

Max Appliance Quick Start Guide

KB Encoder/Transcoder 5.8



The KB Max Encoder/Transcoder is a portable all-in-one H.264/HEVC encoder, offering 4K 360-degree virtual reality capabilities in a portable, small form factor appliance. The KB Max is suitable for on-the-go live events and non-permanent installations.

This *Quick Start Guide* illustrates the basic steps required to set up and connect the KB Max appliance.

Safety Guidelines

Use the following guidelines when unsafe conditions exist or when potentially hazardous voltages are present:

- Always use caution and common sense.
- To reduce the risk of electrical shock, do not operate equipment with the cover removed.
- Repairs must be performed by qualified service personnel only.

Improper handling and/or installation practices of sensitive equipment may VOID the warranty.

Caution

When handling components, or when setting switch options, always use an antistatic wrist strap connected to a grounded equipment frame or chassis. *If a wrist strap is not available, periodically touch an unpainted metal surface on the equipment.* Never use a conductive tool, such as a screwdriver or a paper clip, to set switches.

Waste Electrical and Electronic Equipment (WEEE) Disposal

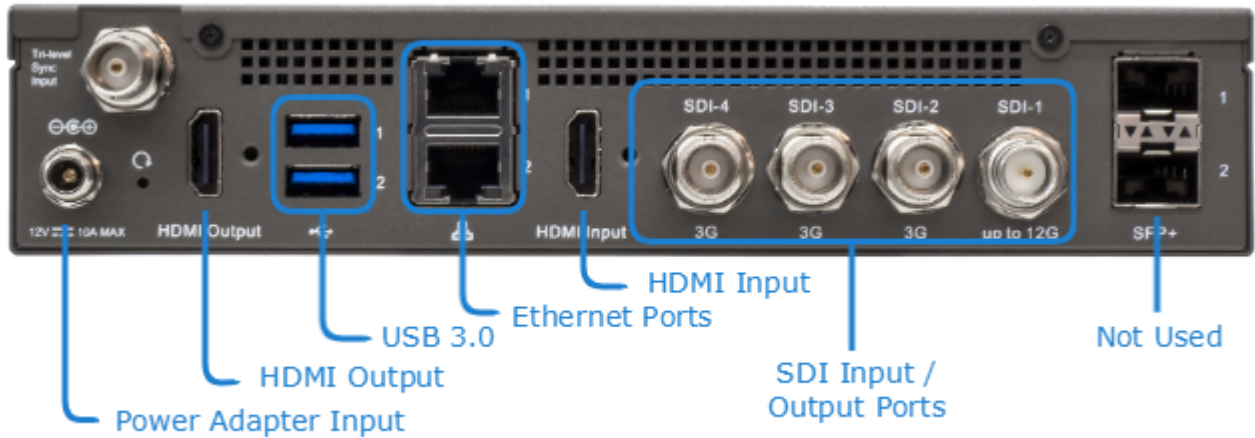


In accordance with the European Union (EU) WEEE Directive, Haivision products that fall within the scope of the WEEE, are labeled with the above symbol, and customers are encouraged to responsibly recycle their equipment at the time of disposal. Haivision also offers its customers the option of returning Haivision equipment to facilitate its environmentally sound disposal.

For more information, please visit our website at: <https://www.haivision.com/environment>.

Setting up the KB Max Appliance

1. Unpack the box and visually inspect the package contents for any evidence of shipping damage.
2. Place the appliance on a stable surface or securely mount it on a wall, under a desk, or on the back of a monitor as desired.
3. On the rear of the appliance:
 - Connect an Ethernet cable to the appropriate port.
 - Connect the power cable to 12V DC power adapter input.
 - Connect the desired video inputs to the HDMI and SDI ports.
 - *(Optional)* If you will be accessing the Console UI, connect a monitor to the HDMI output and connect a USB keyboard.
 - *(Optional)* For Managed Services customers who have the optional desktop, connect a monitor to the HDMI output, and a mouse and keyboard to the USB ports.



4. Plug the power adapter into an A/C power source.

Powering on the Appliance

To power the appliance press the power button on the front of the device.



Tip

When powering on and off the device, simply tap the power button. Do not hold down the button for an extended period, as that resets the device.

When the device finishes booting, the logo appears on the front panel display screen.

Front Panel

- The front panel display shows Haivision logo followed by the IP address of up to two installed NIC cards (corresponding to the labels on the back of the unit).
- The status lights include:

LED	State	Description
Encode	<ul style="list-style-type: none"> • Off • Green • Red 	<ul style="list-style-type: none"> • No channel is running. • At least one channel is running and no errors. • At least one channel is running and there is an error.
Status	<ul style="list-style-type: none"> • Off • On 	<ul style="list-style-type: none"> • Device is powered off. • Device is powered on.

Obtaining the Assigned IP Address

On the KB Max, the IP address for the device appears on the display panel on the front of the unit when you power it on. If there are two NIC cards, both addresses appear on the display one above the other.



Note

After first boot, the device attempts to obtain an IP address from a DHCP server on your network. We recommend that you change to a static IP address before continuing with the setup. Contact your network administrator for guidance on which network settings to use. The following section takes you through the steps to update your network settings using the Console UI.

Connecting to the Console UI

[Standard Configuration](#) [Managed Services Configuration](#)

Note

Accessing the Console UI requires administrator privileges and password.

To access the Console UI:

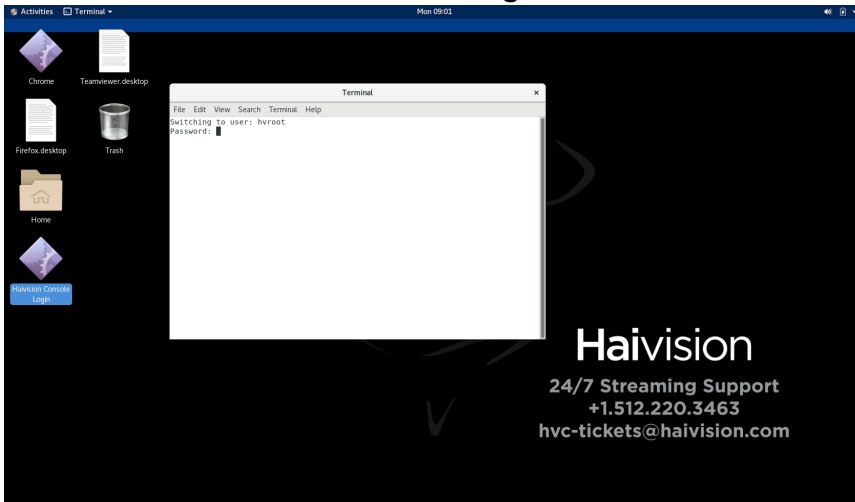
1. Either connect a keyboard and monitor to the appliance, if applicable, and boot the appliance. Or, initiate a secure shell (SSH) connection to the IP address of the server using an SSH client (for example, PuTTY).
2. Log in using the `hvrroot` username and password. Refer to the *Important Notice* document that accompanied your device for the default `hvrroot` password.

[Standard Configuration](#) [Managed Services Configuration](#)

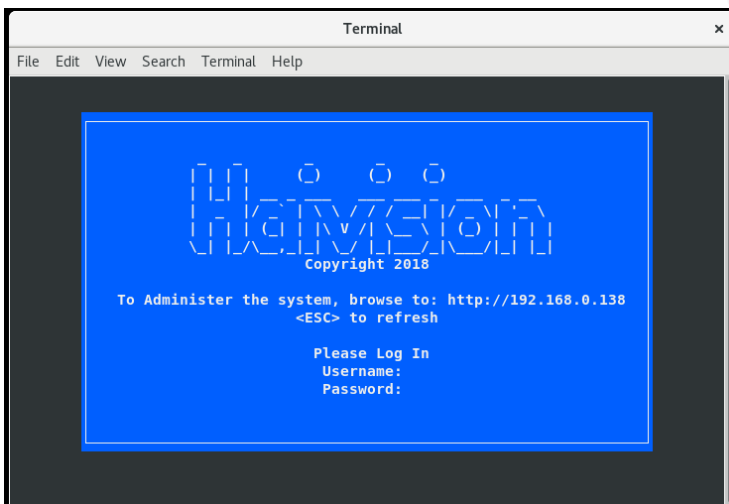
If you opted for the Managed Services option, your appliance includes a CentOS desktop. To connect to the Console UI with the Managed Services option:

1. Attach a keyboard, mouse, and monitor to the appliance.
2. Push the power button on the front of the appliance (the power LED will light).
3. At the Desktop login screen, enter your username and password. See the *Important Notice* document for the factory-set credentials.

4. Double click the **Haivision Console Login** icon.



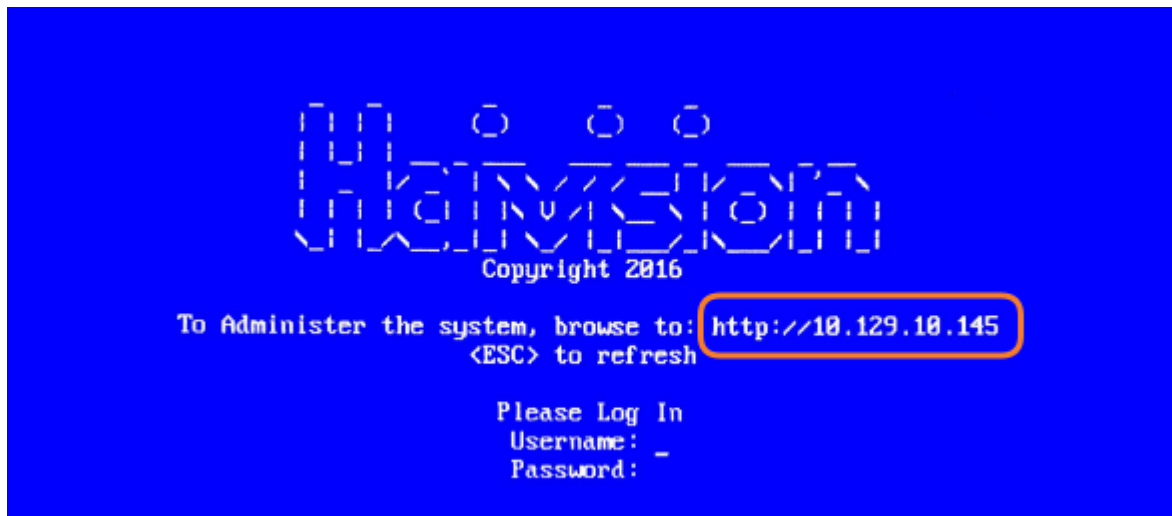
5. At the prompt, enter the `hvroot` password. See the *Important Notice* document for the factory-set credentials.
6. The Console UI login window appears. Login using the `hvroot` username and password again.



Changing the Network Settings

To change the network settings of the device:

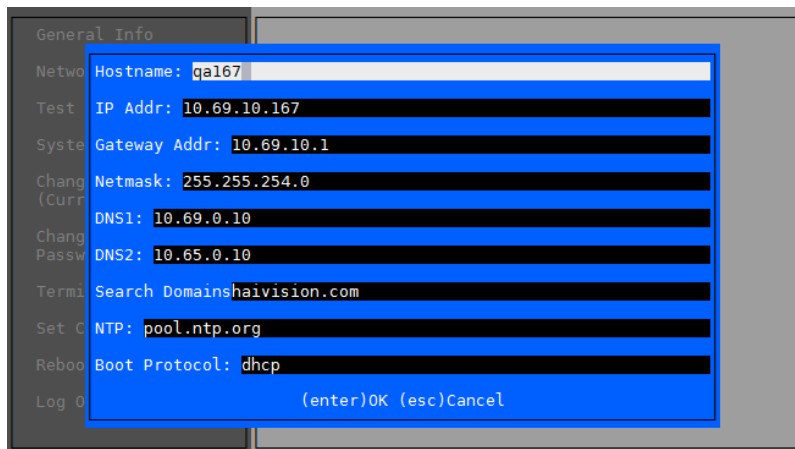
1. Once the Console UI welcome screen appears on the attached monitor, locate the IP Address assigned to the device as noted on the welcome screen.



2. Log in to the Console UI using the credentials provided in the *Important Notice*.
3. In the navigation sidebar, use the ↑↓ (up and down arrow) keys to highlight **Network Settings**, and then press the **Enter** key.
4. Using the ↓ (down arrow) to step through all the Network Settings, change the Hostname, IP Address, Gateway Address, Boot Protocol (DHCP or static), and any other settings as necessary.

Note

- In the Boot Protocol textbox you must type either 'dhcp' or 'static'.
- Depending on your SSH client settings, the console window might not display all the available settings. For instance, "Boot Protocol" may not be visible if your screen height is not large enough.



Note

If your device supports IPv6, the network settings page contains both IPv4 and IPv6 settings:

```

Hostname: localhost.localdomain
Primary DNS: 192.168.0.1
Secondary DNS:
Search Domains: localdomain
NTP: pool.ntp.org

IPv4 Enabled [y/n]: y
IPv4 Addr: 192.168.0.217
IPv4 Gateway Addr: 192.168.0.1
IPv4 Netmask: 255.255.255.0
IPv4 Boot Protocol [dhcp|static]: dhcp

IPv6 Enabled [y/n]: n
IPv6 Global Address:
IPv6 Gateway:
IPv6 Link-Local Addr:
IPv6 Privacy Extension [y/n]:
IPv6 Boot Protocol [auto|dhcp|static]:
    
```

5. Press the **Enter** key to save your changes and return to the main screen.

Note

After pressing Enter, it takes a few seconds for the settings to be saved. The system may seem unresponsive during this time.

6. Select **Log Out** and then press the **Enter** key to exit the Console UI.

Related Topics

- [Using the Console UI with Haivision Hardware](#)

Accessing the KB Web Interface

You can access the KB web interface:

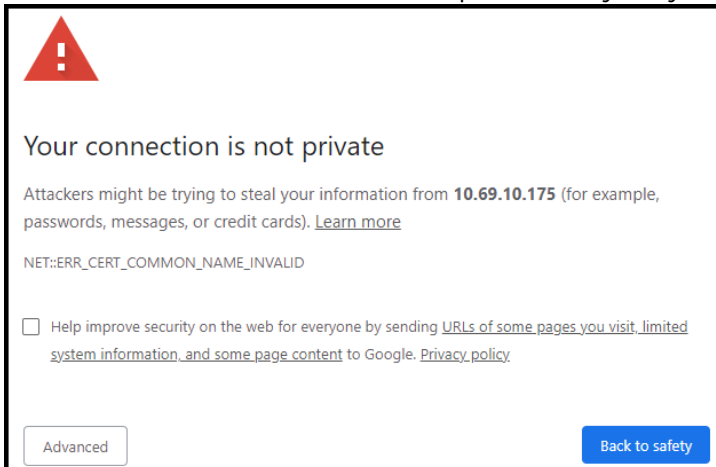
- From a remote system
- If you purchased the Desktop UI option, locally on the server

[Remote KB Access](#) [Local KB Access](#)

To access the device's Web interface:

1. On another computer connected to the same network, open a Web browser.
2. Enter the device's assigned IP address. For example, if the IP Address is 10.5.1.4, enter a URL of https://10.5.1.4.
3. When a browser accesses the website, it requests a security certificate to confirm that the site is trusted.

The device ships with a self-signed SSL certificate key set which works with any configured server hostname. However, Web browsers do not consider self-signed certificates to be trusted, because they are not signed by a Certificate Authority. Consequently, when accessing the website with a self-signed certificate, users see a security warning and are prompted for authorization as shown below. Responses may vary depending upon the browser used.



Important

Before proceeding or adding an exception for the site, check with your administrator on the correct response.

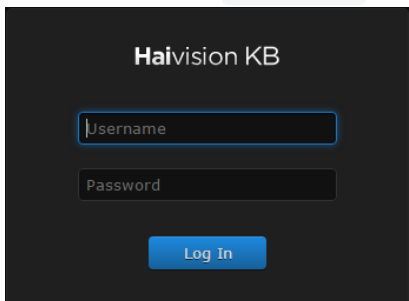
4. Sign in using one of the credentials provided on the *Important Notice* included with your device.

[Remote KB Access](#) [Local KB Access](#)

If your server includes the Desktop UI, you can open a browser in the UI to view the KB web interface. To access KB locally on the server:

1. Ensure a keyboard, mouse, and monitor are connected to the appliance and the appliance is powered on.

2. After the system fully boots, log in to the desktop using the credentials provided in the *Important Notice* document.
3. Open a browser and it automatically connects to the web interface URL. If not, use `localhost` for the URL.
4. Log in using the `haiadmin` credentials provided in the *Important Notice* document.



Refer to the *User's Guide* for step-by-step information for using the KB web interface. All information is available online at the [Haivision InfoCenter](#).

Related Topics

- [Obtaining the Assigned IP Address](#)
- [Changing Account Passwords](#) in the User's Guide
- [Supplying KB with a TLS/SSL Security Certificate](#) in the User's Guide

Enabling ABR Super Hybrid Cascade on KB Max

Achieving 4K UHD with the KB Max device requires that you create a Super Hybrid cascade. Basically, you oversubscribe one channel to monopolize all four pipelines on the HEVC hardware encoder and assign any other H.264 channels to be handled by the CPU and GPU resources. To do this, you must override the settings at the system level.

To enable the Super Hybrid cascade adaptive bitrate option:

1. Access the KB Max Console UI as described in [Connecting to the Console UI](#).
2. Open a terminal window.
3. Enter the following command in the terminal window: `enableforceusem31`

Tip

To verify, switch to the KB web interface. You should see that the HEVC meter is running at 100% (as opposed to 25% if only one of the four pipelines was subscribed to the channel).

To return to normal cascade adaptive bitrate operations:

1. Access the KB Max Console UI as described in [Connecting to the Console UI](#).
2. Open a terminal window.
3. Enter the following command in the terminal window: `disableforceusem31`

Tip

To verify, switch to the KB web interface. You should see that the HEVC meter is running at 25% and that the GPU meter is indicating activity as well (as opposed to the HEVC meter showing 100%).

Obtaining Documentation

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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>