



Streambox Live



 **Streambox**

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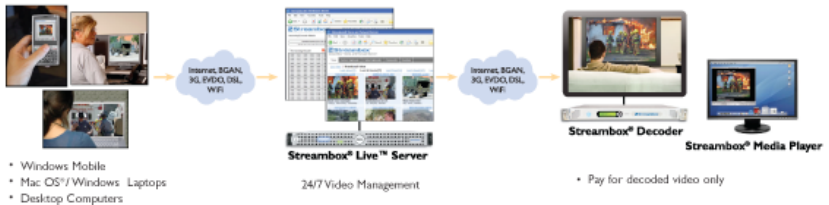
INTRODUCTION

Description of Streambox Live Service

Streambox Live is an innovative broadband video contribution service that enables video journalists, stringers, and other contributors such as citizen reporters, to send video over wired and wireless IP networks to the Streambox Live server. This service will also allow video broadcasters to search and preview large volumes of incoming video, select the video they want, and route it to their decoders. Broadcasters will only pay for what they use.

Suggested Workflow

Using the Streambox Phone Encoder, the new Streambox Live Encoder (for laptops and desktops), or their existing Streambox Encoders, contributors will send live video to the Streambox Live Server. Video broadcasters will log into the Streambox Live Server, find the video stream they want, and route it to their decoder. From the Streambox Live Server, broadcasters will also be able to add new decoders, or manage existing decoders.



Summary of New Features

DRM

Streambox Live includes a new meta-data field referred to as “DRM”. This field gives contributors the ability to control which video broadcasters can access their video streams. Any aggregator specified in the audience metadata field will be able to see that contributor’s live or archived video and have rights to it, while others will not. All users will have access to any “Public” video streams or archives.

Ad-Hoc Decoding

There is a great new feature in Streambox Live for decoders. You can continue using existing decoders by manually routing video to them. However, a new upgraded version of the decoder and Streambox Media Player will enable the decoder to conditionally “pull” video from the Streambox Live Server based on the live stream’s metadata. This is also password-protected, so only your decoders can access your streams.

Easy-to-use interface

In order to make the Streambox Encoder software more accessible to citizen reporters, the entire interface has been simplified with a focus on ease of use. After opening the software, users will enter metadata, pick a preset and they're done!

Automatic Video Archiving

All live streams that reach the Streambox Live server are automatically archived for later download. Files can be located by searching for relevant metadata terms. Each archived file has its own page with an in browser preview.

Auto-Bandwidth Negotiation v1

The Live encoders have a new technology built in called auto-bandwidth negotiation (ABN). This will automatically set the target bit rate of the available bit rate between the encoder and the live server.

USB Camera Support

We have enabled the Windows Live Encoder to support many USB cameras and cameras built in to the laptop. Support for the Apple iSight camera was already available.

Streambox Encoder for Windows Mobile

Another new technology being released as part of the Streambox Live platform is the Encoder for Windows Mobile. Streambox Encoder for Windows Mobile is powered by the ACT-L3 codec, but has been modified to run on a Windows Mobile device. The software lets you send metadata, and comes preconfigured with 3 presets. Common resolutions are: 160x128, 174x144 and 320x240. Maximum frame rate is 15 FPS.

Check the Streambox Live website for a list of tested devices.

LIVE ENCODER USER GUIDE

Installation

Download

To download your Live Encoder for Windows or Mac OS X, log in to:
Http://live.streambox.com

Once you have logged in to the Streambox Live server, click on the “downloads” tab. From this page you can access all available downloads related to Streambox Live. The encoder software will be freely distributed, but comes with some limitations. The maximum bandwidth is 512 Kbps, maximum resolution is CIF, and the target IP is locked.

For Windows Live Encoder there is only one installer. During the install users can choose either PAL or NTSC. For Apple OSX, users must download either the NTSC or PAL version of the installer.

Getting started with Live Encoder

Network configuration

The Streambox Live Encoder will work over any available network connection. Use your computer’s operating system tools to make sure you are connected to the network before proceeding.

Connect Camera and Start Software

Prior to launching the software the camera you are going to use should be connected. The software will automatically detect the camera.

Launch the software by double clicking on the icon.

Add metadata

The opening screen asks you to add metadata. Please include all relevant information for describing the contents of your video.



Using Presets

You are able to make and modify presets in the Streambox Live version of the encoder. The Live Encoder comes with 3 presets already created. You may select these from the “presets” drop down menu.



Manual – this preset allows you to manually select bit rate, resolution, audio codec, and FEC amount.

Reliable – this preset should be used under adverse networking conditions. It includes a slightly lower data rate, and FEC is added.

Sport – this preset is configured for video containing more motion. It has higher frame rate and lower resolution.

Talking Head – this preset uses the highest quality resolution but has a lower frame rate for a talking head with low motion in the background.

Click “Go Live!”

After you choose your setting, click the “GoLive!” button to begin streaming video to the Streambox Live server.



You will immediately see a real-time preview of the video you are sending.

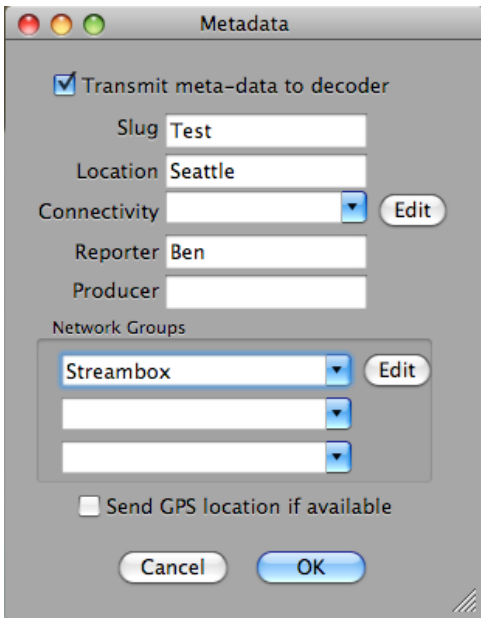
Using your existing Streambox Encoder

If you already own Streambox Encoder software for Mac or PC, you can use it with the Streambox Live Service. To do so set the target decoder IP to be **174.143.76.98**.

DRM Metadata Field

It is recommended that you use the DRM field when using the standard Streambox Encoder software. Use the following steps to add DRM Metadata:

1. Open the metadata dropdown
2. Make sure “transmit metadata” is enabled
3. Type the DRM Group or list of receivers in the first “Network Group” field



Edit meta data screen

PHONE ENCODER USER GUIDE

Installation

Software installer

From your computer, follow these steps:

1. **Connect to: <http://live.streambox.com>**
2. **Click on the “downloads” tab**
3. **Download the software for Windows Mobile Phone**
4. **Copy the software to your phone using activesync and install it**

From your phone:

1. **Open the web browser**
2. **Connect to: <http://m.streambox.com>**
3. **Download the software directly to your phone and install**

Recommended phone tweaks

It is recommended that you modify the “Power” settings of the phone so that it doesn’t turn off if not used.

Getting Started

Choose your network

First decide if you will use the carrier’s 3G network or the built in Wi-Fi of the phone. Wi-Fi generally provides a higher data rate, but is not as widely available as 3G. If you choose to use 3G, no further action is required, the Streambox software will make the connection. If you are using Wi-Fi, use the connection manager of the phone to get registered on your network. When you are connected with Wi-Fi, the Streambox software will detect it and use that connection.

Login

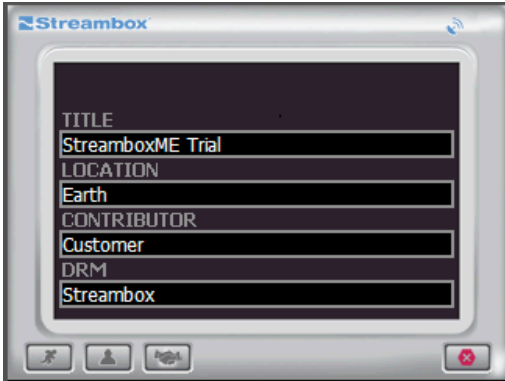
Launch the software by browsing to the executable using the phones file explorer. The software should be installed in “My Device/Program Files/Streambox/MobileEncoder”.

A shortcut called “StreamboxME” is also placed on the quick launch menu.

Add metadata

The next screen up will prompt you to enter metadata. You don’t have to use this feature, but it is recommended. By filling in the “DRM” field you will specify whom you are sending to. If you leave the field blank it will go to all video broadcasters that are using the Streambox Live service. If you would like to send to more than one recipient, you can place multiple names here separated

by commas. In order to use the new ad-hoc decoding functions, the values you place in these fields are important.



Phone Encoder Metadata Screen

Select preset and stream

Below is an image of the main control screen for the Streambox Phone Encoder. By pressing one of the three buttons on the bottom you will apply the preset associated with that button and start streaming to the Streambox Live Server. If you are using 3G, the phone will automatically connect.



Reliable – this preset should be used under adverse networking conditions. It includes a slightly lower data rate, and FEC is added.



Talking Head – this preset uses the highest quality resolution but has a lower frame rate for a talking head with low motion in the background.



Sport – this preset is configured for video containing more motion. It has higher frame rate and lower resolution.



Cancel button – this button will stop the current stream. If you press this button again it will terminate the application.

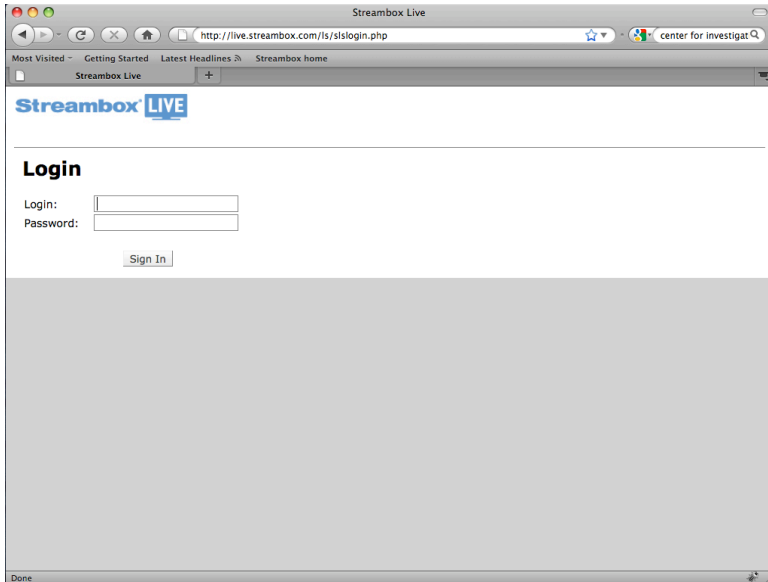
LIVE SERVER USER GUIDE

Connect to server

To connect to the Streambox Live Server, first open a web browser. In the address bar type **http://live.streambox.com** and press “enter”.

Login

As a Streambox Live user, your user name and password will have been emailed to you. Locate your user name and password then log in.

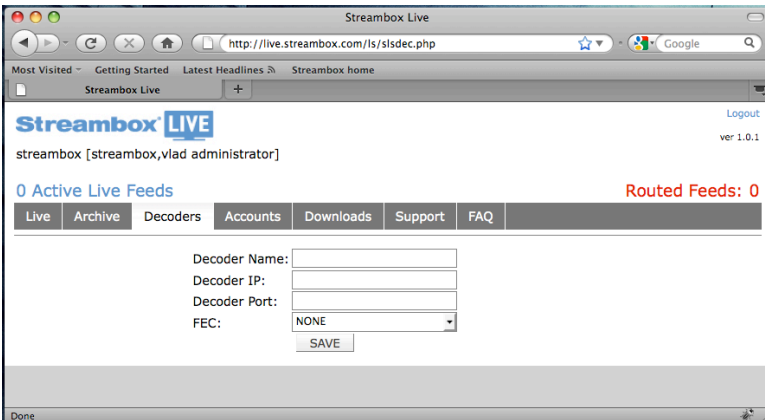


Streambox Live Login Page

Add or manage decoders

When you log in for the first time you will have to add at least one decoder to your account. To add a decoder, follow this procedure:

1. Click on the “Decoders” tab
2. Click on the “Add new decoder” button
3. Fill in your decoder’s name, IP, and port
4. Choose an FEC amount. This FEC is added between the Streambox Live server and your decoder and does not originate at your encoder. Be aware that once the service officially starts extra FEC that you add will be billable since it increases the amount of bandwidth you consume.
5. Click the “save” button



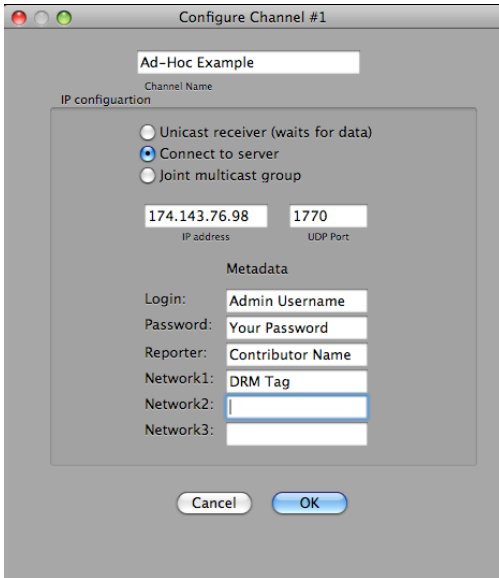
Add Decoder Page

Ad-Hoc Decoders

Part of the new Streambox Live Service is the ability to do ad-hoc decoding. The new decoder software, and Streambox Media Player give you the ability to selectively pull live streams from the Live server based on the metadata of the live stream.

To use the Streambox Live Media Player in ad-hoc mode follow these steps:

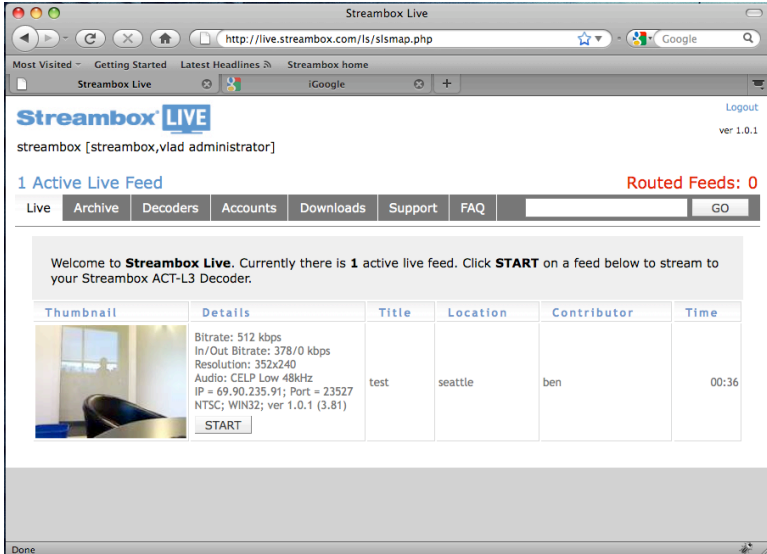
1. Open the configuration menu of the channel you wish to use
2. Select “Connect to server”
3. Add the Streambox Live Server IP address and port number:
174.143.76.98 and **1770**
4. For login and password use your drm.admin account credentials
5. For the “Reporter” field, enter the contributor’s name
6. In the “Network 1” field, enter your DRM tag
7. Click “ok” and click select the channel to apply settings



Ad-Hoc Decoding

Select and route video streams

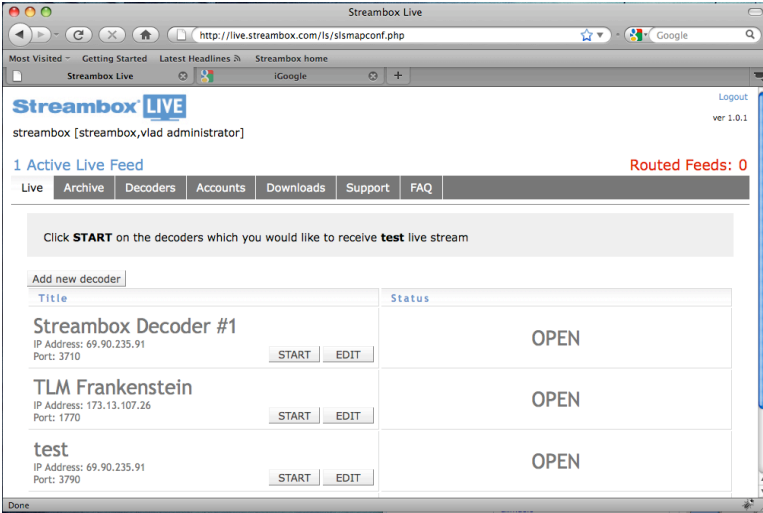
Routing video to your encoders is easy. Click on the “Live” tab to begin.



Live Tab

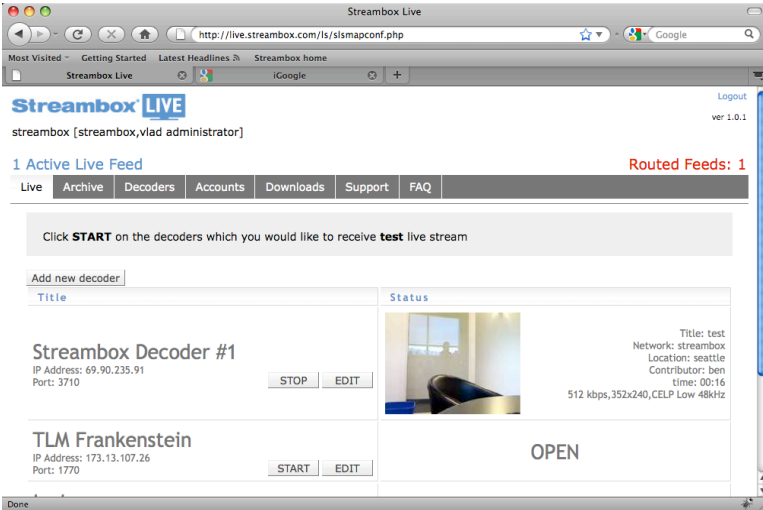
On this page you will see all incoming video streams that are available to you, along with all the metadata and stream characteristics you also have a thumbnail preview of the actual stream. This preview is created during the first 10 seconds of video and does not change.

To route the video stream, click on the “START” button. This will bring up a table with all your decoders on the left and what stream is currently routed to them on the right.



Decoder routing table

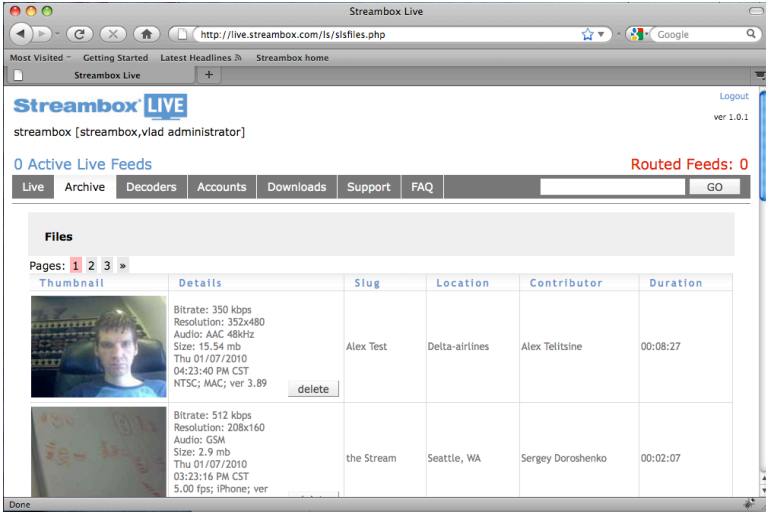
When you are ready to decode click the “START” button and the stream you selected will be routed to the decoder you choose.



Decoder with stream routed

Archive Feature

One of the new features of Streambox Live is the ability to auto-archive incoming video streams. When a new feed is sent to you, an archive ACT-L3 file is automatically created whether the stream is routed or not. When you click on the Archive tab, you will see all video archives available to you for download. You can also do a metadata search to find the files you are looking for. To delete the file, click the “delete” button on this page.



Archive Page

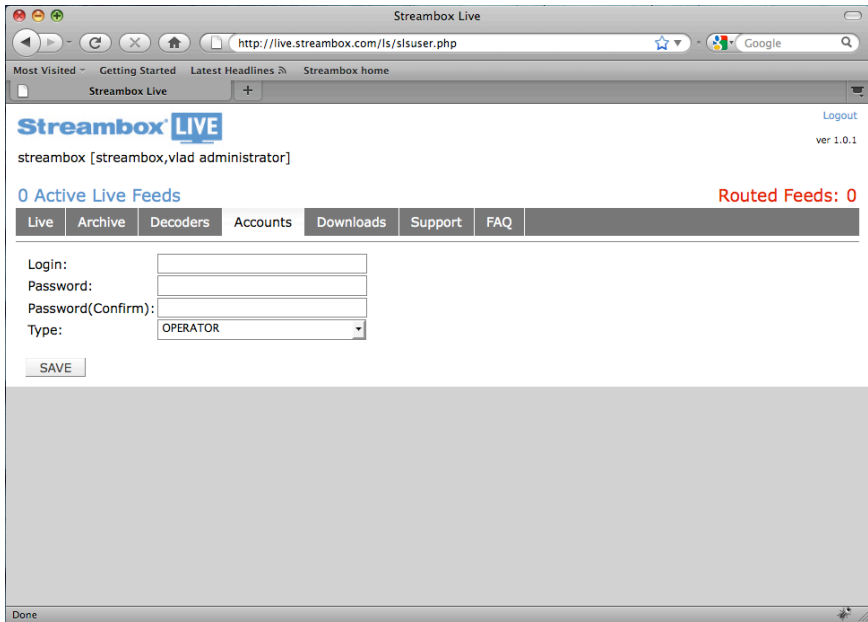
Clicking on the thumbnail will take you to a new page that displays information about the file, an in-browser preview of the first 1000 frames, as well as a download link to the raw ACT-L3 file.

Managing Accounts

The Streambox Live server offers 3 levels of account management. There are the DRM administrator, the DRM operator, and the DRM contributor. Administrators and operators can route video, download archives and manage decoders. Administrators can manage accounts and view billing logs, but operators cannot. Contributors and Administrators have access to file downloads.

To create a new account:

1. Click on the “Accounts” tab
2. Select the account type you would like to create
3. Fill in the information fields



Add user page