Introduction

The Streambox® AvenirMicro™ and AvenirDrone™ are next generation mobile video encoders.

They are built on the Qualcomm® Snapdragon™ CPU module with HD-SDI and HDMI video capture. The AvenirMicro and AvenirDrone have a small form factor weighing in at 500gm and 400gm respectively.

The workflow philosophy is an ‘as you like it’ modular design. To the base unit you can snap on an embedded modem module, a battery module, a breakout cable for four external USB modems, or a USB modem module.
Getting Started

What’s Included:

- Streambox Avenir Micro or Drone Encoder base unit
- AC Power Supply with international plug adapters

What’s Needed:

- Video source such as a digital video camera
- HDMI or SDI video cable to connect the video source
- Ethernet cable connected to an IP network
- Free trial account for Streambox Cloud Services (http://live.streambox.com/ls/reg.html) (see Figs. 12-14)
- Browser access to Internet to view video stream on your Streambox Cloud Account
Anatomy of the AVENIR Micro™

- HDMI in
- ¼”-20 mount
- LED Beacons
- LCD screen
- Action of buttons
- Action Buttons
- Power switch
- LAN Connect
- 2 x USB*
- SDI (BNC) in
- Power connect (7-17 VDC)

*Buffalo WiFi dongle is used for near point-to-point remote control/settings
Making the Right Connections

• Connect the power source
• Connect a video source via SDI in or HDMI in
• Connect LAN with IP service*
• Turn power switch on
  • Unit will start streaming automatically with a good video source and Internet connection – the Green “streaming” LED will flash (see Fig. 1, next page)
  • If either video source or Internet connection is insufficient the Red alert LED will flash with a text explanation on the LCD screen

*Use LAN connection for setup. Subsequent use will support either *LAN, WiFi, and WWAN (mobile modems), or *ALL bonded together.
Figure 1. Initial, Home Screen

**Actions**
INFO: 2 sec press → Custom Preset (Fig. 3)
INFO: Single press → Network IP’s (Fig. 4)
STOP: Single press → Stop streaming
START: Single press → Start streaming
START: 2 sec press → ABN Preset (Fig. 3)

* Micro is position responsive so the Top Button is always the button on the top (Fig. 2)

** State changes require active video and network connections
Right-side Up View
Top action item is associated with the top button (green). Bottom action item is associated with bottom button (blue).

Upside Down View
When a Micro or Drone is flipped upside-down, the LCD display is rotated so the text is always right-side-up. The buttons will match the action times (compare green and blue arrows in both orientations).
Custom Preset
Pressing the INFO button for 2 seconds on the Home screen (see Fig. 1) will initiate live streaming using the values set by the Custom Preset option (within the Web interface).

ABN Preset (Automatic Bandwidth Negotiations)
Pressing the START button for 2 seconds on the Home screen (see Fig. 1) will initiate live streaming using an automated process to determine the best bandwidth. Press ACCEPT when an acceptable bandwidth has been reach or you can allow ABN the full time to determine the best bandwidth available (in this case there is 13 seconds left in the process).
Figure 4. Network IP’s

LAN IP Screen

Actions
More: Single press → Next screen, WIFI IP
HOME: Single press → Home screen (Fig. 1)

WiFi IP Screen
(in this case there is no WiFi connection)

Actions
More: Single press → Decoder screen (Fig. 5)
HOME: Single press → Home screen (Fig. 1)
Figure 5. Decoder (stream destination)

Video Stream Destination (Decoder)

**Actions**
More: Single press → Network Mode screen (Fig. 6)
More: 2 sec press → Next Cloud Server*
HOME: Single press → Home screen (Fig. 1)

* Each time you press the More button for 2 seconds it advances to the next Cloud Server; LiveUS (US West), LiveUSEst (US East), LiveAU (Australia), LiveDE (Germany), LiveEU (Europe), LiveJP (Japan), LiveSG (Singapore), LiveIN (India).

** State changes require active video and network connections
Figure 6. Network Mode

Bond ALL network connections for streaming

Actions**
More: Single press → CPU Temp screen (Fig. 7)
More: 2 sec press → Next Network Mode (below)
HOME: Single press → Home screen (Fig. 1)

** State changes require active video and network connections
Figure 7. System Screens

**CPU Temperature Screen**

**Actions**
- More: Single press → IFB screen (below)
- HOME: Single press → Home screen (Fig. 1)

**IFB Screen**

**Actions**
- More: Single press → Serial Number screen (Fig. 8)
- Restart: Single press → Restart IFB
System Serial Number Screen

Actions
More: Single press → Restart Encoder screen (below)
HOME: Single press → Home screen (Fig. 1)

Restart Encoder Screen

Actions
HOME: Single press → Home screen (Fig. 1)
RESTART: Single press → Restart Encoder
Web Settings
Figure 9. Initial Setup

Setup

1. Plug in camera
2. Plug in LAN
3. Plug in power
4. Turn on (wait for Home screen, see Fig. 1)
5. Goto LAN IP Screen (see Fig. 4)
6. Open web browser
7. Enter LAN IP on address line
8. On web page, press ‘Metadata’ button*
9. Enter metadata (see Figs. 9 and 10)

*Item #8 is not shown in this picture
Figure 10. Streambox Micro Access

Editing Metadata (Step 1)

1. Find the LAN IP (for initial setup – see Fig. 4)
2. Open web browser on same network
3. Enter LAN IP address on address line (this connects you directly with the Micro/Drone)
4. Click Metadata button
5. Go to Fig. 11
Figure 11. Streambox Micro Access

**Editing Metadata** (Step 2)

1. Enter Title (any title for a video is fine)
2. Enter Reporter
3. Enter Location
4. Enter your “Group” as DRM. If you don’t have a “Group,” try your Username, as shown in the example*:
5. Click Save button (now your streams will be received by your StreamboxUser account)

* StreamboxUser is an example account name. You will have to created an account and then enter that name.
Streambox Cloud™
1. Enter [http://live.streambox.com](http://live.streambox.com) in browser
2. Login if you have an account or click the ‘Sign Up’ tab if you do not (in the latter case see Fig. 13, otherwise skip to Fig. 14)
Figure 13. Creating Streambox Cloud Account

Streambox Cloud Login Page

1. Enter a User Name
2. Enter your email
3. Enter a Password
4. Re-enter a Password
5. Enter Captcha string
6. Enter Promotional Code (if any)
7. Check if you accept terms
8. Click ‘Create an Account’ button
9. Select ‘Log In’ tab (see Fig. 12)
Figure 14. Personal Live Channel

Streambox Cloud Login Page

1. Live video playback
2. Social media sharing (share live stream via social media or embed in your own website)
3. List of archived videos
4. Space remaining on your account
5. Account actions
Local Remote Control
Local AP Remote Control
You can connect directly to a Micro encoder via a peer-to-peer WiFi connection for remote control. Using a mobile device (iPhone/Android) or a computer with WiFi:
1. Scan available WiFi networks for Micro device name (this will be the same as the serial number). Then connect to that device using 10 ones (1111111111) for a password. See Fig. A.
2. From the web browser, enter the URL http://10.111.111.1 to access the Micro device. See Fig. B.
3. Remember to return system to original WiFi connection when you are done.

Figure 15. Local Access Point Login