

Kraken CR Quick Start Guide

Kraken CR Encoder/Transcoder, Version 2.8



This Quick Start Guide provides the steps required to install and connect to your Kraken CR (Compact Rugged) H.264/HEVC encoding/transcoding appliance.

For detailed Kraken configuration and operation information, please refer to the [User's Guide](#) (available on the InfoCenter at <https://doc.haivision.com>).

For the default credentials, refer to the *Important Notice* (postcard shipped with the appliance). You may download the *Important Notice* as well as the latest software and Release Notes through the [Download Center](#) on the Haivision Support Portal (<http://support.haivision.com>).

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.

Physical Installation

1. Open the box, verify the contents, and visually inspect the items for any shipping damage. If necessary, contact Haivision for return instructions.

2.

Note

The Kraken CR is an indoor appliance and should be kept in a dry, dust free environment.

Caution

When mounting in a server rack, refer to your rack vendor's documentation as well as the included rack mount instructions in the rail kit provided with your system. Improper rack mounting could cause serious harm to equipment and/or people near the rack. Please be sure to properly and securely mount your hardware.

The Kraken CR takes in fresh air from the top rear air vent and pushes it out the front. Do not stack the units or block the air flow in any way as it can cause the unit to overheat.

Caution

This equipment is susceptible to damage by static electricity. Proper handling and grounding is essential. Use a grounded antistatic wrist strap, foot strap, or equivalent safety equipment to prevent Electrostatic discharge (ESD) when you install the appliance.

Do not open the appliance. There are no user-serviceable parts inside the unit. Making unauthorized changes will void the warranty.

Do not remove the SSD card while the appliance is running.

Caution

Hot surface. Avoid contact. The chassis can achieve a surface temperature 75°C in poorly ventilated environments, and may cause personal injury if touched.

Surface chaude. Éviter le contact. Le châssis peut atteindre une température de surface de 75°C dans des environnements mal ventilés et peut causer des blessures en cas de contact.

Warning

This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security.

Ce produit est destiné à être installé dans une zone d'accès restreint. Les zones d'accès limitées sont protégées par un mécanisme spécifique, une serrure et une clé ou tout autre dispositif de sécurité.

Caution

There is no power switch on the Kraken CR. The power is automatically on when the unit is plugged in. 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.

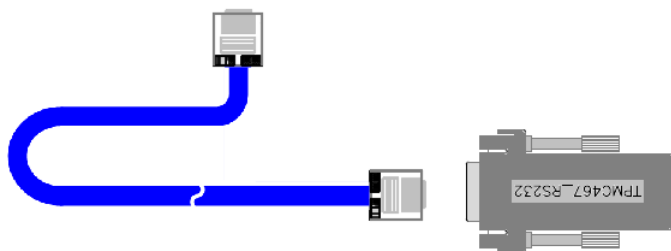
Le cordon d'alimentation est utilisé comme interrupteur général. La prise de courant doit être située ou installée à proximité de l'équipement et être facile d'accès.

Connecting Kraken CR

1. On the front of the Kraken CR:

- To connect to the unit via the Web interface or SSH, connect an RJ45 Ethernet cable (CAT5) cable to the **Eth 0** connector on the Kraken CR front. Connect the other end of the cable to the network.
- To capture CoT or KLV metadata from the serial port, connect the **COM** port to the serial port of a computer.

Use the RS-232 DB9 to RJ45 Serial adapter (included in the package, shown following) and a standard straight Ethernet cable. For the pinouts, see [COM Serial Port RJ45 Pinout](#) and [Serial Adapter DB9 Pinout](#).

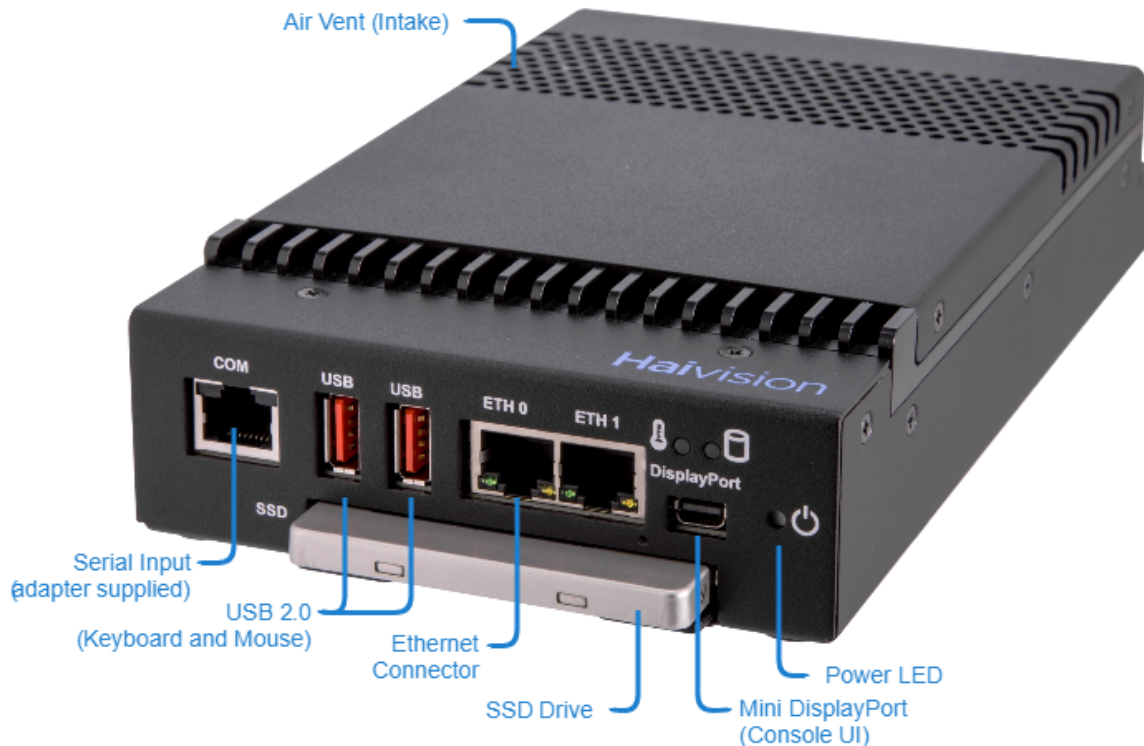


Note

To capture metadata from the serial port, set the terminal parameters as follows to communicate with Kraken:

Parameter	Setting
Baud Rate	115,200 bps
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

- To directly connect to the Kraken CR console UI:
 - Connect the Mini **DisplayPort** to a monitor. Use an HDMI or DVI adapter, if required.
 - Connect a mouse and keyboard to the **USB** ports.



2. On the rear of the Kraken CR:

- To capture HD/SD-SDI digital video, connect your video source cable to the **SDI** input (BNC connector).
- To capture Analog Composite video, connect your video source cable to the **COMP** input (BNC connector).



3. Plug the DC connector into the power connector at the rear of the unit.
4. Plug the power cord into the AC adapter.
5. Plug the cord into a grounded AC power source. (Refer to Caution under [Physical Installation](#).)

Changing the Network Settings

Note

After first boot, the device is configured for a static IP address as defined in the *Important Notice*. Prior to accessing the main Web interface, you must configure the device with a valid IP address and gateway to work in your environment. The following section takes you through the steps to update your network settings using the Console UI.

To change the network settings of the device:

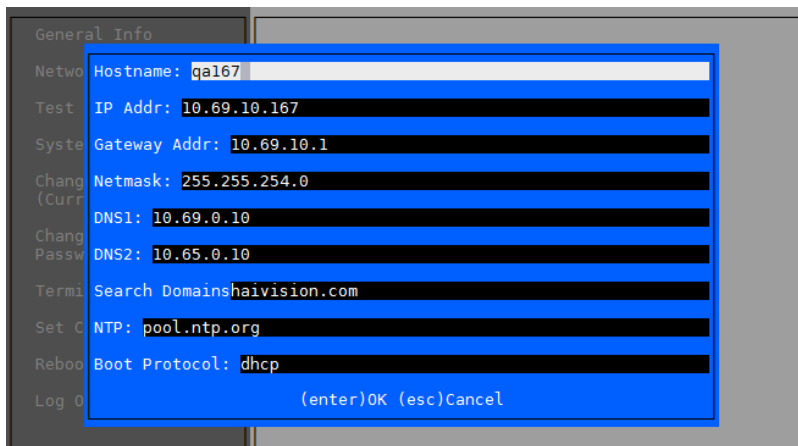
1. Once the Console UI welcome screen appears on the attached monitor, locate the IP Address assigned to the device as noted on the welcome screen.



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.

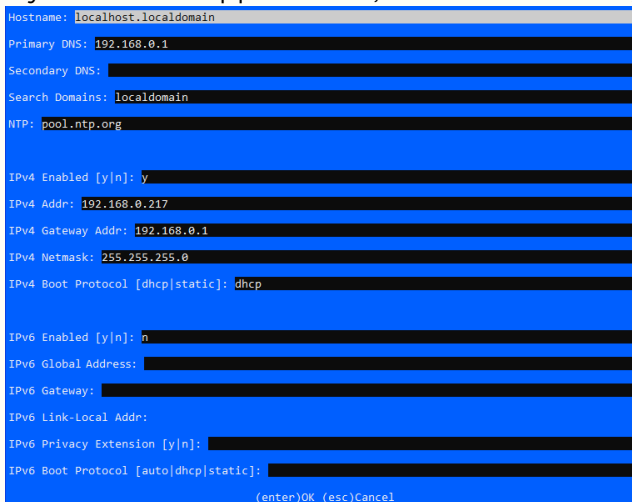
Note

- 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:



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.

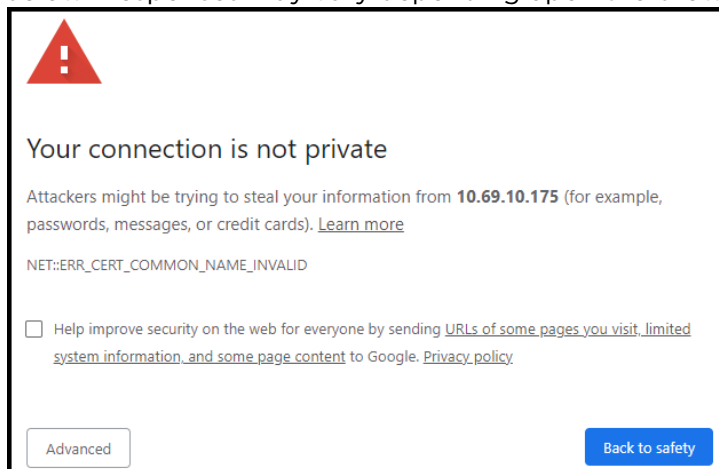
For more details, refer to [Using the Console UI with Haivision Hardware](#).

Accessing the Web Interface

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.

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 Streams List View.



Gliffy Macro Error

Cannot find a diagram with these parameters:

- **Name:** Streams_List_View_NEW

Diagrams with the same name were found on the following pages:

Hover over the link to preview, click to set.

[Accessing the Web Interface](#)

[Accessing the Web Interface](#)

[Accessing the Web Interface](#)

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Setting Up Transcoding and Encoding

To set up transcoding, you need to define:

- **Inputs** - the source URL, or an SDI or Analog Composite Input (Kraken CR or other supported hardware) for baseband input encoding
- **Transcoders** - audio and video characteristics to change
- **Outputs** - one or more output URLs
- **Streams** - select from defined Inputs, Outputs, Transcoders, and (optionally) Metadata sources.

You may optionally configure Kraken to capture KLV or CoT **Metadata** from a UDP network source or from the SDI or Serial Input interface.

For detailed configuration and operation information, please refer to the [Kraken User's Guide](#).

Technical Specifications (Kraken CR)

Note

References to Kraken CR include variants of Kraken CR that provide HEVC hardware acceleration.

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Encoding

Video Input: <ul style="list-style-type: none"> • Composite NTSC/PAL • SD-SDI SMPTE 259-M • HD-SDI SMPTE 292M, 274M, 296M
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Transcoding

Sources: <ul style="list-style-type: none"> • IP MPEG-2, H.264 or HEVC input • MJPEG from L-3 Vortex 	
Input H.265/HEVC: <ul style="list-style-type: none"> • Up to Level 4 (1080p30) • Main Profile • MPEG Transport Stream, SRT or RTSP • Up to 10Mbps • CBR, VBR 	Output H.265/HEVC: <ul style="list-style-type: none"> • Main Profile • Up to Level 4 (720p30) • MPEG Transport Stream or SRT • Up to 6Mbps • Transport Stream Shaping, VBR
Input H.264/AVC: <ul style="list-style-type: none"> • Up to Level 4.2 (1080p60) • Baseline, Main, High Profile • MPEG Transport Stream, SRT or RTSP • Up to 20Mbps • CBR, VBR 	Output H.264/AVC: <ul style="list-style-type: none"> • Baseline, Main, High Profile • Up to Level 4 (1080p30) • MPEG Transport Stream or SRT • Up to 10Mbps • Transport Stream Shaping, VBR
Input MPEG-2: <ul style="list-style-type: none"> • MainProfile@MainLevel (SD) • MainProfile@HighLevel (HD) • MPEG Transport Stream • Up to 20Mbps 	
Input Audio: <ul style="list-style-type: none"> • MPEG1 Layer 2 • AAC 2 channel and 5.1 	Output Audio: <ul style="list-style-type: none"> • AAC 2 channel • Audio Sync Preserved
Input Metadata: <ul style="list-style-type: none"> • KLV or CoT over serial RS-232 • KLV or CoT over IP • KLV over HD-SDI 	Metadata (Processing): <ul style="list-style-type: none"> • CC 608/708 pass-through • CoT to KLV conversion • CoT Relay • Insertion and KLV edits • KLV pass-through • SMPTE 336M compliant • MISB 0601 compliant

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Video Processing

- De-interlacing
- Down Scaling
- Aspect Ratio Preserved
- Configurable Frame Rate
- Optional QSV HW Acceleration

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Networking

- Single Program Transport Stream (SPTS)
- Unicast/Multicast
- TS over UDP
- Session Announcement (SAP)

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Management

- Web User Interface (HTTPS)
- REST API
- Console UI

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Appliance

Dimensions (H x W x D)	44.45mm H x 124.968mm W x 213.868mm D (1.75" H x 4.92" W x 8.42" D)
Weight	2.6 lbs (1.18 Kg)
Power Requirements	12-28VDC, 45W 100-240VAC external locking power supply
Temperature	Operating: 0°C to 50°C (32°F to 122°F) Non-Operating: -40°C to 50°C (-40°F to 122°F)

Topics Discussed

- [COM Serial Port RJ45 Pinout](#)
- [Serial Adapter DB9 Pinout](#)

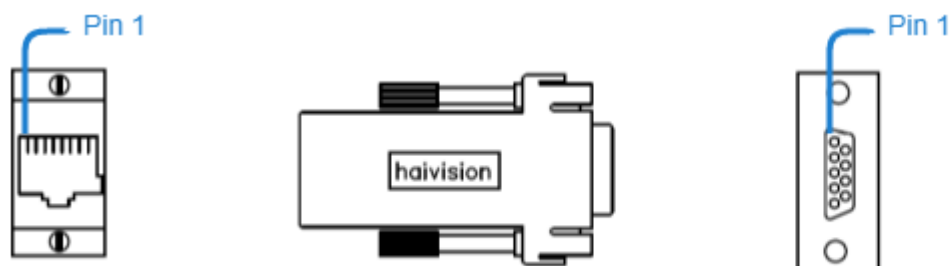
COM Serial Port RJ45 Pinout

Pin #	Signal RS-232
1	Not connected
2	Not connected
3	Not connected
4	Signal Ground
5	Received Data
6	Transmitted Data
7	Not connected
8	Not connected

Serial Adapter DB9 Pinout

The Serial Management adapter has the following pinouts:

Management Port (RJ-45 Jack)		Serial Port (DSub-9 Female Connector)	
Pin #	Signal	Pin #	Signal
1	RI (Ring Indicator)	9	RI (Ring Indicator) N/C
2	DCD (Data Carrier Detect)	4	DTR (Data Terminal Ready)
3	DTR (Data Terminal Ready)	6	DSR (Data Set Ready)
4	GND (Ground)	5	GND (Ground)
5	RXD (Receive Data)	3	TXD (Transmit Data)
6	TXD (Transmit Data)	2	RXD (Receive Data)
7	CTS (Clear to Send)	7	RTS (Request to Send)
8	RTS (Request to Send)	8	CTS (Clear to Send)
		1	DCD (Data Carrier Detect)



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>.

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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>