

Makito X Encoder Quick Start Guide

Makito X Encoder 2.2



This Quick Start Guide summarizes the basic steps required to install and configure the Makito X encoder (single-height or dual-height chassis) to stream to your compatible decoding device or player, such as the Makito X or the Makito decoder.

For detailed configuration and operation information, please refer to the *User's Guide* (available at <https://doc.haivision.com>). For the default credentials, refer to the *Important Notice* (postcard shipped with the appliance or available on the Haivision Support Portal at <http://support.haivision.com>). For information on the MB6 (6-slot) or MB21 (21-slot) chassis, please refer to the [MB6 and MB21 Chassis Installation Guide](#).

Installing the Encoder

1. Unpack the box and visually inspect the package contents for any evidence of shipping damage. [See the *Important Notice* postcard in the box for list of contents.]
2. Install the Makito X as a desktop unit on a flat, well-ventilated surface.

! Important

Refer to the [Safety Guidelines](#) and [Waste Electrical and Electronic Equipment \(WEEE\) Disposal MXE](#) in the *User's Guide*.

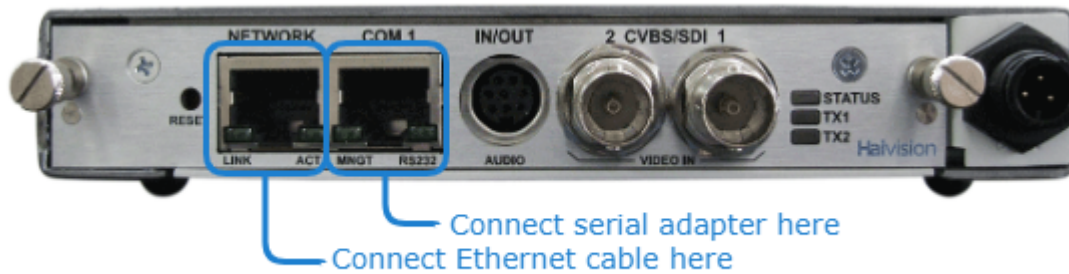
Connecting to the Network

To connect the Network Interface:

1. Connect the Makito X's network port to the IP network using an Ethernet UTP cable (type Cat 5 or higher).

This will allow you to telnet to the unit or connect via the Web interface.

Network and COM1 Ports (Makito X SDI, #S-292E-HSDI2)



Note

To connect the serial interface (if applicable, SDI only), please refer to [Serial Interface Setup \(Makito X SDI\)](#) in the [User's Guide](#).

Connecting to A/V Sources

1. Connect your video cables to one (or both) of the Makito X's video inputs, using the appropriate connector:

[SDI Video Input](#) [DVI Video Input](#)

SDI Video Input

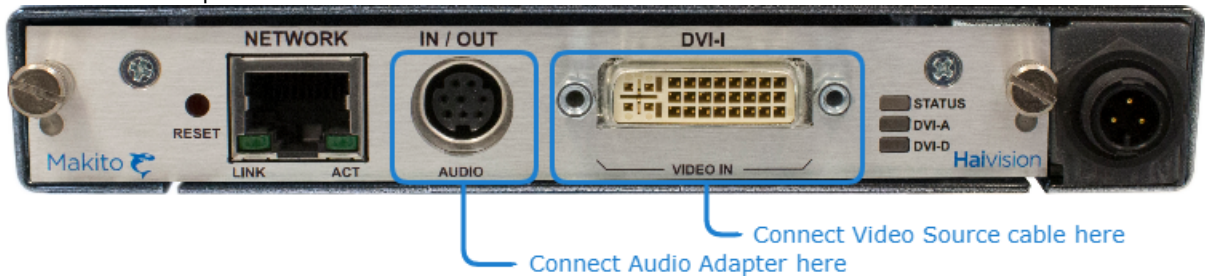
- **Composite (CVBS) Video Input:** Use the BNC connector(s).
- **SDI Video/Embedded Audio (SD or HD) Input:** Use the BNC connector(s).



[SDI Video Input](#) [DVI Video Input](#)

DVI Video Input

- **Component Analog / Digital Video/Computer Graphics:**
Use the DVI-I Input connector.



2. **Analog Audio Input:** Connect your audio source cable to the Makito X's audio input, using the RCA female to audio adapter (unbalanced shown below).



White - Channel 1 In
Red - Channel 2 In
Black - Talkback Out

Note

A balanced audio cable adapter is available from Haivision upon request. Please contact your sales representative or email Haivision at: sales@haivision.com

The Makito X also supports Serial Digital Interface (SDI) embedded audio format. Selection between Analog (the default) and SDI digital audio is done from the Web interface (see [Configuring Audio Encoders](#)) or using the command line interface (CLI) `audenc` command.

Powering Up the Encoder

Once all the cables are in place, the encoder is ready to be powered up.

Caution

To prevent damage to the Makito X and/or power supply, be sure to connect the power supply to the chassis first and then to the AC source. Always use the AC power cord and power supply provided with the unit. The single and dual-height chassis have different power supply units and chassis connectors.

Important

There is no power switch on the Makito X appliance. The power is automatically on when the unit is plugged in. When using the AC/DC power adapter, the power supply cord is used as the main disconnect device. Ensure that the AC socket outlet is located near the equipment and is easily accessible.

To power up the Single-Height or Double-Height Chassis:

1. Insert the 3-pin connector on the 12V power supply into the Power input jack at the rear of the Makito X.
2. Connect the power cord to the power supply and plug the cord into a grounded AC power source. The status LED will start blinking green, indicating that the encoder is booting up.
3. Wait until the Status LED stays solid green, indicating that the encoder is ready for operation.

[Single-Height Chassis](#) [Dual-Height Chassis](#)

Single-Height Chassis

Rear View (#S/B-292E-HDSI2) showing Conxall 3-pin Locking Connector



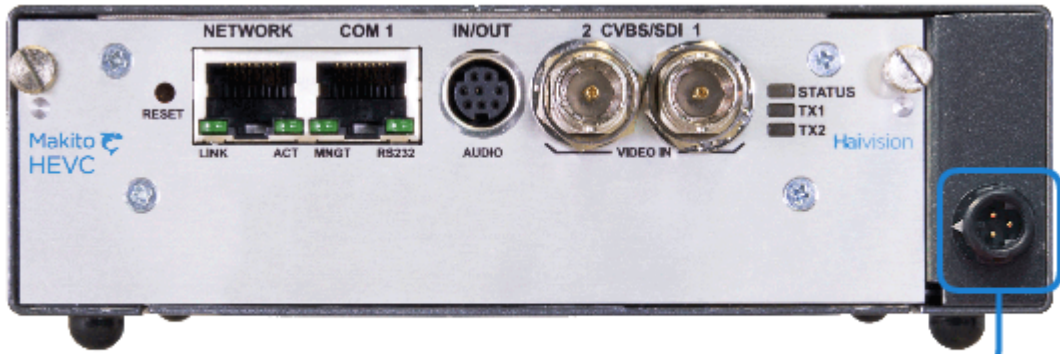
Power Adapter 12VDC with Conxall 3-pin Connector



[Single-Height Chassis](#) [Dual-Height Chassis](#)

Dual-Height Chassis

Rear View (Makito X HEVC Encoder #S-292E-SDI2-HEVC)



Connect power supply here
(Power Input jack)

Power Adapter 12VDC with HiRose 3-pin Connector



HiRose connector

Accessing the Web Interface

1. Open a Web browser of your choice, such as Chrome, Firefox, Safari, or Internet Explorer.
2. Type the IP address for the encoder into the URL address bar and press Enter.

The Makito X comes pre-configured with the following default settings:

IP Address	Subnet Mask	Gateway
10.5.1.2	255.255.0.0	10.5.0.1

Note

The above network settings may be different if your Makito X was pre-configured to interoperate with a Furnace system.

Before you can begin streaming, you must configure the Makito X with a valid IP address and gateway to work in your environment. For details, see [Configuring Network Settings](#) in the User's Guide.

3.

Note

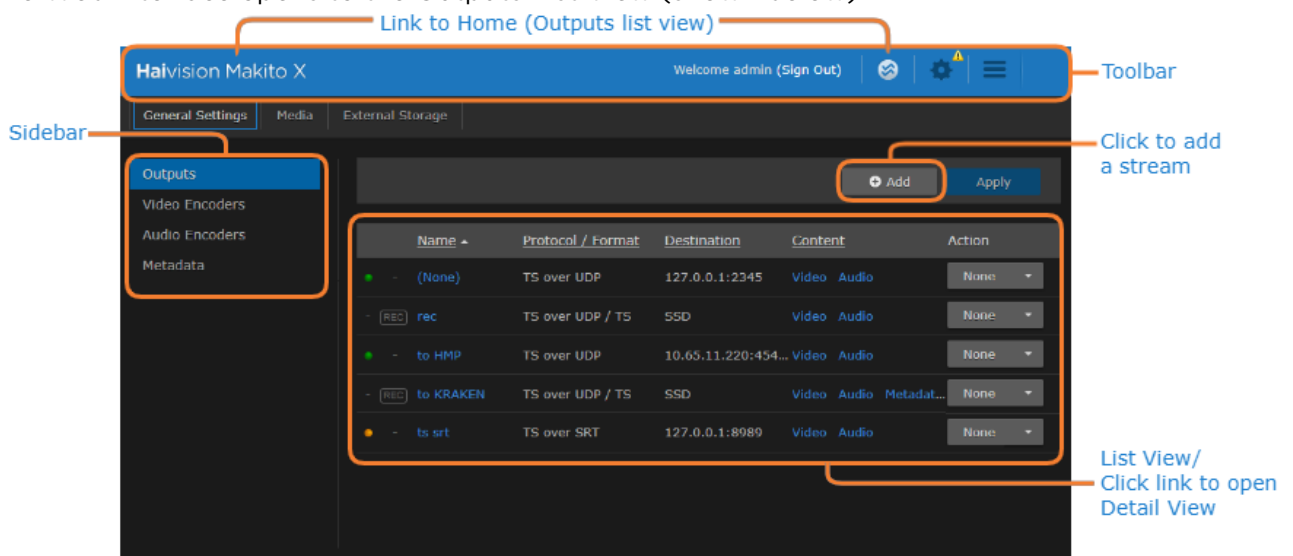
The Makito X identity certificate and trusted root certificates may be managed from the Web interface (Certificates page) or using the CLI `certificate` command.

4. Sign in to the Makito X Web interface, using the default administrative username and password. Please refer to the *Important Notice* document (included in the box or available from the [Download Center](#) on the Haivision Support Portal) for the default login credentials.

Tip


For security purposes, be sure to change the default passwords! See [Changing Your Password](#) in the User's Guide.

The Web interface opens to the Outputs List View (shown below).

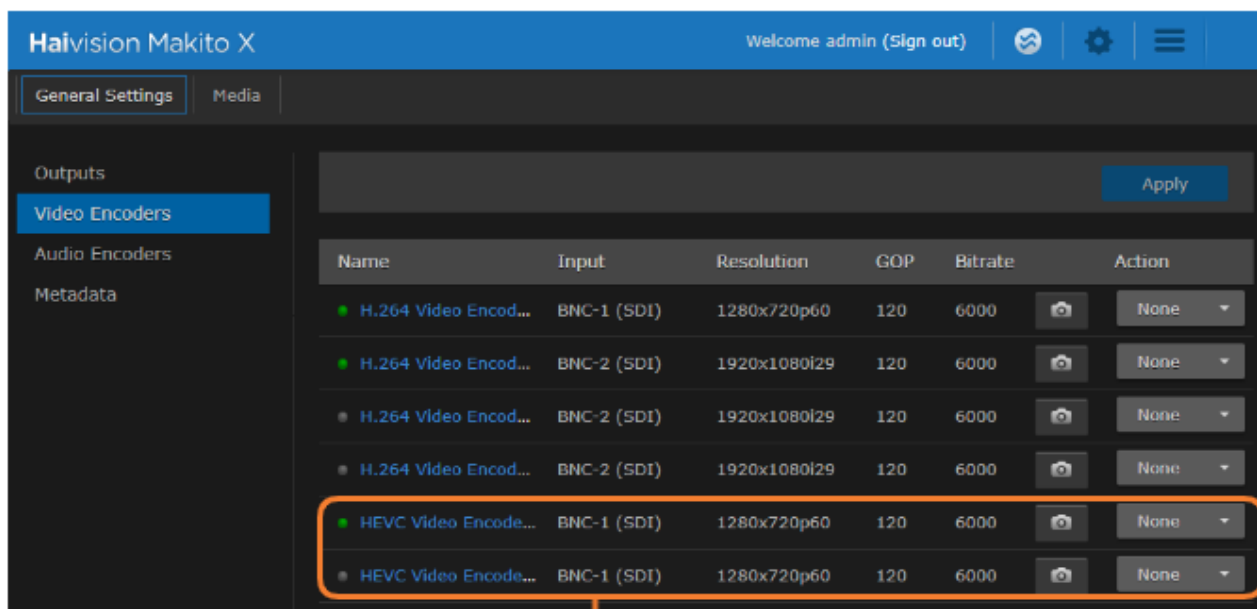


Configuring the Video Settings

From the Video Encoders pages, you can configure four or six independent video encoders to apply to streams.

1. Click the  **Streaming** icon on the toolbar, and then click **Video Encoders** on the sidebar (under **General Settings**).

The Video Encoders List View displays information at a glance for the video encoders. On the Makito X HEVC, the List View includes two HEVC encoder instances, as shown in the following example:



Name	Input	Resolution	GOP	Bitrate	Action
H.264 Video Encod...	BNC-1 (SDI)	1280x720p60	120	6000	None
H.264 Video Encod...	BNC-2 (SDI)	1920x1080i29	120	6000	None
H.264 Video Encod...	BNC-2 (SDI)	1920x1080i29	120	6000	None
H.264 Video Encod...	BNC-2 (SDI)	1920x1080i29	120	6000	None
HEVC Video Encode...	BNC-1 (SDI)	1280x720p60	120	6000	None
HEVC Video Encode...	BNC-1 (SDI)	1280x720p60	120	6000	None

HEVC Encoder instances

2. To change the status for an encoder, click the dropdown list under **Action** and select either Start or Stop (as applicable).
3. To view details or configure the settings for a video encoder, click the link in the table.
4. On the Detail View, you can configure the Video Encoder settings.
 - To configure settings such as the video Input, (output) Bitrate, Resolution, and GOP Size, select or enter new values in the appropriate fields. See [Video Encoder Settings](#) in the User's Guide.
 - To apply your changes, click **Apply**.
 - To start or stop the encoder, click **Start** or **Stop** (as applicable).
 - To view statistics for the encoder, click **Statistics**.

Configuring the Audio Settings

From the Audio Encoders pages, you can configure four or eight independent audio encoders to apply to streams.

1. Click **Audio Encoders** on the sidebar (under **General Settings**).
The Audio Encoders List View displays information at a glance for the audio encoders.

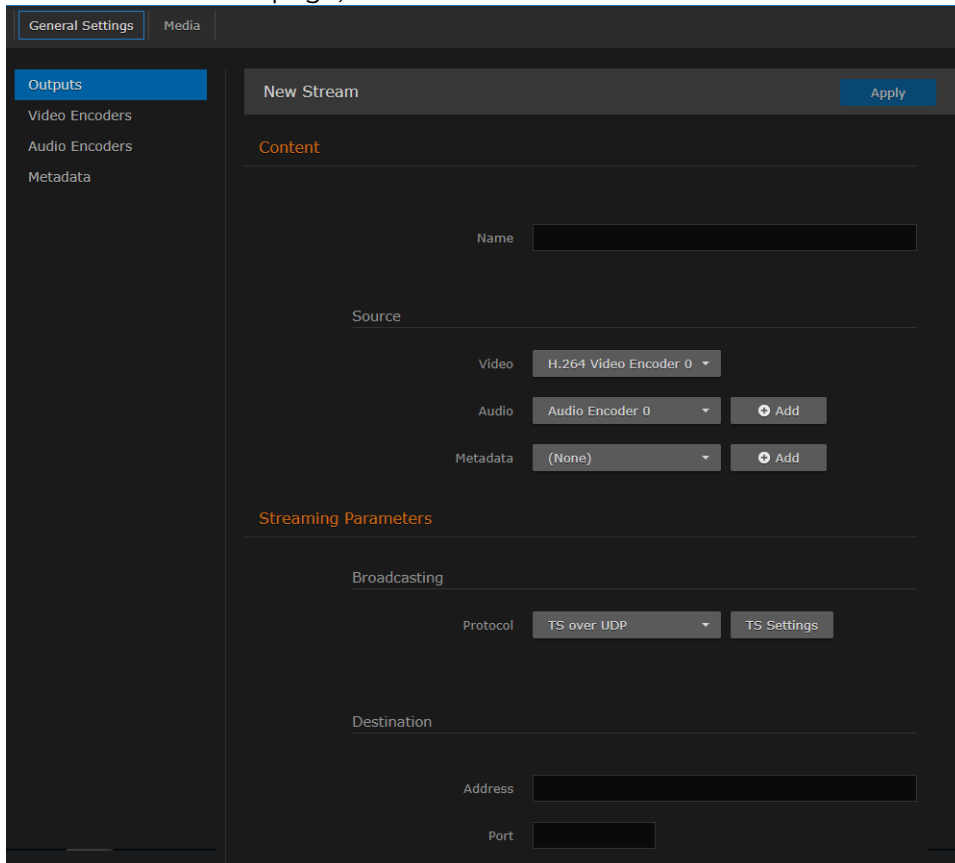
Name	Input	Channels	Language	Bitrate	Action
Audio Encoder 0	SDI-1 Ch. 1-2	Stereo		128	None
Audio Encoder 1	Analog	Stereo		128	None
Audio Encoder 2	Analog	Stereo		128	None
Audio Encoder 3	Analog	Stereo		128	None
Audio Encoder 4	Analog	Stereo		128	None
Audio Encoder 5	Analog	Stereo		128	None
Audio Encoder 6	Analog	Stereo		128	None
Audio Encoder 7	Analog	Stereo		128	None

2. To change the status for an encoder, click the dropdown list under **Action** and select either Start, Stop or Mute (as applicable).
3. To view details or configure the settings for an audio encoder, click the link in the table.
4. On the Detail View, you can configure the Audio Encoder settings.
 - To configure audio settings such as the Input, Bitrate, and Language, select the new values in the appropriate fields. See [Audio Encoder Settings](#) in the User’s Guide.
 - To apply your changes, click **Apply**.
 - To start or stop the encoder, click **Start** or **Stop** (as applicable).
 - To mute the audio (when active), click **Mute**.
 - To view statistics for the encoder, click **Statistics**.

Setting Up Streaming

From the Outputs pages, you can set up streaming. On the Makito X with Storage, you can set up streaming only, recording only, or streaming with recording.

1. Click **Outputs** on the sidebar (under **General Settings**).
2. On the Outputs List View, click **Add** to create the first stream or recording session.
3. On the New Stream page, fill in the fields to choose the Content:



4. Type a name for the stream in the Name field.
5. For the Source, (as an example) use Video Encoder 0 and Audio Encoder 0 (analog) with no Metadata.

Note

By default, SDI Input 1 is assigned to Video Encoders 0 and 1, and SDI Input 2 is assigned to Video Encoders 2 and 3.

6. (Makito X with Storage only) To set up streaming, toggle the Streaming Parameters button to **On**.
7. For a basic MPEG-2 transport stream setup, under Broadcasting, select TS over UDP as the Protocol (keeping the default TS settings).
8. Under Destination, type in the IP Address and Port number, for example, multicast address 225.6.7.8 and port 2000.
9. Leave the default values for the remaining Streaming parameters. See [Streaming Output Settings](#) in the User's Guide.

10. If you only want to create a streaming session, click **Apply** now. Otherwise skip this step.

Setting Up Recording

Note

Recording is only available on the Makito X with Storage dual-height model.

Recorded sessions may be exported to an FTP/SFTP server or stored locally on an SSD (if installed).

To set up a recording session:

1. On the Outputs Detail View, scroll down the page and toggle the Recording Parameters button to **On**.
2. Under File, type a name for the recording in the Name field. Keep the default TS File Format and settings.
3. Under Time & Size, keep the default settings for Recording Limit and Recording Segmentation (None) to get started.
4. Click **Apply** to start recording (as well as streaming, if configured).

Viewing Your Streams

To view your streams, make sure your decoding devices or applications:

- support MPEG Transport Stream format,
- are turned on and connected to a display,
- are accessible on the same network segment as the Makito X, and
- are “tuned” to the Makito X Destination IP address and Port, for example, `225.6.7.8` / ports `2000` and `2400` (as defined in Step #6 in [Setting Up Streaming](#)).


Tip

For the recommended settings to optimize the Makito X encoder configuration to stream to the Makito X decoder, see [Makito Decoder Interoperability](#) in the User’s Guide.

Note

In order to optimize your encoder’s performance, it is recommended that *only* the required network services be enabled. Please review the network services to make sure services used for your application are enabled or disabled as appropriate. See [Enabling and Disabling Network Services](#) in the User’s Guide.

Important

Clicking **Apply** does not save your changes and they will be lost after a reboot. Saving configurations as presets provides a way for you to save groups of settings and apply them to other streams. A warning indication  appears in the title bar on systems with unsaved configurations. For more information, see [Saving and Loading Presets](#) in the User’s Guide.

Obtaining Documentation

This document was generated from the Haivision InfoCenter. To ensure you are reading the most up-to-date version of this content, access the documentation online at <https://doc.haivision.com>. You may generate a PDF at any time of the current content. See the footer of the page for the date it was generated.

Getting Help

General Support	<p>North America (Toll-Free) 1 (877) 224-5445</p> <p>International 1 (514) 334-5445</p> <p><i>and choose from the following:</i> Sales - 1, Cloud Services - 3, Support - 4</p>
Managed Services	<p>U.S. and International 1 (512) 220-3463</p>
Fax	<p>1 (514) 334-0088</p>
Support Portal	<p>https://support.haivision.com</p>
Product Information	<p>info@haivision.com</p>