with h.264.

Enc CH 1   Enc CH 2   **Enc CH 3**   Enc CH 4

## Video

Format:    GOP Struct:   
 Rate Mode:    Bitrate:  (4 ~ 20 Mbps)  
 Average Bitrate:  (3.5 ~ 20 Mbps)   Out Resolution:   
 Input Color Space:

## Audio

Format:    Bitrate:   
 Audio Gain:  (0 ~ 255)   Audio Delay Mode:   
 Audio Check: ☒

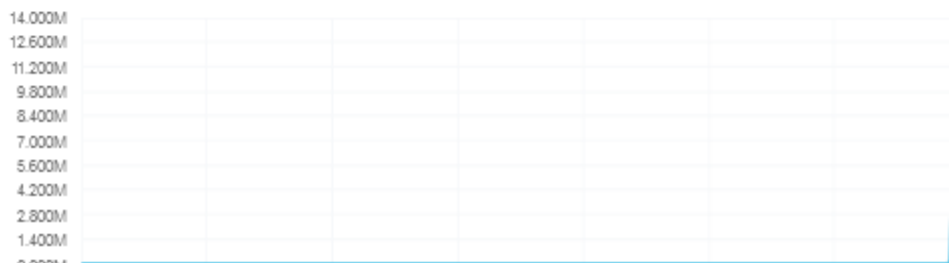
## Program

Program Output: ☒   Program Number:   
 PMT PID:    PCR PID:   
 Video PID:    Audio PID:   
 VCT Insert: ☐   Service Name:   
 Service Provider:    Character Encoding:

## Status

Encoder Chip Version: 00.0E.01.28   Interface Version: HDMI 08.06VA  
 Input Lock: ●   Encode Status: ●  
 Input Information: 1920 x 1080P 50fps Different Input Signals   Bitrate: 3.228 Mbps

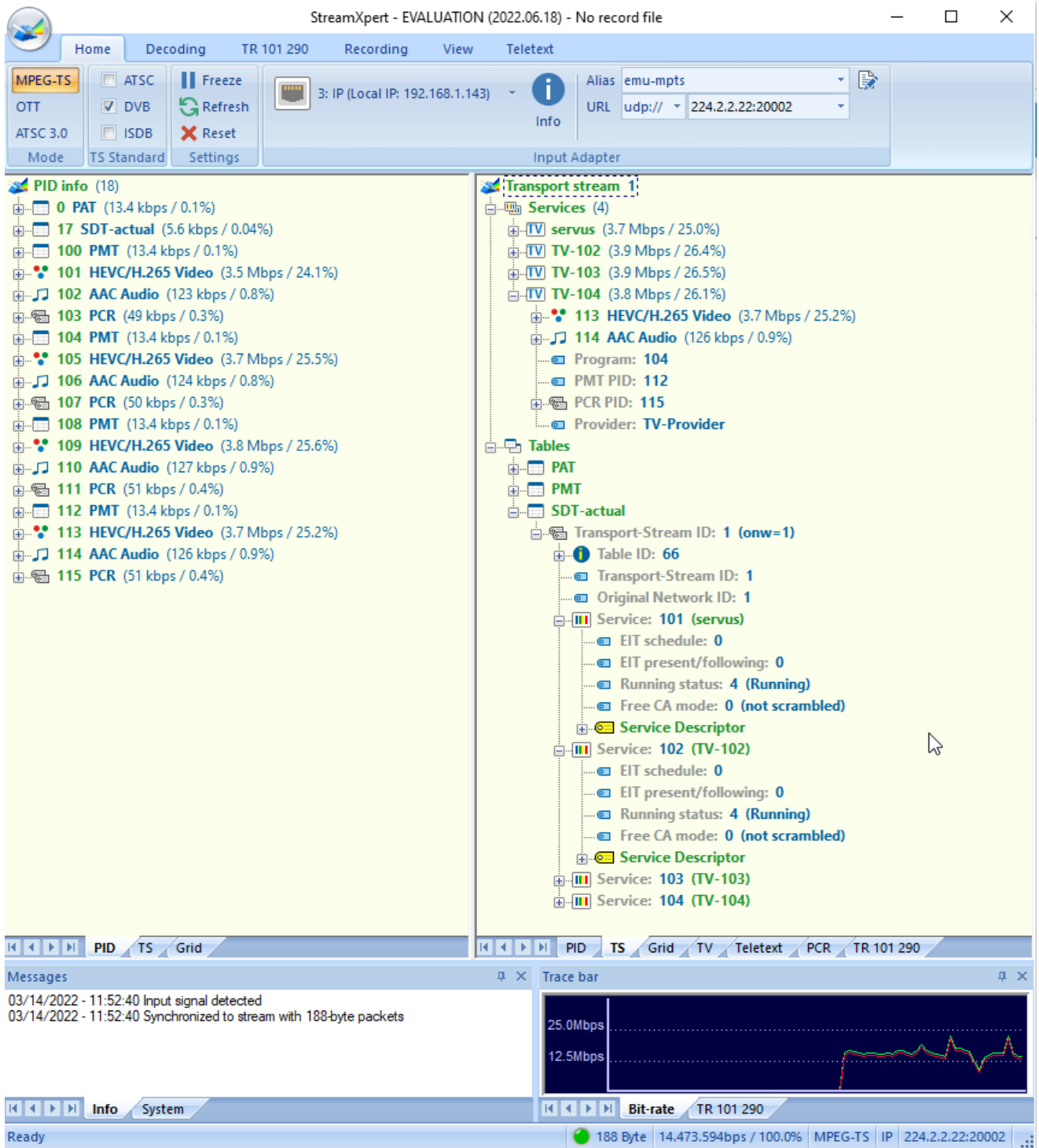
■ Bitrate: 0.000Mbps



The screenshot displays the BLANKOM EMU 8500.2 software interface, which is used for configuring and monitoring MPEG-TS streams. The interface is divided into several sections:

- Top Bar:** Contains the 'MPEG-TS' tab, a 'Freeze' button, and a 'Refresh' button. It also shows the 'Input Adapter' settings, including the IP address (3: IP (Local IP: 192.168.1.143)) and the URL (udp:// 224.2.2.2:3006).
- PID info (6):** A tree view showing the following streams:
  - 0 PAT (14.6 kbps / 0.1%)
  - 17 SDT-actual (2.9 kbps / 0.03%)
  - 112 PMT (14.6 kbps / 0.1%)
  - 113 AVC/H.264 Video (9.9 Mbps / 98.0%)
    - Bitrate: 9.893.928 bps / 98.0%
    - ES Info: Resolution (WxH): 1280x720, PAR (Pixel Aspect Ratio): 1:1, Chrominance: 4:2:0, Bit Depth: 8-bit, Colour Primaries: BT.709, Transfer Characteristics: BT.709, Matrix Coeffs: BT.709, Frame Rate: 50.00Hz, PCR: No, Scrambled: No, CC Errors: 2, Type: AVC/H.264 Video, Stream ID: 224
  - 114 AAC Audio (147 kbps / 1.5%)
  - 115 PCR (58 kbps / 0.6%)
- Transport stream 1:** A tree view showing the following services:
  - TV-104 (10.0 Mbps / 99.5%)
    - 113 AVC/H.264 Video (9.9 Mbps / 98.0%)
      - PID: 113
      - Bitrate: 9.893.928 bps / 98.0%
      - ES Info: Resolution (WxH): 1280x720, PAR (Pixel Aspect Ratio): 1:1, Chrominance: 4:2:0, Bit Depth: 8-bit, Colour Primaries: BT.709, Transfer Characteristics: BT.709, Matrix Coeffs: BT.709, Frame Rate: 50.00Hz, Stream ID: 224
    - 114 AAC Audio (147 kbps / 1.5%)
      - Program: 104
      - PMT PID: 112
      - PCR PID: 115
      - Provider: TV-Provider
  - Tables: PAT, PMT, SDT-actual

- Messages:** A log of events:
- 03/14/2022 - 12:50:04 Input signal detected
- 03/14/2022 - 12:50:04 Synchronized to stream with 188-byte packets
- 03/14/2022 - 12:59:34 Lost input signal
- 03/14/2022 - 12:59:34 Input signal detected
- 03/14/2022 - 13:08:24 Lost input signal
- 03/14/2022 - 13:20:45 Input signal detected
- Trace bar:** A graph showing the bitrate of the stream over time, with a scale from 0 to 20.0Mbps.



## IP-stream Outputs:

| #      | IP Address   | Port  | Protocol | Pkt Length | Null PKT Filter                     | Status                               | Bit(Act/Max) |  |
|--------|--------------|-------|----------|------------|-------------------------------------|--------------------------------------|--------------|--|
| MPTS 1 | 224.2.2.22   | 20002 | UDP      | 7          | <input checked="" type="checkbox"/> | <span style="color: grey;">●</span>  | 22.1/32.0 M  |  |
| SPTS 1 | 224.22.22.22 | 30002 | UDP      | 7          | <input checked="" type="checkbox"/> | <span style="color: green;">●</span> | 0.2/10.0 M   |  |
| SPTS 2 | 224.2.2.2    | 3002  | UDP      | 7          | <input checked="" type="checkbox"/> | <span style="color: green;">●</span> | 0.2/12.0 M   |  |
| SPTS 3 | 224.2.2.2    | 3004  | UDP      | 7          | <input checked="" type="checkbox"/> | <span style="color: green;">●</span> | 11.2/12.0 M  |  |
| SPTS 4 | 224.2.2.2    | 3006  | UDP      | 7          | <input checked="" type="checkbox"/> | <span style="color: green;">●</span> | 11.0/12.0 M  |  |

All HDMI IN per module should have same Input resolution like 1080i50.

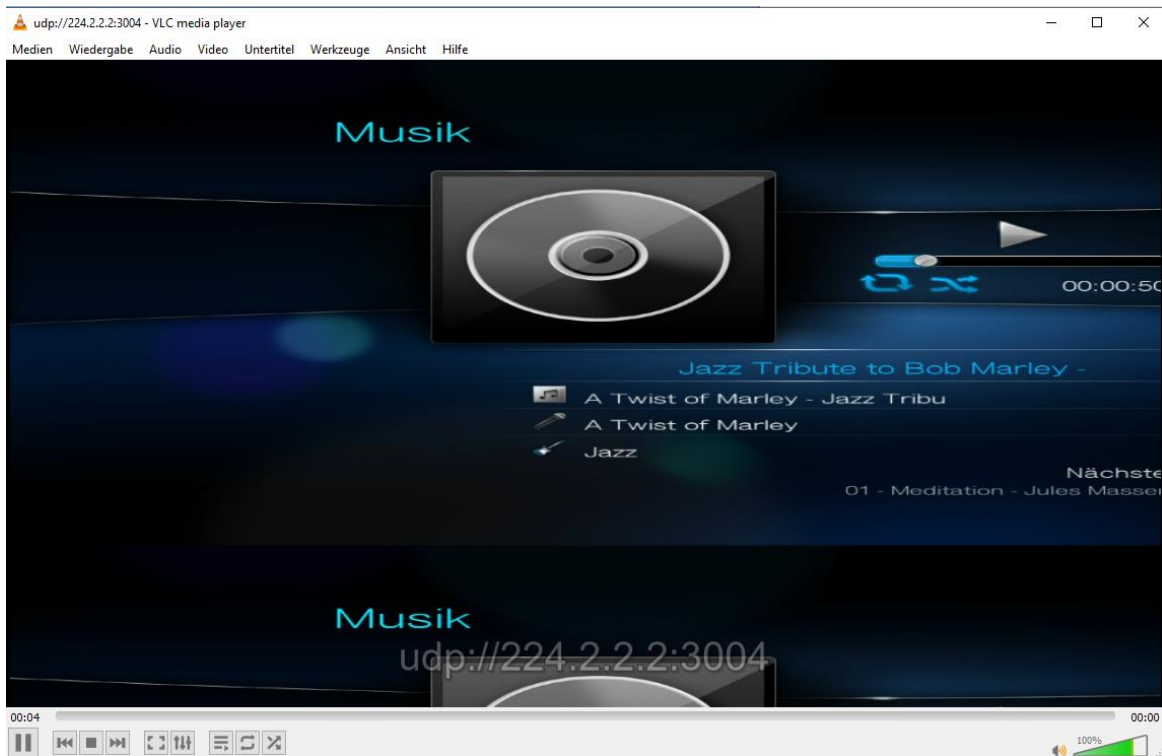
Here an example what happens if not - Mismatching Inputs:

Encoder 3 set to 1080i60, the others are 720p50:

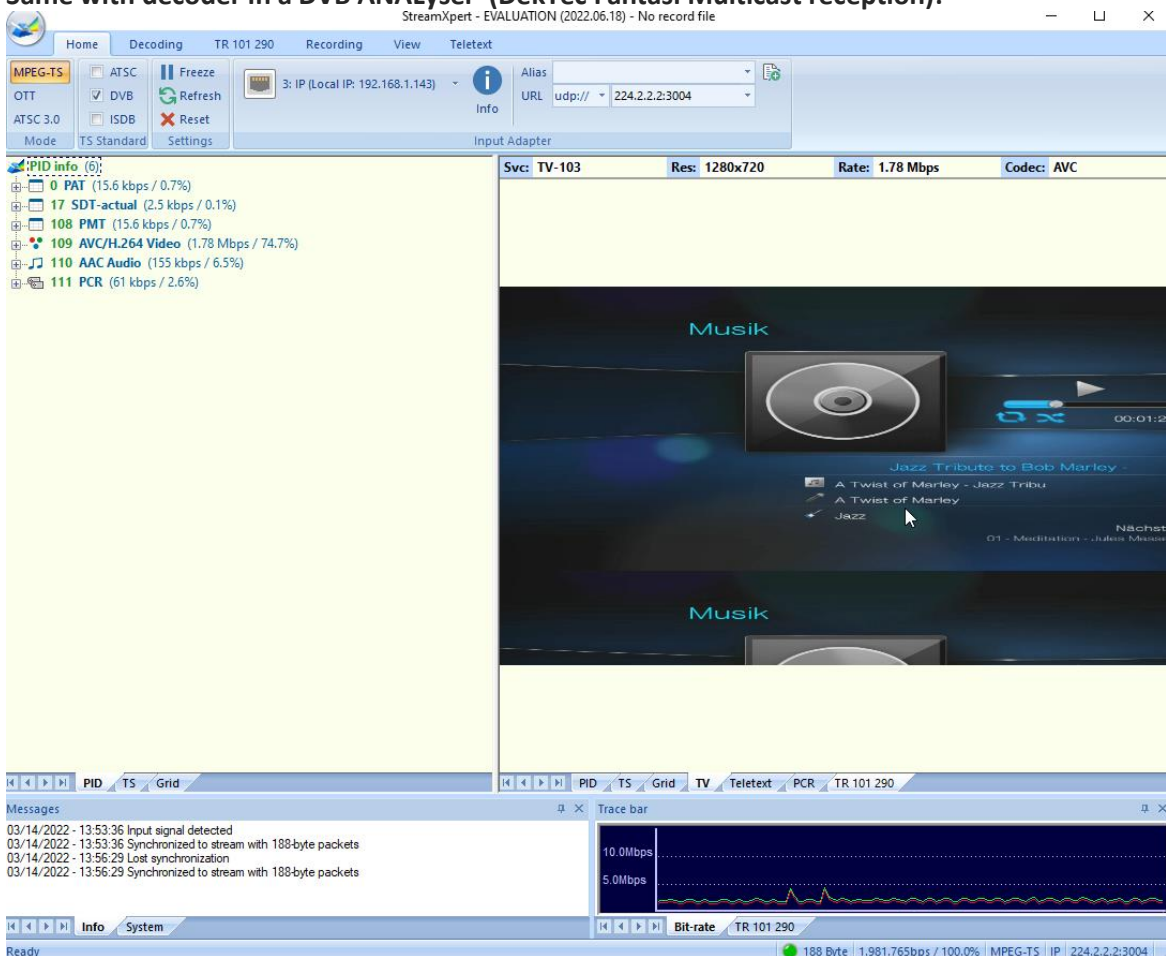
| Enc CH 1                                                            | Enc CH 2 | Enc CH 3                       | Enc CH 4 |
|---------------------------------------------------------------------|----------|--------------------------------|----------|
| <b>Video</b>                                                        |          |                                |          |
| Format: H.264                                                       |          | GOP Struct: IBBP               |          |
| Rate Mode: VBR                                                      |          | Bitrate: 12.00 (4 ~ 20 Mbps)   |          |
| Average Bitrate: 3.50 (3.5 ~ 20 Mbps)                               |          | Out Resolution: 1280 x 720 50p |          |
| Input Color Space: Auto                                             |          |                                |          |
| <b>Audio</b>                                                        |          |                                |          |
| Format: HE-AAC                                                      |          | Bitrate: 128 Kbps              |          |
| Audio Gain: 128 (0 ~ 255)                                           |          | Audio Delay Mode: Mode 1       |          |
| Audio Check: <input checked="" type="checkbox"/>                    |          |                                |          |
| <b>Program</b>                                                      |          |                                |          |
| Program Output: <input checked="" type="checkbox"/>                 |          | Program Number: 103            |          |
| PMT PID: 0x008c                                                     |          | PCR PID: 0x008f                |          |
| Video PID: 0x008d                                                   |          | Audio PID: 0x008e              |          |
| VCT Insert: <input type="checkbox"/>                                |          | Service Name: TV-103           |          |
| Service Provider: TV-Provider                                       |          | Character Encoding: UCS-2      |          |
| <b>Status</b>                                                       |          |                                |          |
| Encoder Chip Version: 00.0E.01.28                                   |          |                                |          |
| Input Lock: <span style="color: green;">●</span>                    |          |                                |          |
| Input Information: 1920 x 1080i 60/59.94fps Different Input Signals |          |                                |          |
| Bitrate: 0.000Mbps                                                  |          |                                |          |
| Interface Version: HDMI 08.06VA                                     |          |                                |          |
| Encode Status: <span style="color: green;">●</span>                 |          |                                |          |
| Bitrate: 2.418 Mbps                                                 |          |                                |          |

The other Output-stream will be forced to 720p50!

But the picture of the 1920 will be cropped:



## Same with decoder in a DVB ANALYSER (DekTec Fantasi Multicast reception):



So its not a real downscaling but cropping.