SAVI | USER GUIDE

STREAM.ONE

www.hellosavi.com

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1. ABOUT THIS GUIDE

This guide specifically pertains to the SAVI STREAM.One Version 1.10.10 and later. These devices utilize a different chipset than previous versions and have additional UI elements and controls. This guide also covers both the 2K and 4K editions, features only available to one of those are marked as such.

If you have any further questions, please contact SAVI support at: 214-785-6510 or support@savicontrols.com

1.1. PRODUCT DESCRIPTION

The STREAM.One comes in either the 4K or 2K editions. The 4K edition provides input support of up to 2160P60 resolutions and HDCP 1.3 while the 2K edition provides input support of up to 1080P60 resolutions and HDCP 1.3. The 2K edition outputs four stream types: Video and audio encoded to H.264 via TS (Transport Stream) Multicast, RTSP (Real Time Stream Protocol) Unicast, or RTSP Multicast, and audio only encoded to PCM via RTP (Real-time Transport Protocol) with SDP (Session Description Protocol). The 4K edition has an additional three stream types: Video and audio encoded H.265 via TS Multicast, RTSP Unicast, or RTSP Multicast.

Both products also output two channel unbalanced audio with adjustable time delay and a JPEG screenshot of the source video that is updated roughly five times per second. The STREAM.One can be powered by PoE 802.3af, or the optional power adapter.

1.2. POWER OVER ETHERNET

The STREAM.One encoders are compliant within the 802.3af PoE specification. Please ensure that any network switch complies with this specification and make certain which ports on the switch provide PoE as some switches do not provide PoE on every port. Many network PoE switches have settings to enable PoE and can also set/schedule PoE power. Please ensure these are set as needed.

1.3. REVISIONS

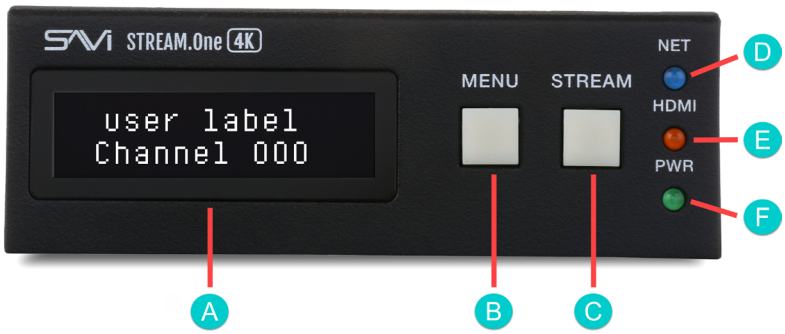
Data Sheet Version	Date	Revised	Description
1.0	2023-04-10	TN	Initial release
1.1	2023-06-05	TN	Updated Phoenix Connector

2. PARTS LIST

Category	Model Number	Description
Included	1 x SSE-02	STREAM.One Encoder
	1 x	AC to DC Power Adapter
	1 x	Unbalanced Stereo Phoenix Connector (3-pin)
	1 x	Chassis Mount Ears
Optional Accessories	1 x SSC-01	STREAM.One Rack Mount Kit

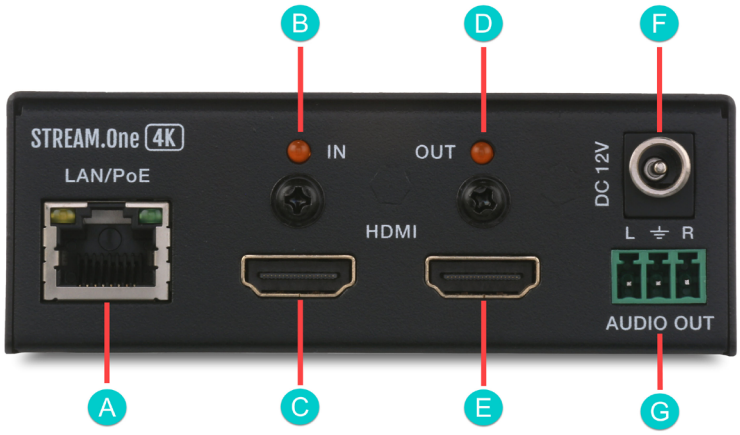
3. PHYSICAL LAYOUT

3.1. FRONT PANEL



A. OLED 2x16 Display
B. Multifunction Menu Button
C. Multifunction Stream Button
D. Network LED / Stream Indicator
E. HDMI LED Input Indicator
F. Power LED Indicator

3.2. REAR PANEL



A. Network (RJ45 Ethernet, 1Gb/s)
B. HDMI Input LED Indicator
C. HDMI Input With Captive Screw
D. HDMI Loop-Output LED Indicator
E. HDMI Loop-Output With Captive Screw
F. 12V DC Power Input
G. Unbalanced 2 Channel Audio Output (Phoenix Connector)

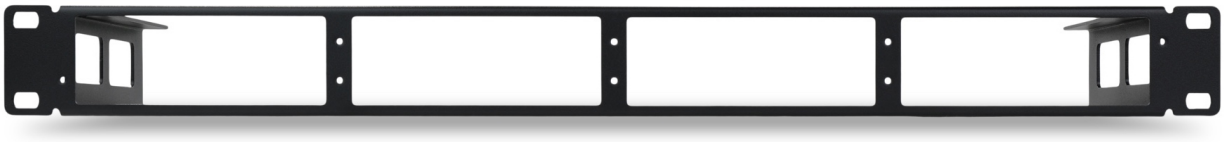
3.3. FRONT PANEL BUTTON SHORTCUTS

The STREAM.One offers a handful of shortcuts for performing basic functions. Each of these utilize the physical buttons on the front of the device. Except for Factory reset, all shortcuts are performed while the STREAM.One is powered on.

Action	Description	Shortcut	Result
Menu options	Displays current information	Press **Menu** repeatedly to cycle through	• IP Address • IP Mode • Subnet Mask • Gateway • Software version • Return to User Label and CH#
Stream	Enables or disables stream	Hold **Stream** for 3 sec	• RTP and RTSP stream stops and shows splash screen • HDMI pass through unaffected • MJPEG preview continues
Reboot	Forces a power cycle	Hold **Menu** for 10+ sec	• Display blanks • LEDs turn off • Boot sequence begins
Factory reset	Overwrites all settings with default values	After power cycle, hold **Menu** for 10 sec	• Stream button flashes • Display: “Factory Reset Completed“ • Green power light turns on • Blue Net light turns on • Orange HDMI light turns
IP reset	Sets IP method to DHCP	Hold **Menu** and **Stream** for 10 sec	• Display: “IP Reset Applied” • Overwrites static IP settings • Ping may delay for up to 1 min • Decoders will need reassignment

3.4. RACK MOUNT SYSTEM (CHASSIS ACCESSORY)

The rack mount system allows four STREAM.One encoders to be installed securely within a 1U space. The encoders are front loaded and secured using captive thumb screws. Compatible with both 2K and 4K versions.



4. GETTING STARTED

STREAM.One encoders are set at the factory to use DHCP. They can optionally be set to Static mode.

4.1. PHYSICAL CONNECTIONS

Ensure the following cables are connected to your STREAM.One and the source device is properly configured:

- 12v Power cable (if not using PoE)
- Ethernet network cable
- HDMI cable from source device (plugged into left HDMI port on STREAM.One)

Ensure the STREAM.One is properly grounded to protect from electrical surges.
Ensure your switch is configured for streaming to prevent network flooding.

4.2. COMPUTER SETUP

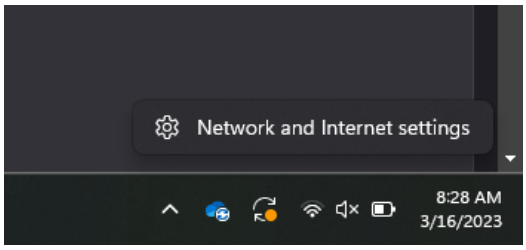
Devices that need to communicate with each other on a network must be in the same IP subnet and not separated by a VLAN configuration.

Check the current IP address of your STREAM.One by pressing the Menu button on the front of the device once. You may need to set your computer to be on the same subnet of the device in order to connect to it. While the interface and steps on achieving this will be different for each Operating System, they all require that you set the ipv4 settings of your LAN adapter.

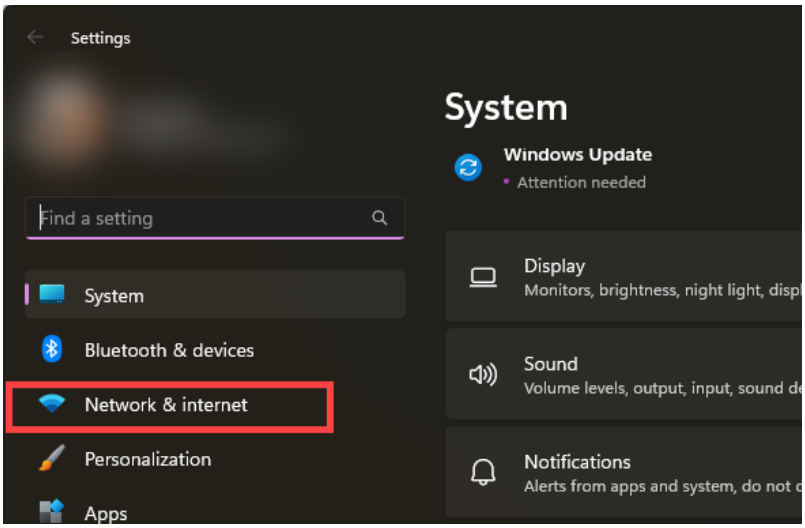
4.2.1. WINDOWS 10 AND 11 LAN SETUP

Opening Network Page

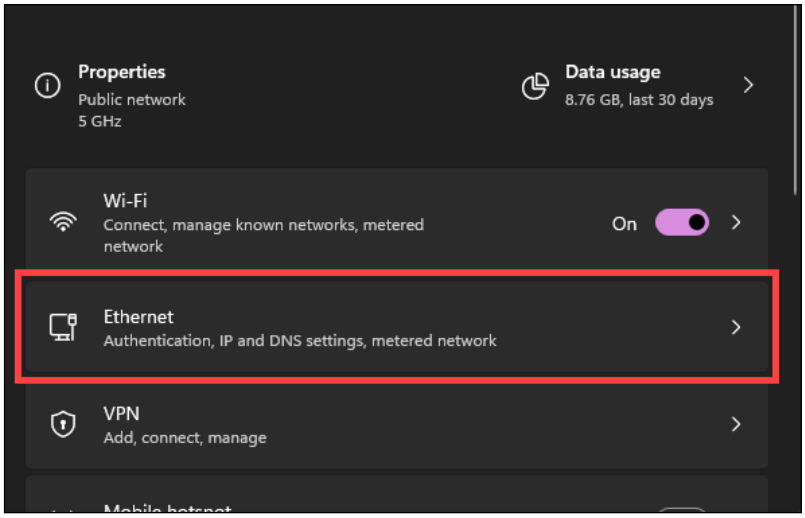
Option 1: Right Click on the taskbar icon that looks like a signal strength indicator. Then click on “Open Network and Internet settings”.



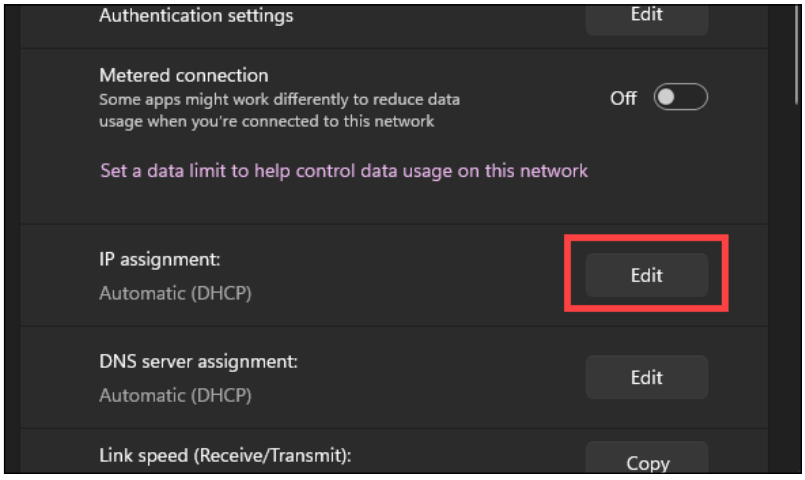
Option 2: Use the search window and type “Settings”. Select **Network & internet** from the list on the left-hand side.



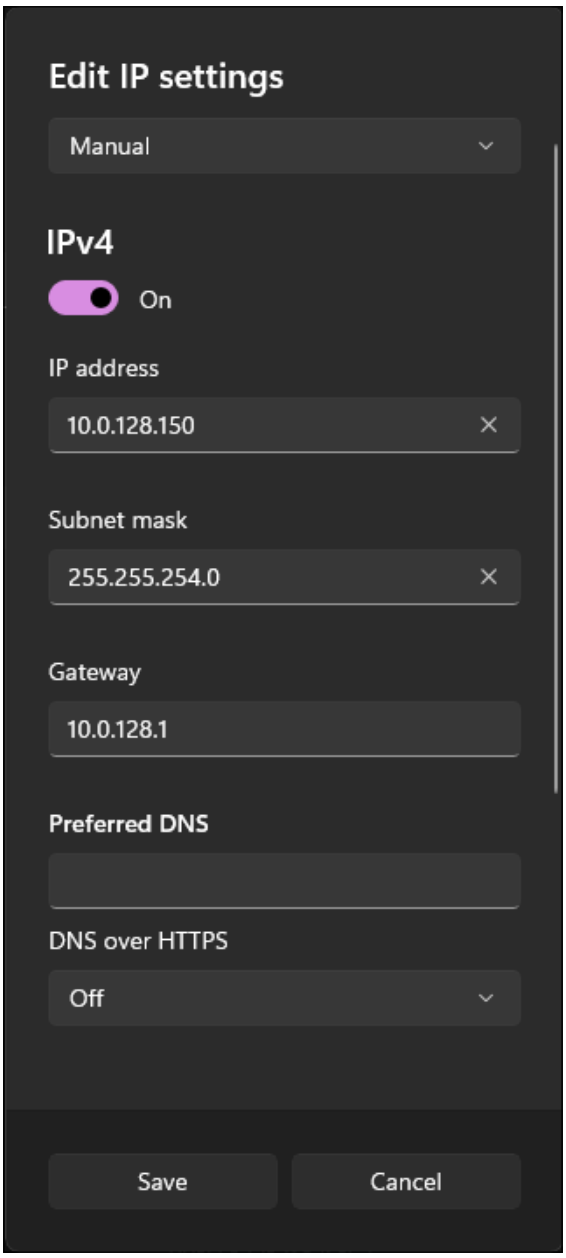
Select **Ethernet**.



Once you are in the Ethernet properties, click **Edit** next to IP assignment.



When the Edit IP settings window appears, change the dropdown to **Manual** and enable IPv4. Enter an IP on the same subnet as the STREAM.One as well as the subnet itself. A gateway address is optional.

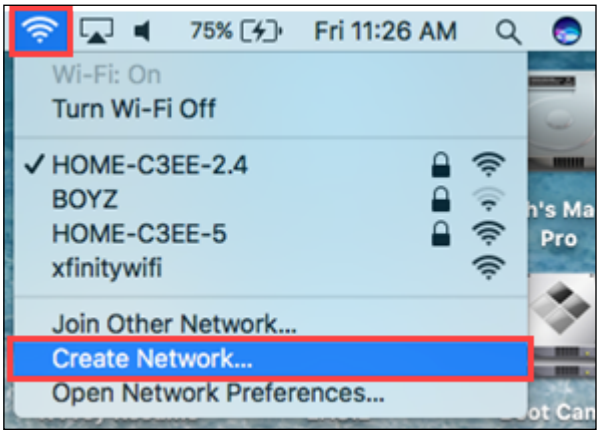


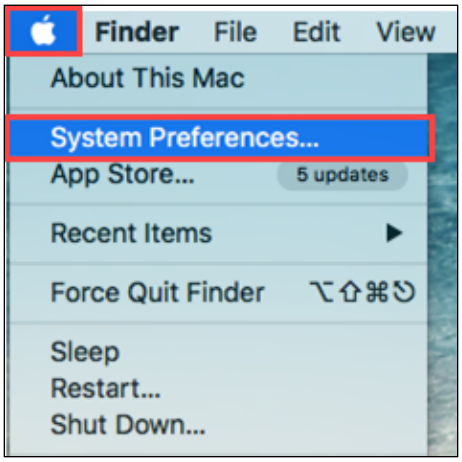
IP information in images are examples.

4.2.2. MAC LAN SETUP

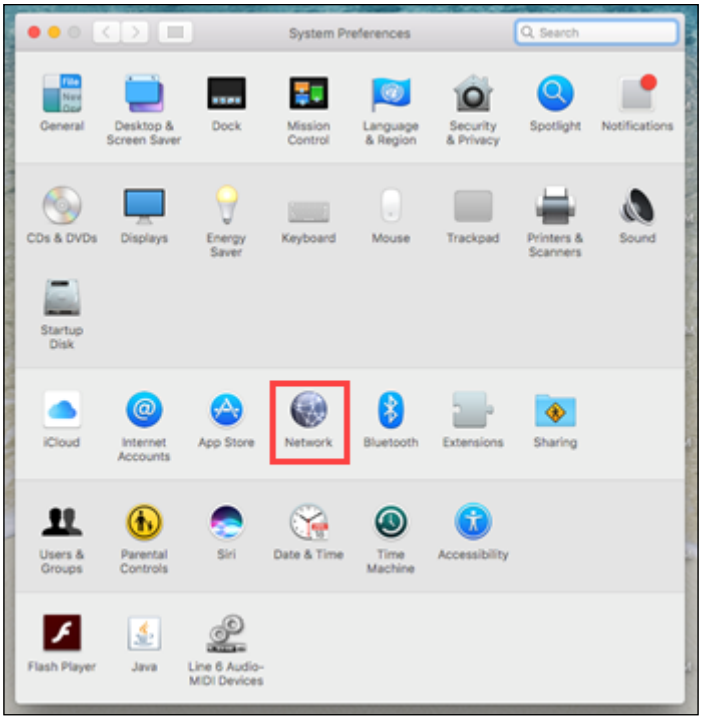
Opening Network Page

From the top menu bar, you can either click on the network symbol or click on the Apple icon in the upper left, and the select system preferences:





Then select Network:



Select the appropriate network adapter from the list in the left pane, and then set the correct IP subnet parameters.

4.2.3. IP ADDRESS AND CHANNEL SETTINGS

The STREAM.One encoders have two methods of IP addressing.

- DHCP (default)
- Static

Channel settings

Encoders translate multicast IP addresses to channels in order to be more understandable and intuitive to the user.

Encoders broadcast on channels and must never be set to do so on the same channel as another encoder.

Network switch requirements

The minimum requirements of a network switch for the STREAM.One are:

- 1Gig Port speeds
- IGMP Snooping
- IGMP Querier
- Fast Leave
- Flow Control

Network switch recommendations

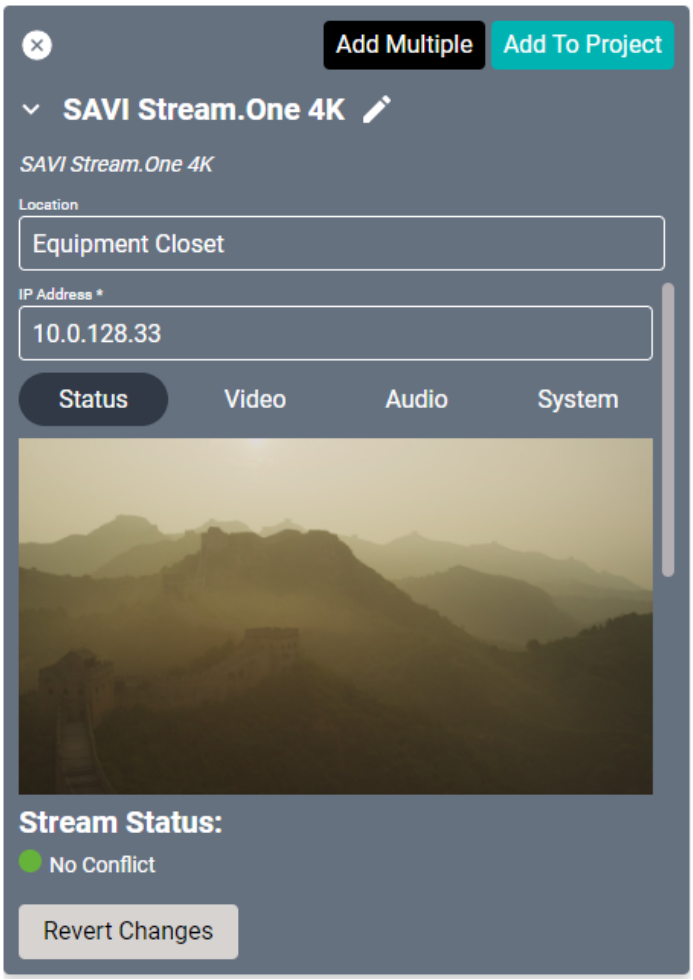
While not required to operate the STREAM.One, you may want to utilize the Power over Ethernet feature of the product. A network switch that supports PoE specification 802.3af is acceptable. However, please carefully review the full power budget capacity of the switch to make sure it can handle the number of STREAM.One units that you will populate the switch with.

STREAM.Ones consume 15.4 Watts over PoE

It is also recommended from a system design standpoint that you consider VLAN management to isolate the multicast traffic generated by the transmitters from devices other than the receivers.

5. USING WITH SAVI

Before getting into the full User Interface, it is important to note that very little configuration is needed when using the STREAM.One with SAVI. Setting a static IP address is the only setup required on the STREAM.Ones before adding them to your project with Creator. We reccomend setting all units to consecutive IP addresses to make use of Creator's Add Multiple feature.



SAVI will overwrite all settings on the STREAM.One with the Creator values

6. SETTING UP A STREAM.ONE

6.1. CONNECTIONS

Power: Each STREAM.One encoder can be powered from a network switch port that provides PoE power compliant with the 802.3af specification. If you cannot utilize PoE over CAT, or you prefer to use power adapters, an AC to DC power adapter is included with each device.

Network: The STREAM.One supports standard category RJ45 connectivity. It is recommended to use CAT6a cabling to ensure best performance.

Video: The STREAM.One accepts HDMI 1.3 video formats up to 1080P60 on 2K units and 2160P60 on 4K units.

Audio Transmitter: The STREAM.One de-embeds the audio present on the HDMI. The included Phoenix connector may be used to connect this audio to a DSP or Amplifier.

6.2. LOGGING INTO THE WEB UI

To log in to the web UI, you will need the following:

- Encoder IP address
- Username
- Password

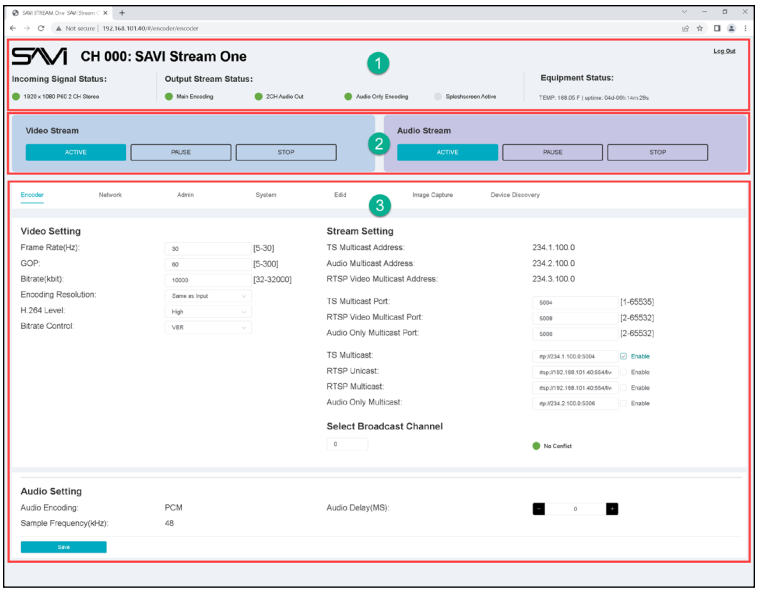
Username: Admin
Password: admin

The log in screen has a username and password field.

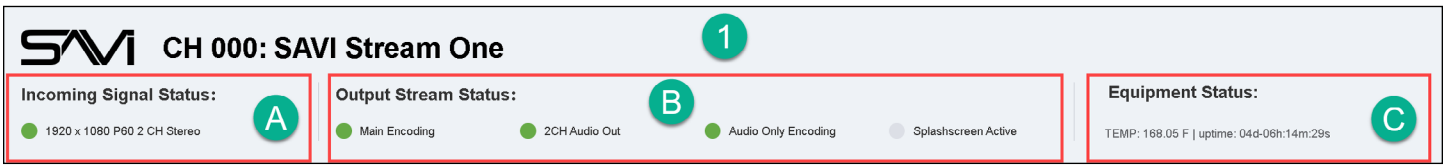
On the login page you will also see the channel and user label information

6.3. WEB UI OVERVIEW

1. **Informational and Diagnostics:** Displays model, user label, signal, stream, and equipment status.
2. **Transport Controls:** Contains video and audio stream controls.
3. **Settings:** Advanced settings separated into several tabbed categories.



6.3.1. INFORMATIONAL AND DIAGNOSTICS



A. Incoming Signal Status: Displays incoming resolution, refresh rate, and audio format (Green = good signal input, Red = no signal or incompatible signal).

B. Output Stream Status: Displays activity of the output stream.

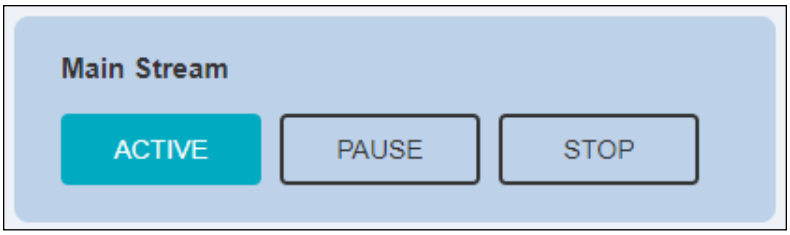
- Main Encoding (Video, Audio on TS)
  - Green = Streaming
  - Orange = paused, image freeze, no audio
  - Red = Stop, no video or audio streaming, splashscreen displayed
- 2CH Audio Out (Analog stereo on Phoenix connector)
  - Green = audio present
  - Red = audio not present
- Audio Only Encoding (PCM 44.1kHz/48kHz audio on RTP/SDP)
  - Green = Streaming
  - Orange = Paused, no audio
  - Red = Stop, no audio stream
- Splashcreen Active
  - Grey = no splashscreen displays
  - Green = splashscreen displayed

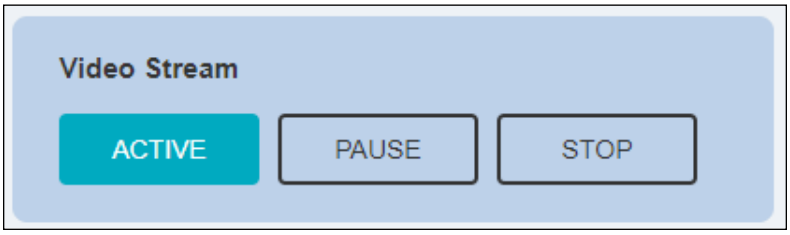
C. Equipment Status: Reports main IC operating temperature, and runtime since last power cycle.

6.3.2. TRANSPORT CONTROLS

Main Stream*/Video Stream

- **Active:** Enables streaming
- **Pause:** Freeze video and audio
- **Stop:** End video and audio stream, display splashscreen



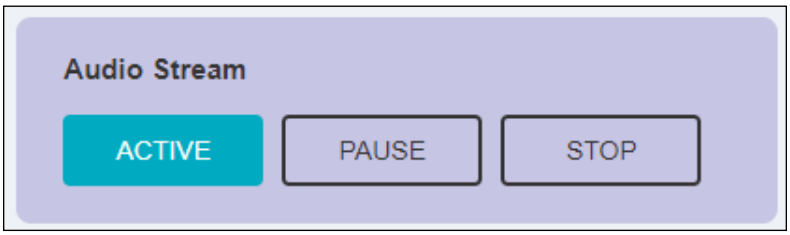


Second Stream (only available on 4K)*

- **Active:** Enables streaming
- **Pause:** Freeze video and audio
- **Stop:** End video and audio stream, display splashscreen
- **Disable:** Disable video and audio stream

Audio Stream

- **Active:** Enables streaming
- **Pause:** Freeze audio
- **Stop:** Disable audio stream



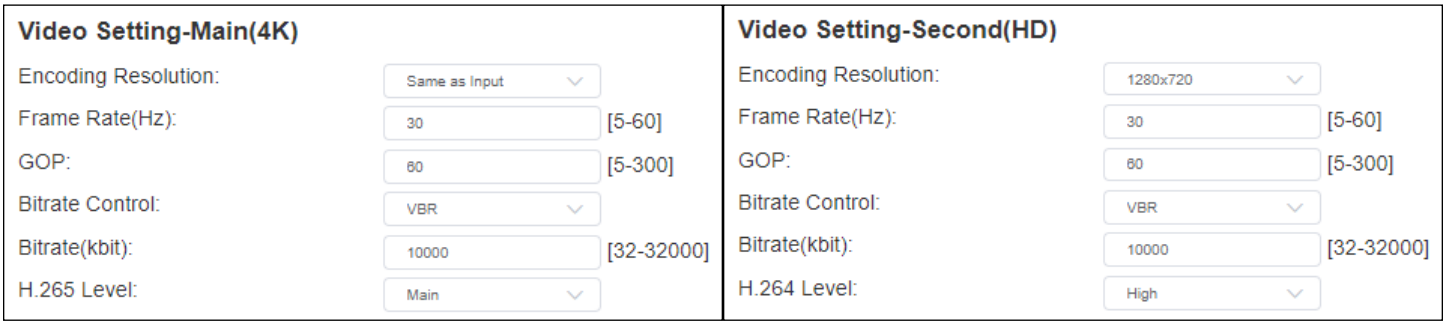
*On 2K devices, there is only one video stream so it is named Video Stream. However, on the 4K device there are two video streams so they are named Main Stream and Second Stream respectively.

6.3.3. ENCODER

The Settings section is separated into several tabs. The Encoder tab provides video, stream, and audio settings. The 4K edition also provides settings for the second stream.

Any changes on this tab require a Save function to implement.

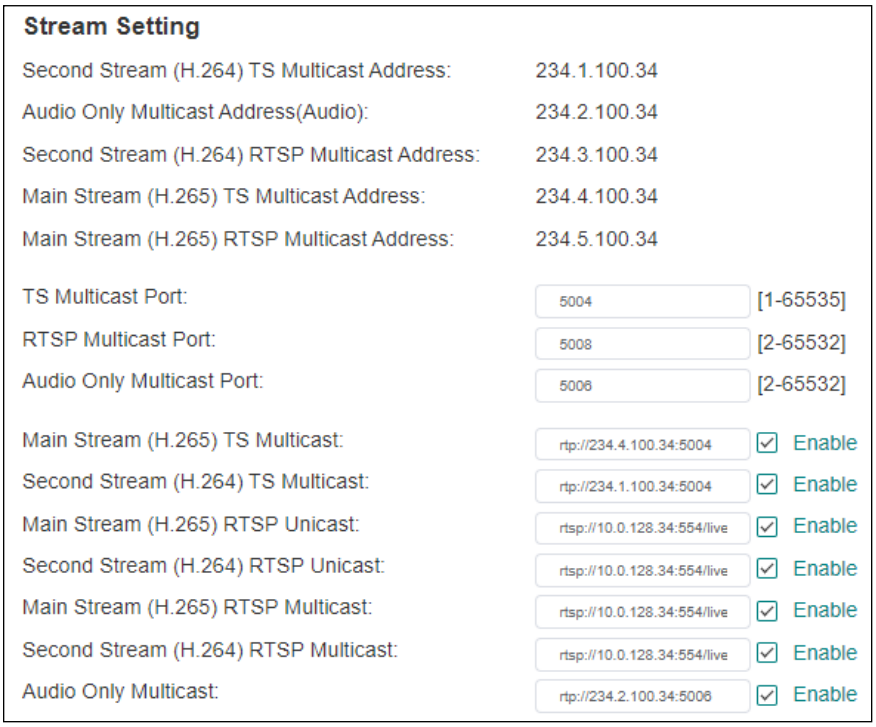
Video Settings



- **Encoding Resolution:** Sets output resolution
  - **Same as input:** Input resolution passed through
  - **3840 x 2160*:** Input resolution scaled to 3840 x 2160
  - **1920 x 1080:** Input resolution scaled to 1920 x 1080
  - **1280 x 720:** Input resolution scaled to 1280 x 720
  - **640 x 480:** Input resolution scaled to 640 x 480 (input aspect may be distorted)
- **Frame Rate(Hz):** Adjustable 1 Hz increments, range 5 to 30 on 2K units and 5 to 60 on 4K units. Set to 30 or 60 by default.
- **GOP:** Adjustable increments of 1, range 5 to 300. Set to 60 by default.
- **Bitrate Control**
  - **VBR:** Variable Bit Rate (set by default)
  - **CBR:** Constant Bit Rate
- **Bitrate(kbit):** Adjustable increments of 1, range 32 to 32000. Set to 10000 by default.
  - For CBR: Sets the CBR value
  - For VBR: Sets the upper limit for VBR
- **H.264 Level**
  - **Baseline:** Lowest encoding, lowest processing power required
  - **Main:** Higher quality
  - **High:** HD quality
- **H.265 Level***
  - **Main:** High quality

*Only available on the 4K edition.

Stream Settings (4K)



Ensure each Port is unique.

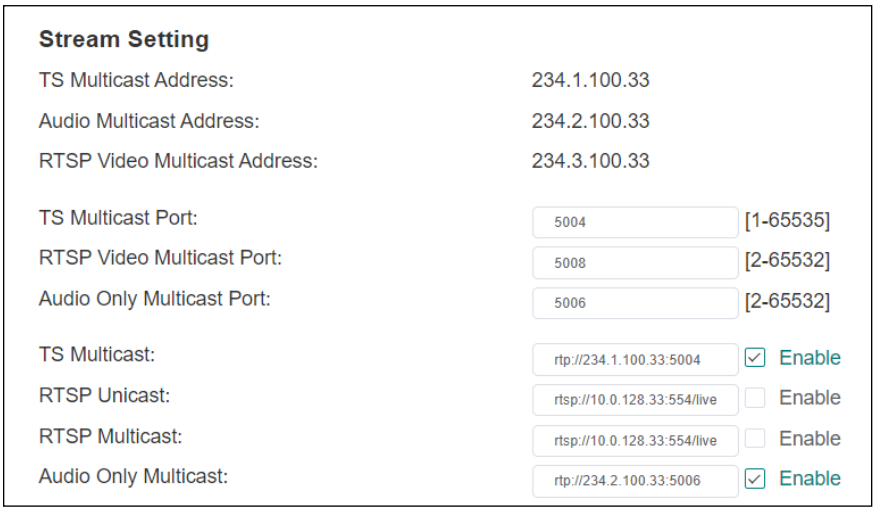
Unicast should only be used when streaming to a single endpoint.

- **Second Stream (H.264) TS Multicast Address:** URL of the Transport Stream (RTP).
- **Audio Only Multicast Address (Audio):** URL of the audio only stream.
- **Second Stream (H.264) RTSP Multicast Address:** URL of the RTSP stream.
- **Main Stream (H.265) TS Multicast Address:** URL of the 4K Transport Stream (RTP).
- **Main Stream (H.265) RTSP Multicast Address:** URL of the 4K RTSP stream.

- **TS Multicast Port:** Port for the Transport Stream. Set to 5004 by default.
- **RTSP Video Multicast Port:** Port for the RTSP stream. Set to 5008 by default.
- **Audio Only Multicast Port:** Port for the audio only stream. Set to 5006 by default.

- **Main Stream (H.265) TS Multicast:** Full RTP stream address. Enabled by default.
- **Second Stream (H.264) TS Multicast:** Full RTP stream address. Enabled by default.
- **Main Stream (H.265) RTSP Unicast:** Full RTSP stream address. Disabled by default.
- **Second Stream (H.264) RTSP Unicast:** Full RTSP stream address. Disabled by default.
- **Main Stream (H.265) RTSP Multicast:** Full RTSP stream address. Disabled by default.
- **Second Stream (H.264) RTSP Multicast:** Full RTSP stream address. Disabled by default.
- **Audio Only Multicast:** Full RTP audio only stream address. Disabled by default

Stream Settings (2K)



Ensure each Port is unique.

Unicast should only be used when streaming to a single endpoint.

- **TS Multicast Address:** URL of the Transport Stream (RTP).
- **Audio Multicast Address:** URL of the audio only stream.
- **RTSP Video Multicast Address:** URL of the RTSP stream.

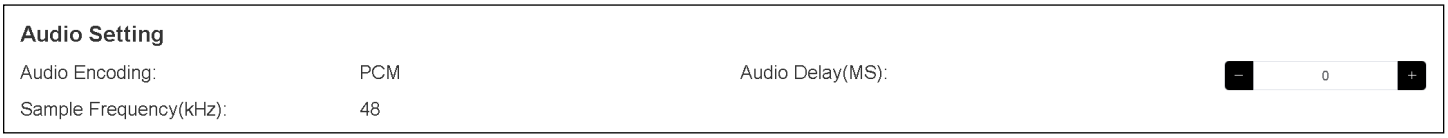
- **TS Multicast Port:** Port for the Transport Stream. Set to 5004 by default.
- **RTSP Video Multicast Port:** Port for the RTSP stream. Set to 5008 by default.
- **Audio Only Multicast Port:** Port for the audio only stream. Set to 5006 by default.

- **TS Multicast:** Full RTP stream address. Enabled by default.
- **RTSP Unicast:** Full RTSP stream address. Disabled by default.
- **RTSP Multicast:** Full RTSP stream address. Disabled by default.
- **Audio Only Multicast:** Full RTP audio only stream address. Disabled by default

Set Broadcast Channel

- **Select Broadcast Channel:** Range 0 to 999, impacts Main and Audio addresses
  - For simplicity, the STREAM.One encoder provides intuitive 'channel' selections, making it easy to set many encoders quickly. The 'channel' number translates to a specific IP address for the Main Video/ Audio Transport Stream (TS), and a different specific IP address for the Audio Only RTP/SDP PCM stream.
- No Conflict LED
  - **Green:** No address conflict
  - **Red:** Conflict with another encoder

Audio Settings



- **Audio Encoding:** Fixed at PCM
- **Sample Frequency(kHz):** Fixed at 44.1kHz or 48kHz depending on the source
- **Audio Delay:** Adjustable in 20mS increments, range 0 to 1500

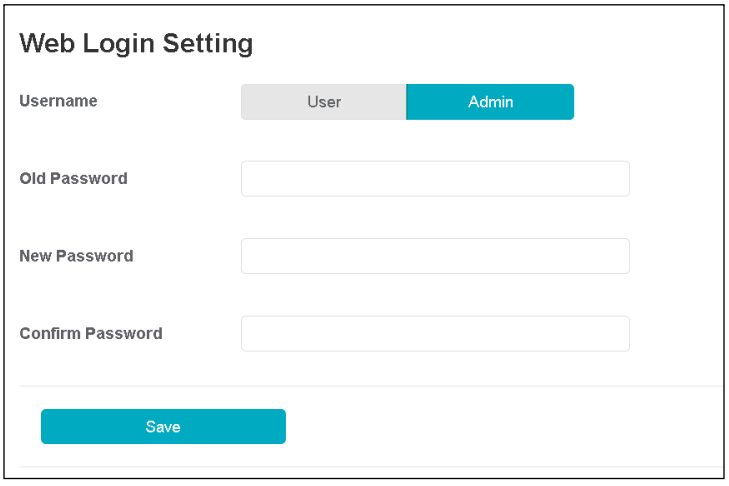
Ensure you SAVE your settings.

6.3.4. NETWORK

- **IP Mode:** Static or DHCP. Set to DHCP by default.
- **IP Address:** Configurable when IP Mode = Static
- **Gateway:** Configurable when IP Mode = Static
- **Subnet Mask:** Configurable when IP Mode = Static
- **Preferred DNS:** Configurable when IP Mode = Static
- **Alternate DNS:** Configurable when IP Mode = Static
- **MAC Address:** Fixed
- **NTP Server:** Set to pool.ntp.org by default.
- **NTP Port:** Port for NTP server, range 1 to 65535.
- NTP Status LED
  - **Green:** Connected
  - **Red:** Not connected

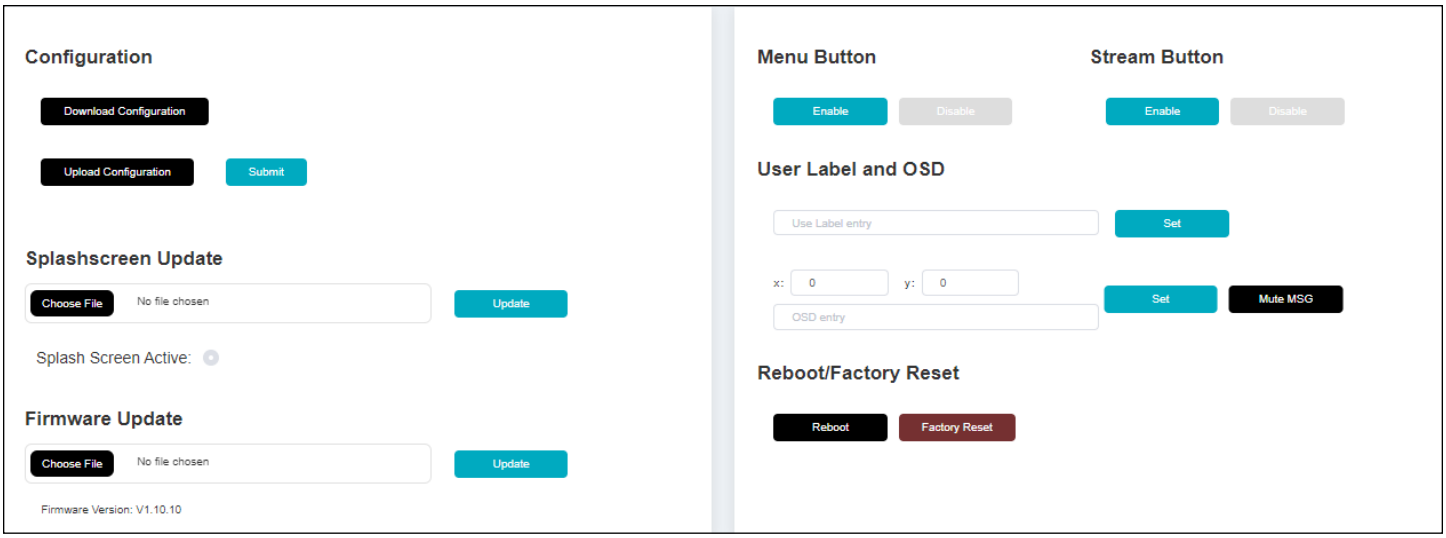
6.3.5. ADMIN

- **Username:** Select User or Admin
- **Old Password:** The old password is required when changing the password
- **New Password:** Enter new password
- **Confirm Password:** Confirm new password



Ensure you SAVE your settings.

6.3.6. SYSTEM



Configuration

- **Download configuration:** Saves settings to a file.
- **Upload configuration:** Restore settings from a file.
  - **Ignore Network and Channel Settings:** This check box is only available when a config file is uploaded but not yet applied. Restores all settings from a config file except for network and channel settings.

Splashscreen Update

- **Splashcreen Update:** Select and upload splashscreen file (.jpg format only).
- **Splash Screen Active:** Status LED for splash screen.
  - Green: Custom image is uploaded and available.
  - Red: Custom splash image is not available.

Firmware Update

- **Firmware Update:** Select and upload firmware file (.bin only).
- **Firmware Version:** Current firmware version.

Menu Button

- **Menu Button:** Enable (default) / Disable front panel menu button
- **Stream Button:** Enable (default) / Disable front panel stream button

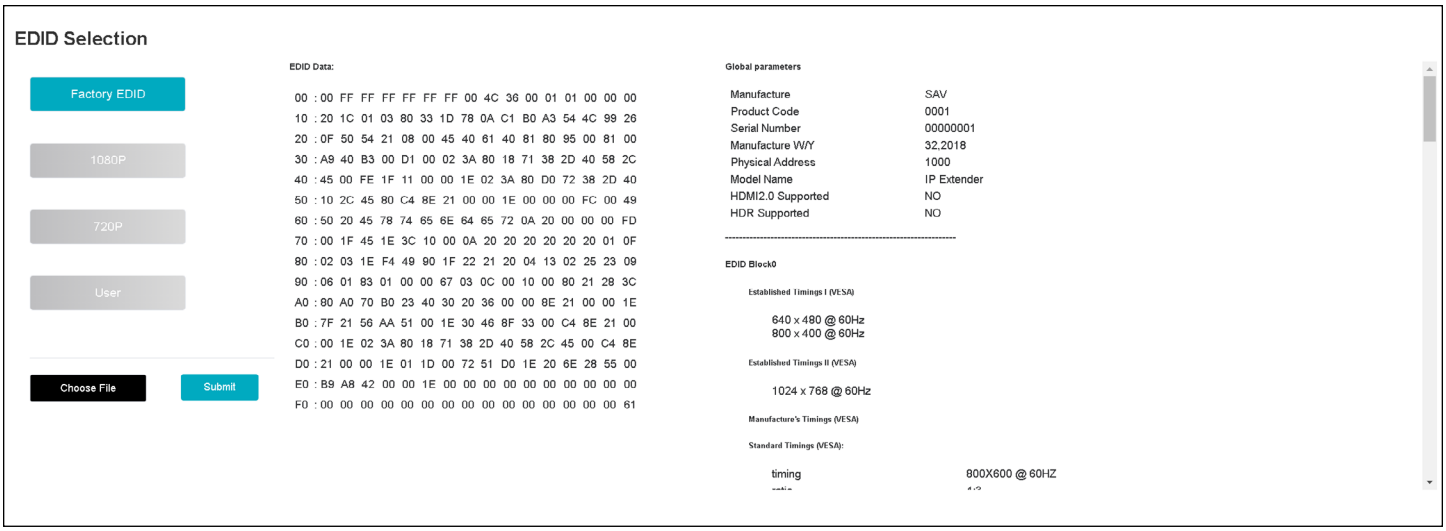
User Label and OSD

- **User Label Entry:** 16 character user label. This identifies the device in the Device Discover tab of other STREAM.Ones.
- **x:** Offset from the left edge for OSD text entry
- **y:** Offset from the top edge for OSD text entry
- **OSD Entry:** Text field to enter OSD message
- **Mute MSG:** Clears message

Reboot/Factory Reset

- **Reboot:** Soft power cycle.
- **Factory Reset:** Reset to Factory defaults:
  - DHCP addressing
  - Encoding on
  - Clear splashscreen file

6.3.7. EDID



- **EDID Selection:** Selection of factory or User files
  - **Factory EDID:** Default 1080P60 48kHz PCM 2 channel audio
  - **2160P*:** Variant 2160P60 48kHz PCM 2 channel audio
  - **1080P:** Variant 1080P60 48kHz PCM 2 channel audio
  - **720P:** 720P60 48kHz PCM 2 channel audio
  - **User:** Allows user upload of EDID file
- **Choose File:** For upload of User EDID file (.bin only).
- **Submit:** To change current EDID to any EDID selected

EDID Data

This block of code is the EDID table. This data will change depending on which selection is chosen from the EDID Selection list.

EDID Details

This scrollable window displays a detailed collection of information about the EDID.

*Only available on the 4K edition.

6.3.8. IMAGE CAPTURE

Image capture is paused by default and shows image capture frame at time tab is selected. Press Play button to start recapture @ ~ 5 Hz. Pause/Freeze when finished.

- **Play/Freeze Button:** Toggle: ~5 Hz image capture, or freeze/stop
- **Download Picture:** Downloads jpeg file in resolution equal to input resolution
- **URL:** URL to capture input signal images

6.3.9. DEVICE DISCOVERY

IP Address	Local	User Label	Channel	MAC Address	Product
10.0.128.31		SAVI Stream.One	CH 000	d0:54:75:01:41:59	STREAM.One 2K
10.0.128.32		SAVI Stream.One	CH 032	CC:4F:5C:90:01:A7	STREAM.One 2K
10.0.128.33		SAVI Stream.One	CH 033	D0:54:75:01:44:11	STREAM.One 2K
10.0.128.34	*	SAVI Stream.One	CH 034	6c:df:fb:0f:da:47	STREAM.One 4K

Discovery is an automatically generated list of any visible STREAM.Ones on the network. Each row will display a single device. Fields include:

- **IP Address:** Network address of the device.
- **Local:** An "*" will be displayed for the current device.
- **User Label:** The name of the device.
- **Channel:** The assigned channel of the device.
- **MAC Address:** The physical identifier of the device.
- **Product:** The edition of the device (2K or 4K).

7. DIAGNOSTICS

This list condenses all of the diagnostics found in the web UI, API, and front panel hardware.

Web UI

- Incoming signal state
- Main Video/Audio stream state
- Audio only stream state
- Splashscreen state
- Encoder conflicts
- Product temperature
- Product total run hours
- EDID detail
- Firmware version
- Image Capture of input
- Device Discovery of all encoders on network/ subnet

API

- Incoming signal state
- Main Video/Audio stream state
- Audio only stream state
- Splashscreen state
- Product temperature
- Product total run hours
- EDID detail
- Device Discovery of all encoders on network/ subnet
- Firmware version
- Serial number
- User label

Hardware

OLED Display

- User label
- Channel number
- IP address
- IP Mode
- Subnet
- Gateway
- Firmware

Indicators

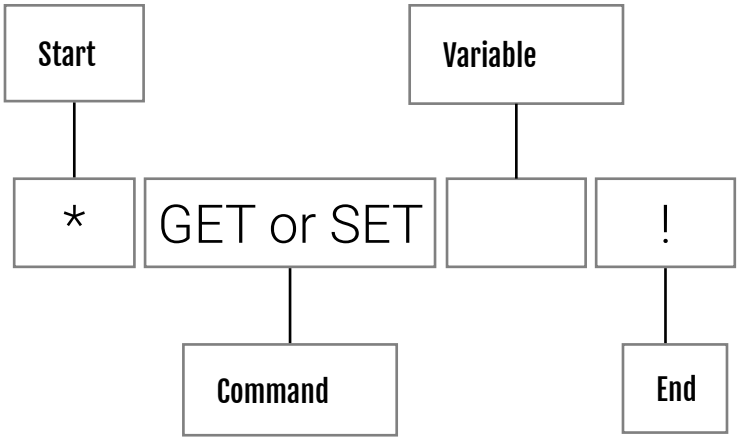
- Front
  - Net connection/stream activity
  - HDMI input status
  - Power status
- Rear
  - Net connection
  - HDMI input status
  - HDMI loop out status

8. APPLICATION PROGRAMMING INTERFACE (API)

While most users will utilize the SAVI Stream.One within a SAVI System, the following API commands are available via TCP Client to be used outside of a SAVI system. Access is achieved using the device's IP address and port number 24. Telnet access is available logging in with device IP address and port 25.

Command structure

All commands start with an asterisk, are followed with a variable, and end with an exclamation mark and a carriage return. The carriage return is input by pressing enter at the end of the line for telnet entries. When programing for a code environment then the carriage return will need to be input as: **\x0d**



An example command would look like this:

```
*GETIPADDRESS!
```

8.1. VERSION 1.10.10

Get Commands

##	Command	Description
1	*GETIPADDRESS!	Get device IP address
2	*GETSUBNET!	Get device subnet
3	*GETGATEWAY!	Get device gateway
4	*GETPREFERREDDNS!	Get device preferred dns server
5	*GETALTERNATEDNS!	Get device alternate dns server
6	*GETIPMETHOD!	Get device IP method
7	*GETMACADDRESS!	Get device mac address
8	*GETACTIVESIGNAL!	Get input signal active status
9	*GETINPUTDATA!	Get input signal information
10	*GETSPLASHSCREEN!	Get splashscreen on/off status
11	*GETOSDON!	Get osd text string
12	*GETOSDONSTATE!	Get osd on/off status
13	*GETDEVICES!	Get online devices
14	*GETSTREAMLOCK-STATE!	Get front panel stream button lock on/off status
15	*GETMENULOCKSTATE!	Get front panel menu button lock on/off status
16	*GETFIRMWARE!	Get device firmware version
17	*GETMAINSTREAM-STATE!	Get main stream status
18	*GETAUDIOSTREAM-STATE!	Get audio stream status
19	*GETCHANNEL!	Get channel number
20	*GETUSERLABEL!	Get userlabel
21	*GETEDID!	Get current edid data
22	*GETTEMP!	Get device internal temperature
23	*GETRUNHOURS!	Get device run time
24	*GETFAULTS!	Get report error information
25	*GETSERIALNUMBER!	Get serial number
26	*GETSDP!	Get session description protocol file
27	*GETANALOGAUDI-ODELAY!	Get analog audio delay time (ms)
28	*GETENCODERBITRATE!	Get encoder bitrate
29	*GETENCODERBITRATE-CONTROL!	Get encoder bitrate control
30	*GETENCODERFRAM-ERATE!	Get encoder frame rate
31	*GETENCODERRESOLU-TION!	Get encoder resolution
32	*GETENCODER-H264LEVEL!	Get encoder h264 level
33	*GETENCODERGOP!	Get encoder gop

Set Commands

##	Command	Description
42	*SETANALOGAUDI-ODELAY_[nnnn]!	Set analog audio delay time (ms) nnnn= 0 ~ 1500
43	*SETENCODERBI-TRATE_[nnnn]!	Set encoder bitrate nnnn= 32 ~ 32000
44	*SETENCODERBITRATE-CONTROL_[xxx]!	Set encoder bitrate control xxx-=VBR xxx=CBR
45	*SETENCODERFRAMER-ATE_[nn]!	Set encoder frame rate nn= 5 ~ 30
46	*SETENCODERRESOLU-TION_[xxx]!	Set encoder resolution xxx=SAME xxx=1080 xxx = 720 xxx=480
47	*SETENCODER-H264LEVEL_[xxx]!	Set encoder h264 level xxx=BASE-LINE xxx=MAIN xxx=HIGH
48	*SETENCODERGOP_[nnn]!	Set encoder gop nnn= 5 ~ 300
49	*SETCHANNEL_[xxx]!	Set channel number xxx= 0 ~ 999
50	*SETIPADDRESS_[nnn.nnn.nnn.nnn]!	Set static network IP
51	*SETSUBNET_[nnn.nnn.nnn.nnn]!	Set static network netmask
52	*SETGATEWAY_[nnn.nnn.nnn.nnn]!	Set static network gateway
53	*SETPREFERREDDNS_[nnn.nnn.nnn.nnn]!	Set static preferred dns server
54	*SETALTERNATEDNS_[nnn.nnn.nnn.nnn]!	Set static alternate dns server
55	*SETIPMETHOD_[xxx]!	Set IP method xxx=STATIC xxx=DHCP
56	*SETEDID_[xxx]!	Set edid mode xxx=DEFAULT xxx=1080 xxx=720 xxx=CUS-TOM
57	*SETOSDON_[x,y]_[sss]!	Set osd on and osd text on[x,y]
58	*SETOSDOFF!	Set osd off
59	*SETUSERLABEL_[xxx]!	Set user label
60	*SETALLSTREAM-STATE_[xxx]!	Set stream status xxx=START xxx=PAUSE xxx=STOP
61	*SETMAINSTREAM-STATE_[xxx]!	Set main stream status xxx-=START xxx=PAUSE xxx=STOP
62	*SETAUDIOSTREAM-STATE_[xxx]!	Set audio stream status xxx-=START xxx=PAUSE xxx=STOP
63	*SETNTPSERVER_[xxx]!	Set NTP Server
64	*SETNTPPORT_[xxx]!	Set NTP port nnn= 1 ~ 65535
65	*SETTSMULTICAST_[xxx]!	Set TS Multicast Enable on/off xxx=ON xxx=OFF
66	*SETRTSPMULTICAST_[xxx]!	Set RTSP Multicast Enable on/off xxx=ON xxx=OFF

34	*GETNTPSERVER!	Get NTP Server
35	*GETNTPPORT!	Get NTP port
36	*GETTSMULTICAST!	Get TS Multicast Address
37	*GETRTSPMULTICAST!	Get RTSP Multicast Address
38	*GETAUDIOMULTICAST!	Get Audio Multicast Address
39	*GETCPU_USAGE!	Reports CPU load
40	*GETMEMORY_USAGE!	Reports memory load
41	*GETDRTSPCONNECT!	Get rtsp connect status

67	*SETRTSPUNICAST_[xxx]!	Set RTSP Unicast Enable on/off xxx=ON xxx=OFF
68	*SETAUDIOMULTICAST_[xxx]!	Set Audio only Multicast Enable on/off xxx=ON xxx=OFF
69	*SETTSMULTICAST-PORT_[xxx]!	Set TS Multicast Port nnn= 1 ~ 65535
70	*SETRTSPMULTICAST-PORT_[xxx]!	Set RTSP Multicast Port nnn= even number(2 ~ 65532)
71	*SETAUDIOMULTICAST-PORT_[xxx]!	Set Audio only Multicast Port nnn= even number(2 ~ 65532)
72	*SETSPLASHSCREEN_[xxx]!	Set splashscreen on/off xxx-=ON xxx=OFF
73	*SETSTREAMLOCK-STATE_[xxx]!	Set front pane stream button lock on/off xxx=ON xxx=OFF
74	*SETMENULOCKSTATE_[xxx]!	Set front pane menu button lock on/off xxx=ON xxx=OFF
75	*SETSIGNALMUTE_[xxx]!	Set input mute xxx = ON xxx = OFF
76	*REBOOT!	Set reboot the device
77	*SETFACTORYDEFAULT!	Set reset the device
78	*HELP!	Show all Get/Set Commands