

PRODUCT QUICK GUIDE

Hardware Setup | Network Configuration | VieBit™ Login and Advanced Interface Settings



IncodeX™

Stream



H.264 HD/SD

Live Streaming Encoder

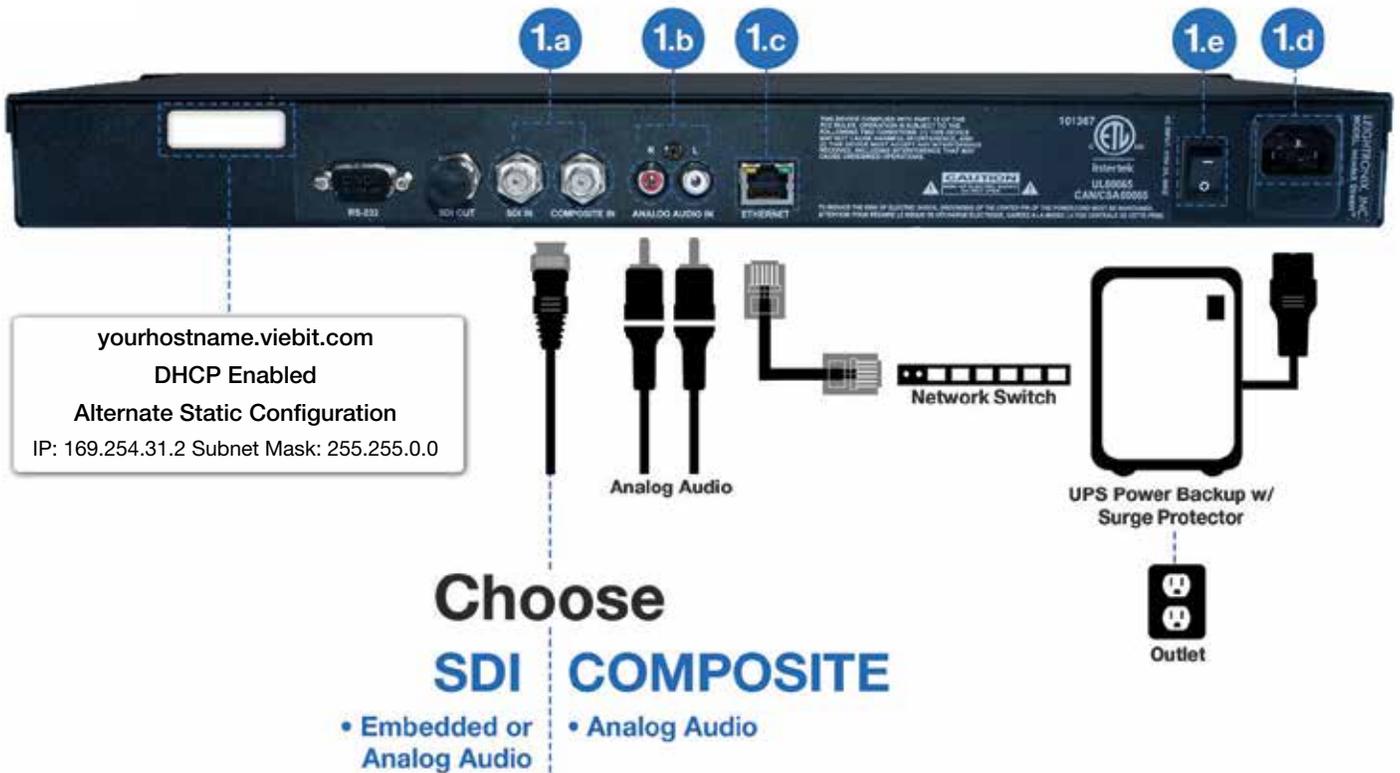
END-TO-END Solutions for
Broadcast & Streaming



LEIGHTRONIX

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Hardware Setup



- 1.a Connect the video input
-If using a digital video source, connect to “SDI IN.”
-If using an analog video source, connect to “COMPOSITE IN.”
- 1.b If using analog audio, connect the analog audio source to audio inputs “R” and “L.”
- 1.c Using the included Ethernet cable, connect the IncodeX Stream Ethernet port directly to a cable or DSL modem, or to a 100/1000 switch on your network. Once powered on, check your network connection by looking at the Ethernet LEDs above the Ethernet port to confirm link status. **NOTE:** For optimal performance, use a dedicated, broadband Internet business connection with your IncodeX Stream.
- 1.d Connect the included power cable into the power cord receptacle of the IncodeX Stream then plug the other end into a MAINS AC power source. **NOTE:** Use of an uninterruptible power supply (UPS) with the IncodeX Stream is strongly recommended.
- 1.e Press in the “1” on the power switch to power on the IncodeX Stream.

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Network Configuration

Automatic Network Configuration

The IncodeX Stream is shipped with Dynamic Host Configuration Protocol (DHCP) enabled and will automatically configure the unit with an IP, subnet mask, and gateway from your network's DHCP server if available. This information can be found on the "Live Streams" page of the VieBit account under "Info."

Manual Network Configuration

If your network does not use a DHCP server, obtain an approved static IP, subnet mask, and gateway from your network administrator.

The IncodeX Stream uses a default static IP address of 169.254.31.2 if a DHCP server is not detected on the network. Removing your DHCP enabled Windows PC from the network will cause the PC to default to a 169.254.x.x static IP address. If the PC does not default to the static IP address of 169.254.x.x after doing this, contact your network administrator or LEIGHTRONIX technical support for help setting up a static IP address on your PC.

- 2.a Connect the IncodeX Stream's Ethernet port to the Ethernet port on your laptop or PC with an Ethernet cable.
- 2.b Open a web browser.
- 2.c In the address bar, enter the IncodeX Stream's default static IP address, 169.254.31.2, and press enter.
- 2.d In lowercase, enter "admin" into the "Username" field and "stream" into the "Password" field of the login prompt. Click "Ok" to login.
- 2.e Stop the IncodeX Stream from encoding by clicking the "Stop Encoder" button.
- 2.f Select the "Static" mode from the first "Network Settings" drop-down box.
- 2.g Enter the IP, subnet mask, and gateway information into the corresponding fields. **NOTE: Be sure to write down your static IP address in a known location so that it is available if needed. This information will be required to access your IncodeX Stream's interface in the future.**
- 2.h Click the "Apply Settings" button. The IncodeX Stream will automatically reboot to apply the network address changes.
- 2.i Disconnect the Ethernet cable from your computer or laptop, and then connect it to your network.

Firewall Considerations

For the IncodeX Stream to communicate outside of an internal network, your network needs to be configured using the specifications below.

Function	Destination	Port(s)	Network Traffic
Configuration sync/ subscription validation	license.leightronix.com	80	HTTP/TCP
DNS (name translation)	67.227.136.122	53	DNS/UDP
Time sync	time.leightronix.com	123	NTP/UDP
VieBit live streaming	Origin server*	Origin port**	UDP

* Check the VieBit "Live Streams" page and click "Info" for the origin server information.

** Check the VieBit "Live Streams" page and click "Info" for the origin port number.

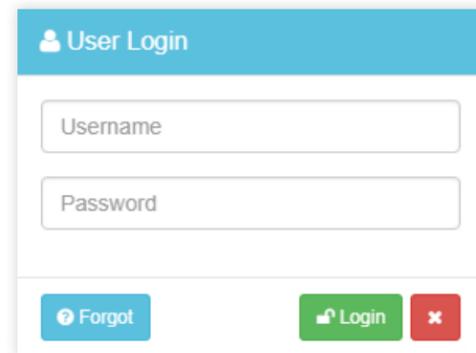
3 VieBit Login & Advanced Interface Settings

The VieBit live streaming account includes a custom streaming website for managing and displaying the audio and video feed from your IncodeX Stream. Follow these steps to set up your VieBit live stream.

Logging Into VieBit

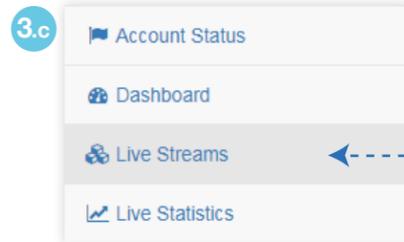
Your VieBit account host name can be found on the rear panel of your IncodeX Stream. Enter this host name into the address bar of a web browser, then follow the steps below:

3.a From your VieBit site's home page, click "Login" in the top right corner and enter your login information.



To log in, refer to your Welcome to VieBit email message for username and password information.

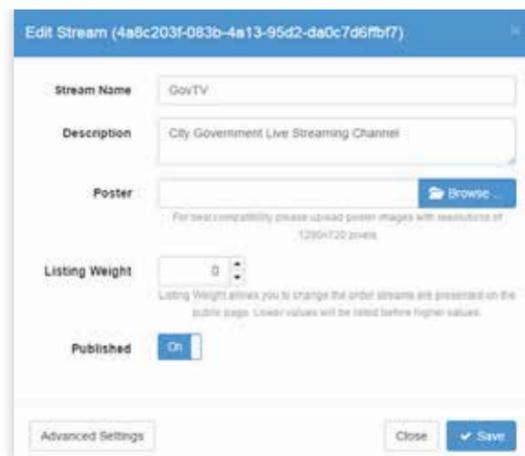
3.b Click "Site Administration" in the drop-down menu under your username to access administrative settings.



To access live stream settings, click the "Live Streams" menu option. A separate panel will be displayed for each encoder associated with your VieBit account.

Edit Stream Information

Click the edit button [] on the panel of the encoder you wish to manage. On the corresponding "Edit Stream" popup window, make changes to any of the following settings:



Stream Name

Type in a name for the stream, which will be displayed to viewers, above the VieBit video player and on the stream's selection button.

Description

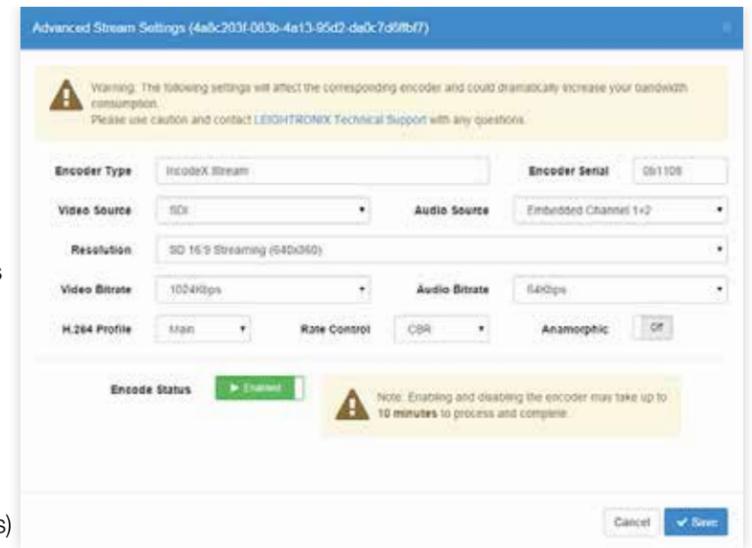
To provide further information to viewers about the live stream, type a description in this field. This description will be displayed under the VieBit video player.

Poster

The image that will be displayed on the VieBit video player window until viewers click the play button. Create a .jpg or .png image file in a third party graphics program that is no smaller than 640px wide by 360px high (default size of the video player) and no larger than 1920px wide by 1080px high (maximum full screen size of video player). Then upload the image by clicking the "Poster" field's browse button [] and navigating to the image's saved location. **NOTE: A poster image larger than the default video player size will be scaled down when the default player is displayed.**

Edit Encoding Settings

Click the advanced settings button [] to reveal the "Advanced Stream Settings" popup window. The encoding settings are used by your LEIGHTRONIX encoder to create the live stream. After selections have been made, click the save button [] to keep the changes or the cancel button [] to cancel your choices. The IncodeX Stream regularly checks with VieBit servers and will automatically update when new encoding settings are detected.



Advanced Settings Explained

Video Source

Choose either "Composite" or "SDI" (HD/SD-SDI signals) to specify the type of video input signal being used.

Audio Source

Use the "Audio Source" drop-down menu to specify the audio encode source as follows:

- If "Composite" is selected as the video source, "Analog" audio will automatically be selected and cannot be changed.
- If "SDI" is selected as the video source, choose either "Analog" to encode analog audio or, if there is audio embedded in your HD/SD-SDI video signal, select the corresponding embedded two-channel audio pair.

Resolution

Choose a resolution for the live stream that maintains the aspect ratio of the incoming video signal (4:3 or 16:9) to prevent image distortion. The selected resolution should also be the same or lower than that of the video source to maintain signal quality. As the resolution increases, the bandwidth needed from the VieBit account to deliver your stream will also increase.

Video Bitrate

Select a video bitrate that maintains the IncodeX Stream's incoming video quality at the selected resolution.

Audio Bitrate

Choose an audio bitrate that maintains the quality of your audio source at the selected input signal.

H.264 Profile

Choose your encoder's H.264 encoding compression capabilities with the "H.264 Profile" drop down box.

- "Baseline" uses the fewest compression features and is best used when viewing on legacy mobile devices is necessary.
- "Main" offers a good balance between a quality video stream and broad compatibility with mobile devices.
- "High" offers the highest quality video stream at the selected bitrate. However, a "High" profile requires more complex encoding and decoding, which will exceed the capabilities of some mobile devices. It is best used for desktop and laptop viewing.

Rate Control

Further control the encoder's data encoding bitrate with the "Rate Control" drop down box. The size and overall quality of the video stream is directly related to the bitrates the encoder uses for encoding, as well as how much bandwidth is required to deliver the stream to viewers. Choose from constant bitrate ("CBR") or variable bitrate ("VBR") as follows:

- CBR (Constant Bitrate) Encoding

CBR allows direct control of the encoding quality and outbound bitrate of the video stream, but is better suited for encoding video that does not contain a lot of movement to prevent an overly large data stream.

- VBR (Variable Bitrate) Encoding

VBR automatically adjusts the selected video bitrate during encoding, using higher bitrates during times of high motion within the incoming video signal while encoding the lower movement portions at lower video bitrates. The selected video bitrate is treated by the encoder as a target that the adjusted bitrates end up averaging over a period of time. VBR encoding results in a data stream that is smaller in size and requires less bandwidth than if the video had been encoded at a constant bitrate.

Anamorphic (Only Available for SD Resolutions)

Enable this option for a widescreen video signal encoded at an SD resolution converted back to a 16:9 aspect ratio in the VieBit video player.

Encoder Status

Select the enabled [] or disabled [] buttons to start and stop your encoder's streaming service.

Support & Product Registration

Support

At LEIGHTRONIX, every customer of our standard product line receives technical support at no extra charge. There are no service contracts, no annual renewals, no allowances, no deductibles, and no exclusions.

In addition to a 5 year hardware warranty, benefits include access to:

- Priority toll-free telephone support
- Email support
- Online support, desktop to desktop via Webex®
- Software updates
- Firmware updates
- Assistance with updates

Looking for firmware/software or additional documentation? Go to www.leightronix.com/support.html to download important updates and full product manuals.

Phone: (800) 243-5589

Email: support@leightronix.com

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