Matrox Vion Series

Installation and User Guide

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(Go to our *website* for the latest version)

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CHAPTER 1

Introduction

This chapter includes the following topics:

- *About Matrox Vion*
- *Supported web browsers*
- *About the Matrox Vion user documentation*
- *Matrox safety information*

About Matrox Vion

Matrox Vion is a compact, multi-channel, 4K-capable IP video gateway designed for media processing and conversion. It enables flexible, low-latency encoding, decoding, transcoding, and cross-conversion of IP video using codecs and protocols such as H.264, HEVC, JPEG XS, and NDI.

For more information about the Matrox Vion Series, including a list of benefits and features, see our *website*.

Supported web browsers

You configure and control the Matrox Vion through a web-based user interface. Currently, only Google Chrome (Windows and macOS) is officially supported.

Other browsers may work, but have not been tested or validated by Matrox Video.

About the Matrox Vion user documentation

The Matrox Vion documentation includes the following resources:

- Matrox Vion NX and EX Device Setup Sheets

  Each Vion device ships with a printed quick start sheet. It covers hardware connections and the basic setup steps to get you started. PDF versions are also available on the Matrox Video *website*.

- Matrox Vion Series Installation and User Guide

  This is the main user guide for configuring and operating the Vion. You can download it from the Matrox Video *website*, along with the latest drivers. Always refer to the *website* for the most recent version of the guide.

Matrox safety information

To ensure safe and reliable operation of your Matrox product, to avoid personal injury, and to prevent damage to your computer or Matrox hardware, read the following guidelines.

Installation and operation

- Read and retain all instructions. Only use your Matrox product according to the instructions, operating ranges, and guidelines provided in the Matrox user guide and other related Matrox documentation. Failure to follow these instructions could result in damage to your product or injury to the user or installer.
- Don't expose your Matrox product to rain, water, condensation, or moisture.
- **Caution: Hot Surface, Do Not Touch**
  
  Your Matrox product can become hot while operating. Ensure that your computer cover is secured in place before turning it on.
  Always turn off your computer, unplug it, and then wait for it to cool before removing the cover of your computer to touch any of its internal parts or to install your Matrox card. Allow hot surfaces to cool before touching your Matrox unit.
- **Attention: Surface chaude, ne pas toucher**
  
  Votre produit Matrox peut devenir chaud durant son fonctionnement. Assurez-vous de bien fermer le couvercle de votre ordinateur avant de l'allumer.
  Éteignez votre ordinateur, débranchez-le et attendez qu'il refroidisse avant d'ouvrir son couvercle pour accéder à ses parties internes ou pour installer votre carte Matrox. Laissez les surfaces chaudes refroidir avant de toucher votre appareil Matrox.
- Static electricity can severely damage electronic parts. Before touching any electronic parts, drain static electricity from your body (for example, by touching the metal frame of your computer).
- When handling a card, carefully hold it by its edges and avoid touching its circuitry.
- Don't stack devices or place devices so close together that they're subject to recirculated or preheated air.
- Don't operate your system or Matrox product near a heat source or restrict airflow to your system, and make sure the ambient temperature doesn't exceed the maximum recommended temperatures. Don't block ventilation holes on your unit or system.

If a power supply (internal or external) was included with your product

- Don't place the external power supply directly on top of the device.
- Only use power supplies originally supplied with the product or use a replacement that's approved by Matrox. Don't use the power supply if it appears to be defective or has a damaged chassis.

- Any AC-powered product must be connected to a grounded outlet installed by a licensed electrician. Don't defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug doesn't fit into your outlet, consult a licensed electrician to replace the obsolete outlet.
- Make sure that nothing rests on the power cables and that the cables aren't located where they can be stepped on, pinched, or tripped over.
- Don't use damaged power cables.
- Unplug your system or device during lightning storms or if unused for long periods of time.

If your product includes laser-based technology

- The device contains a Class 1 laser product for use only under the recommended operating conditions and guidelines. For more information, see your Matrox user guide.
- Invisible laser radiation may be emitted from disconnected fibers or connectors. Don't stare into beams or view directly with optical instruments.
- Only use optical transceivers originally supplied with the product or use a replacement that's approved by Matrox.
- For more information on laser support and compliance, see your Matrox user guide.

If your product includes a battery

- The battery is non replaceable.
- To dispose of your product, see *https://video.matrox.com/en/environment/product-waste-management*.

Repair

- Don't attempt to open or repair a power supply unit (if one was supplied).
- Don't attempt to open or repair your Matrox product.
- If there's a fault with your Matrox product, review your Matrox warranty for more information.

CHAPTER 2

Getting started with Matrox Vion

This chapter includes the following topics:

- *Initial setup overview*
- *Device connections and button functions*
- *Discovering your device on the network*
- *Logging in to the user interface*
- *Updating your device firmware*
- *Configuring SSL certificates*

Initial setup overview

Use the following steps to set up your Matrox Vion. Where applicable, links are provided to other sections for more detail.

To get started with Matrox Vion:

Step 1. **Connect the power supply** -- Matrox Vion can be powered using the included 19 v d.c. adapter or an optional 12 v d.c. supply.

More info: see *Device connections and button functions*.

Step 2. **Connect Vion to your network** -- A network connection is required to access the web interface and, depending on your workflow, to receive or send media streams.

More info: see *Device connections and button functions*.

Step 3. **Connect input and output interfaces** -- Depending on your Vion model, connect your desired inputs and outputs (for example, network, HDMI, or SDI).

More info: see *Device connections and button functions*.

Step 4. **Access the web interface** -- On first boot, Vion defaults to DHCP mode. Once connected to your network, you can open the Vion interface using a supported web browser (Google Chrome is recommended).

More info: see *Discovering your device on the network*.

Step 5. **Log in to Vion and create the initial administrator account** -- When you first access the Vion web interface, you are prompted to create the device's initial administrator account. This includes setting a username and password.

More info: see *Logging in to the user interface*.

Step 6. **Update the firmware** -- Check the Matrox Video *website* for the latest firmware version. We recommend updating to ensure you have the most recent features and fixes.

More info: see *Updating your device firmware*.

Step 7. **Install SSL certificates** -- To avoid browser security warnings, install a valid SSL certificate.

More info: See *Configuring SSL certificates*.

Step 8. **Create user accounts** -- As the administrator, you are responsible for creating user accounts for others who will operate the Vion.

More info: See *Creating user accounts*.

Result of this task: Your device is now ready for use.

Device connections and button functions

The information in this section is also available on the printed Device Setup sheets included with your Matrox Vion EX or NX device:

- Matrox Vion NX Device Setup
- Matrox Vion EX Device Setup

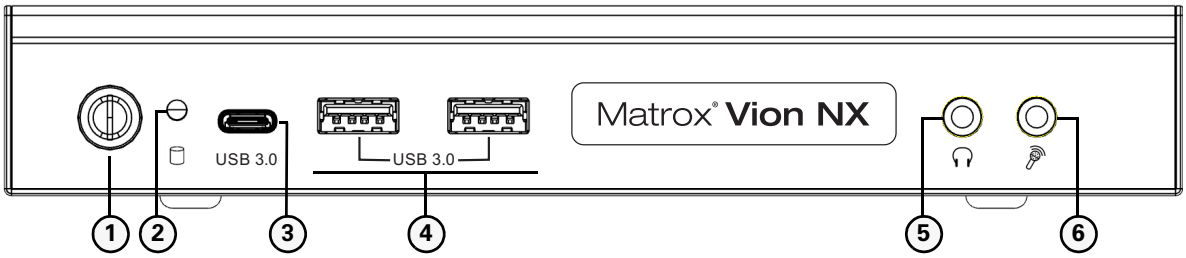
The setup sheets describe the device's hardware connections and button functions.

You can also download the latest versions of the setup sheets from the Matrox Video *website*, along with the most recent firmware.

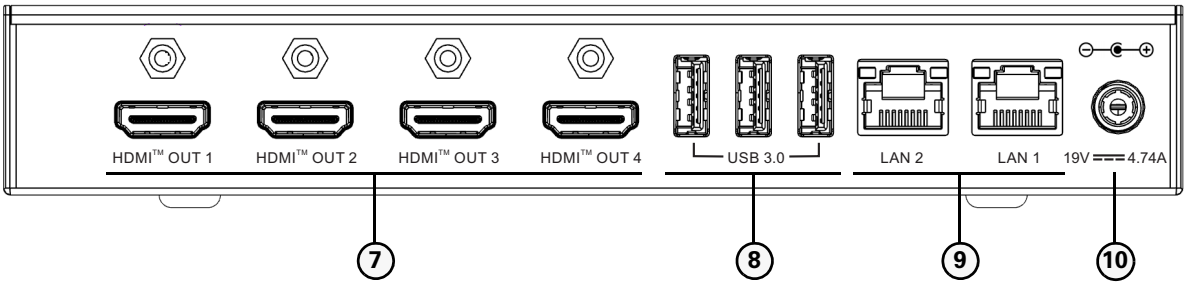
Matrox Vion NX

The following components are available on the Matrox Vion NX front and rear panels.

Matrox Vion NX (Front)



Matrox Vion NX (Rear)



Label	Component	Description
(1)	Power button	Powers the device on or off. The button is illuminated green when the device is powered on.
(2)	Status LED	Blinks red when the device is reading from or writing to storage.
(3)	USB Type-C	Provides USB power and supports external devices such as a keyboard and mouse for the factory reset process. Additional functionality may be available in future releases.

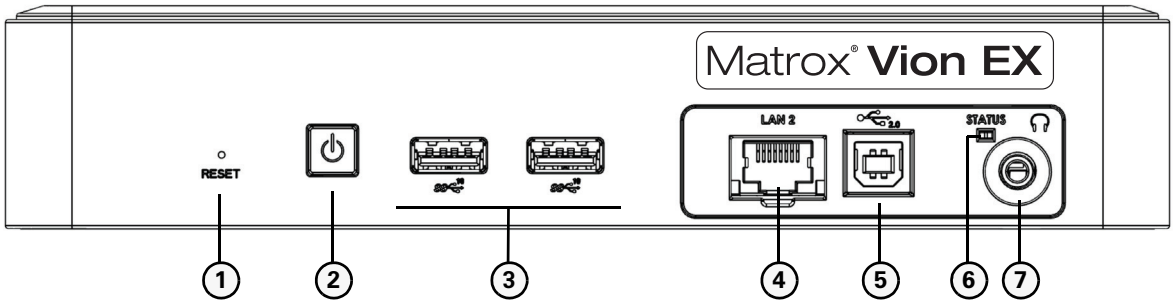
Label	Component	Description
(4)	USB 3.0	Provides USB power and supports external devices such as a keyboard and mouse for the factory reset process. Additional functionality may be available in future releases.
(5)	Audio out	Standard 3.5 mm stereo output. Additional functionality may be available in future releases.
(6)	Microphone	Microphone-level analog audio input. Additional functionality may be available in future releases.
(7)	HDMI outputs 1 - 4	HDMI outputs 1 and 2 can be used to monitor a video output stream. HDMI outputs 3 and 4 are not used in a Vion workflow and are inactive.
(8)	USB 3.0	Provides USB power and supports external devices such as a keyboard and mouse for the factory reset process. Additional functionality may be available in future releases.
(9)	LAN 1 and LAN 2[1]	**LAN 1** -- Supports up to 2.5 GbE. Use this port for media and user interface access. **LAN 2** -- Supports up to 1 GbE. Use this port for media or control traffic as needed.
(10)	Power input	Connect a 12 v d.c. or 19 v d.c. power supply. The 19 v d.c. adapter is included with the device.
(11)	Reset (Not shown)	Use a paperclip or similar tool to reboot the device.

1. The two network ports are intended for use with separate networks (one for Control, one for Media). Using both ports on the same network is not recommended. If combined Control and Media traffic exceeds the capacity of a 1 GbE port, use the 2.5 GbE port.

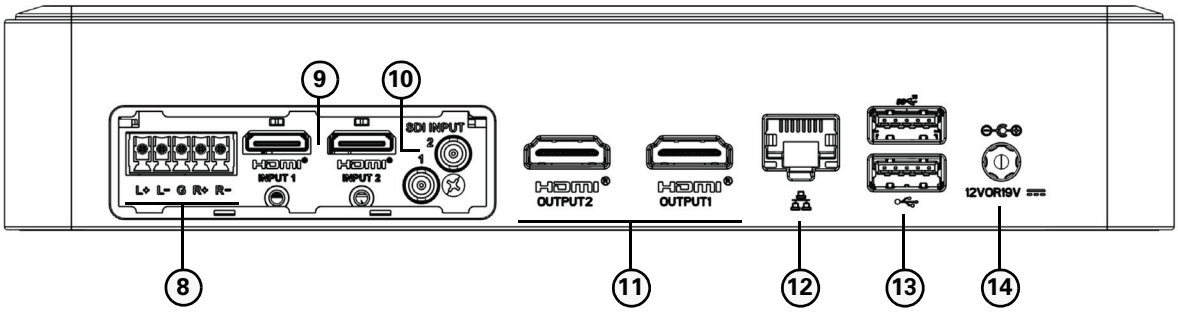
Matrox Vion EX

The following components are available on the Matrox Vion EX front and rear panels.

Matrox Vion EX (front)



Matrox Vion EX (rear)



Label	Component	Description
(1)	Reset	Use a paperclip or similar tool to reboot the device.
(2)	Power button	Powers the device on or off. The button is illuminated blue when the device is powered on.
(3)	USB 3.0	Provides USB power and supports external devices such as a keyboard and mouse for the factory reset process. Additional functionality may be available in future releases.
(4)	LAN 2[1]	Supports up to 2.5 GbE. Use this port for media and user interface access.
(5)	USB Type B	This port is not currently used.
(6)	Status LED	Displays Vion system status during boot and normal operation.
(7)	Audio out	Standard 3.5 mm stereo output. Additional functionality may be available in future releases.

Label	Component	Description
(8)	Phoenix connector	Connect an analog audio source for balanced or unbalanced audio input.
(9)	Mini HDMI Input 1 and 2	Connect mini HDMI input sources. LEDs indicate connection status. Use the screw holes below each port to attach the Matrox cable retention bracket (part no. SK-SLNB-4F, sold separately).
(10)	Mini SDI Input 1 and 2	Connect SDI input sources using the included mini-BNC adapters.
(11)	HDMI Output 1 and 2	Connect monitors to preview video output.
(12)	LAN 1[1]	Supports up to 1 GbE. Use this port for media and user interface access.
(13)	USB 2.0 and 3.0	Provides USB power and supports external devices such as a keyboard and mouse for the factory reset process. Additional functionality may be available in future releases.
(14)	Power input	Connect a 12 v d.c. or 19 v d.c. power supply. The 19 v d.c. adapter is included with the device.

1. The two network ports are intended for use with separate networks (one for Control, one for Media). Using both ports on the same network is not recommended. If combined Control and Media traffic exceeds the capacity of a 1 GbE port, use the 2.5 GbE port.

Discovering your device on the network

When the Matrox Vion starts up, it obtains an IP address from your DHCP network. To find this address and access the user interface, locate the device's serial number (printed on a sticker on the unit), then use one of the following methods from a computer on the same subnet:

- Web browser
  - Open a supported web browser (see *Supported web browsers*) and go to: *https://vion-SerialNumber.*
  - Replace *SerialNumber* with the actual serial number of your device.
- Command line tools (Bonjour SDK required)

  Use one of the following commands to resolve the device's IP address:

  - **Command Prompt (CMD)**: *ping vion-SerialNumber.local*
  - **PowerShell**: *ping vion-SerialNumber*
  - Replace *SerialNumber* with the actual serial number of your device.

NOTE Note the following:

- Make sure your computer is on the same subnet as the Vion. If Bonjour is not installed, you may not be able to resolve the hostname directly.
- You can also use the *Matrox Unified Utility* application to discover Vion devices. For more information, see the embedded help included with the application.

Logging in to the user interface

After you discover your Matrox Vion on the network and determine its IP address, you can log in to the web-based application to configure the device.

To log in to the user interface:

Step 1. Find the device on your network

More info: see *Discovering your device on the network*.

Step 2. **Connect to the Vion user interface** -- Open a supported web browser and do one of the following:

- Enter the IP address of the device (for example: *https://123.123.123.123*).
- Enter the hostname using the serial number (for example: *https://vion-SerialNumber*). Replace *SerialNumber* with the serial number printed on the sticker on your device.

More info: You must use HTTPS to access the application.

Step 3. **Log in to the Vion application** -- Enter the **Username** and **Password**, then click **Sign in**.

Step 4. **Create the administrator account (first-time login only)** -- If this is your first time logging in, you will be prompted to create the administrator account. Enter a username and password to complete the setup.

Result of this task: You are now logged in to the Matrox Vion.

When done, remember: Visit the Matrox Video *website* to check for the latest firmware. It is recommended to keep your device updated.

Updating your device firmware

It is recommended to use the latest firmware version, especially if you are setting up Matrox Vion for the first time. Check the Matrox Video *website* to see if a newer version is available.

You can also use the *Matrox Unified Utility* to update multiple Vion devices at once. For more information, refer to the *Matrox Unified Utility* documentation.

To update the firmware:

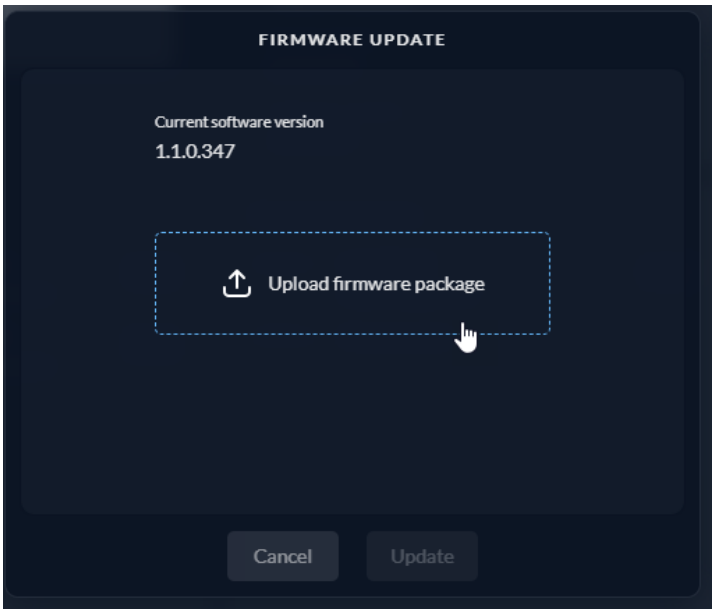
Step 1. **Download the update package** -- Go to the Matrox Video *website* and download the latest firmware for your device.

Step 2. Log in to your Matrox Vion

More info: see *Logging in to the user interface*.

Step 3. **Start the update process** -- From the **Dashboard**, click **Update**.

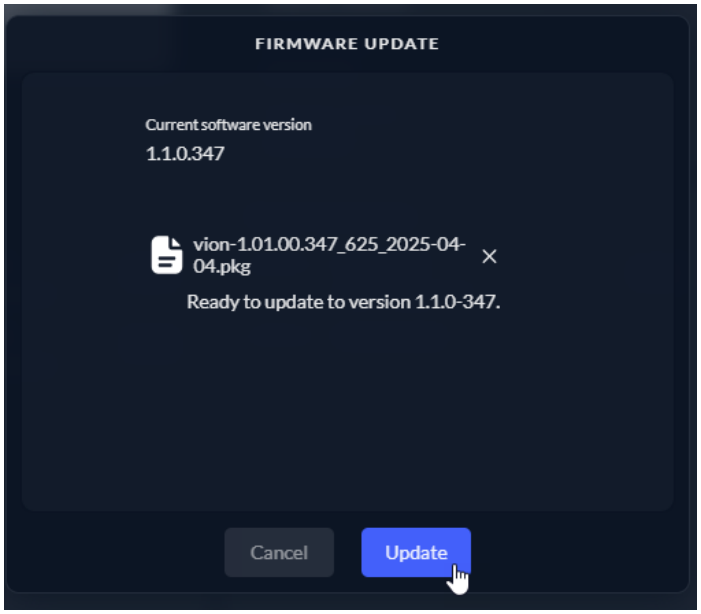
Step 4. **Upload the firmware package** -- Click **Upload firmware package**, then browse to the folder where you saved the update file.



More info: You can also drag and drop the file into the upload window.

Step 5. **Validate the file** -- Click **Open**. The application uploads and validates the firmware file.

Step 6. **Apply the update** -- Click **Update** to begin installation. A progress bar shows the update status.



Step 7. **Wait for reboot** -- When the update is complete, the device automatically reboots. Log in again to continue.

Result of this task: Your Matrox Vion is now running the updated firmware.

When done, remember: You can also use the *Matrox Unified Utility* application to update Vion devices. For more information, see the embedded help included with the application.

Configuring SSL certificates

Matrox Vion uses HTTPS to secure access to its web interface. By default, Vion includes a self-signed SSL certificate.

When you first connect, your browser may display a warning such as:

"Your connection is not private"

NET::ERR_CERT_AUTHORITY_INVALID

This warning appears because the self-signed certificate is not trusted by your browser. The connection is encrypted, but the browser cannot verify the device's identity.

To remove this warning and establish a trusted connection, upload a valid SSL certificate and matching private key signed by a certificate authority (CA).

To upload an SSL certificate:

Step 1. **Log in to Matrox Vion** -- You can ignore the browser warning and proceed.

More info: see *Logging in to the user interface*.

Step 2. **Open the Certificates section** -- Go to the **Other** page and expand the **Certificates** section.

Step 3. **Upload your certificate and key** -- Click the plus icon **(+)** to add a new server certificate.

- Upload the certificate file (*.crt* or *.pem*)
- Upload the corresponding private key file (.key)

Step 4. **Save the new certificate** -- Click **Save** to apply the changes.

Result of this task: Vion uses the uploaded certificate for secure HTTPS access. If the certificate is signed by a trusted CA, browsers will no longer display security warnings.

When done, remember: If no certificate is uploaded, the system continues using the built-in self-signed certificate.

CHAPTER 3

Using Matrox Vion

This chapter includes the following topics:

- *User interface overview*
- *Using the Dashboard*
- *Configuring Processing settings*
- *Configuring Network settings*
- *Configuring Date and time settings*
- *Creating user accounts*
- *Configuring Other settings*

User interface overview

You control and configure the Matrox Vion using a web-based interface, accessible from most standard web browsers (see *Supported web browsers*).

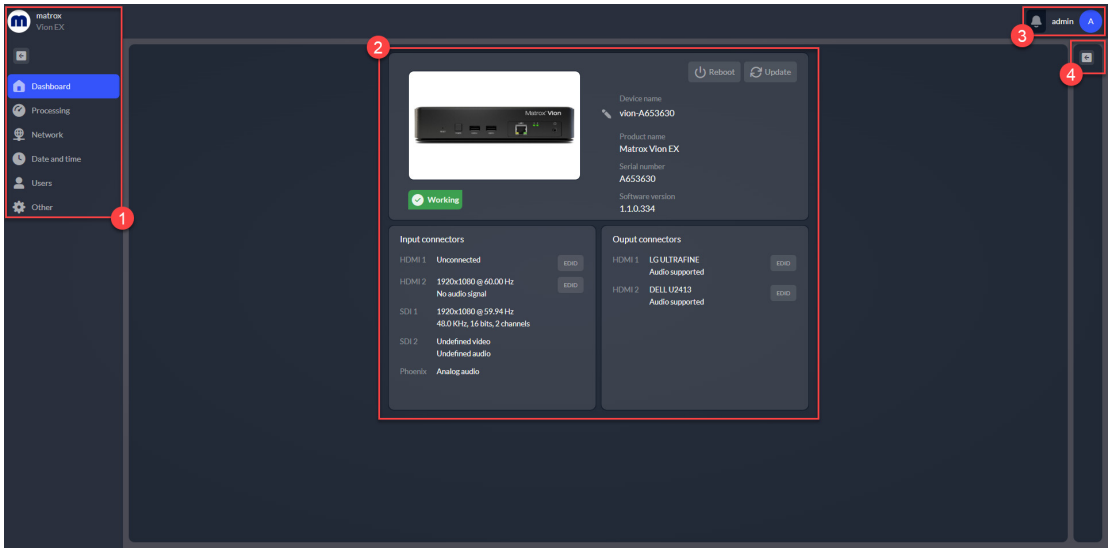
The interface has four key areas:

- **Navigation menu (left)**: Lets you move between sections such as Dashboard, Processing, Network, and Users.
- **Main work area (center)**: Displays detailed settings and options for each selected section.
- **Status window (right)**: Shows important information about active processes and device status.
- **Notification area (top right)**: Displays alerts, warnings, and system messages.

Because the interface runs in a browser, you can access the Vion from most operating systems and devices.

When you log in, the **Dashboard** appears by default. It shows an overview of your Vion device, including input and output connectors, EDID status, device info, and software version.

Matrox Vion Dashboard



Callout number	Description
(1) - Navigation menu	Use the navigation menu to access different configuration sections, including **Dashboard**, **Processing**, **Network**, **Date and Time**, **Users**, and **Other**. Selecting a menu item updates the main work area.
(2) - Main work area	Displays detailed content and interactive controls for the selected section. This is where you configure settings, view device status, and manage pipelines (input-to-output media workflows).

Callout number	Description
(3) - Notification area	Shows system alerts, updates, and connection status indicators. This area may also include firmware update messages or warnings.
(4) - Status window	Displays quick-access system indicators.

Using the Dashboard

The Dashboard provides a high-level overview of the device's current state and offers quick access to key actions. From the Dashboard, you can:

- Reboot the device
- Check software version and hardware identifiers
- Change the device name
- Perform a firmware update
- Manage EDID settings for HDMI inputs and outputs

Use this screen to confirm system status, access connected interfaces, and initiate basic maintenance tasks.

Configuring Processing settings

The **Processing** section is where you configure all live routing, conversion, and distribution tasks on the Matrox Vion. From this interface, you define how input sources are connected to processing paths and then routed to output destinations.

Each pipeline combines a video source, an optional audio source, and one or more output destinations into a single processing chain. You can drag inputs into the workspace, add processing steps, and assign outputs to build workflows that match your use case.

Use this section to create and manage pipelines for tasks such as IP stream encoding, decoding, transcoding, and protocol conversion.

The rest of this section includes two example workflows that demonstrate how to create a complete processing pipeline:

- *Example workflow 1: Creating an NDI to SRT pipeline*
- *Example workflow 2: Creating an HDMI to RTSP pipeline*

These examples cover typical configurations and can be adapted to support any combination of inputs, processing steps, and outputs available on the Vion.

For details on individual settings, refer to the Matrox Vion Settings Reference.

Example workflow 1: Creating an NDI to SRT pipeline

This task guides you through setting up a pipeline that receives an NDI stream and outputs it as an SRT stream. This configuration is ideal for scenarios where you need to transmit high-quality video over the internet with low latency.

NOTE For detailed settings and advanced configurations, refer to the *Matrox Vion Settings Reference*.

To create the processing pipeline:

Step 1. Log in to Matrox Vion (see *Logging in to the user interface*).

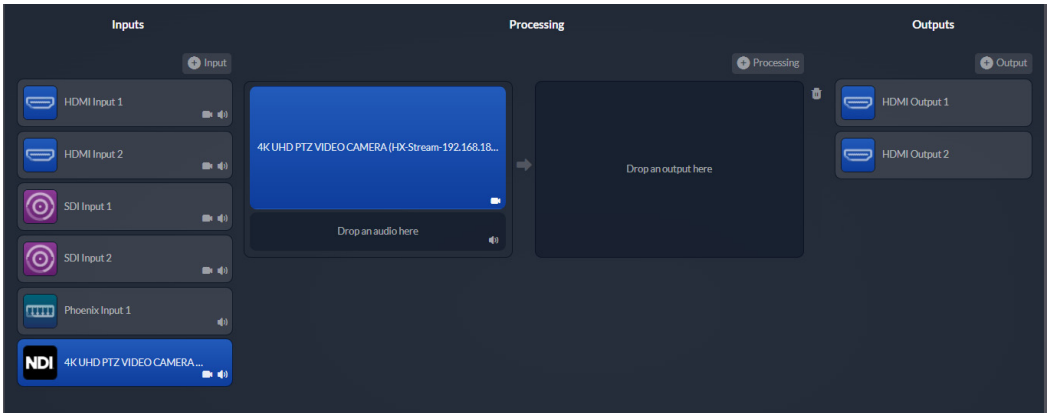
Step 2. Go to the **Processing** section.

Step 3. Add NDI Input:

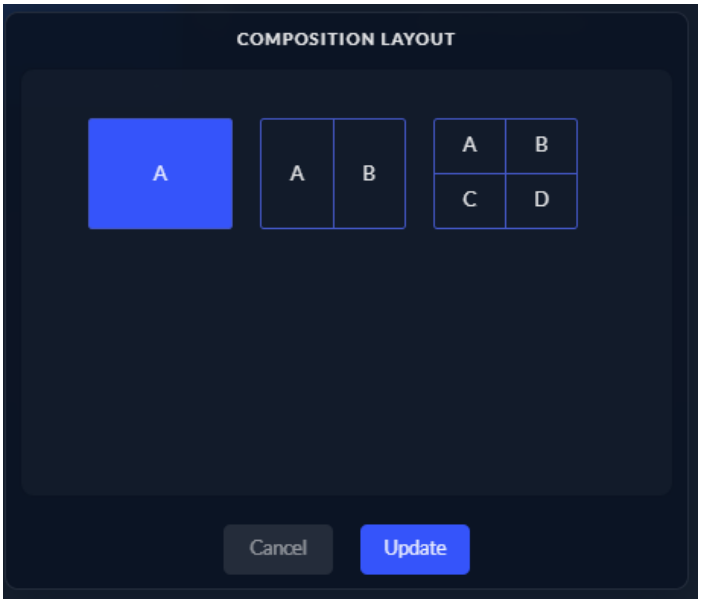
- Click (**+Input**), then select **NDI**.
- Select **Custom** to manually enter the stream name.
- Select **Discovery** to choose from a list of NDI sources on the network. Discovered streams are found using the device's configured NDI discovery servers or groups.
- Adjust other settings as needed.

Step 4. Drag and drop the NDI input you created into the processing pipeline.

Example: NDI added to processing pipeline



Step 5. (Optional) Click on the NDI block in the Processing pipeline to adjust the **Composition layout**, then click **Update**.

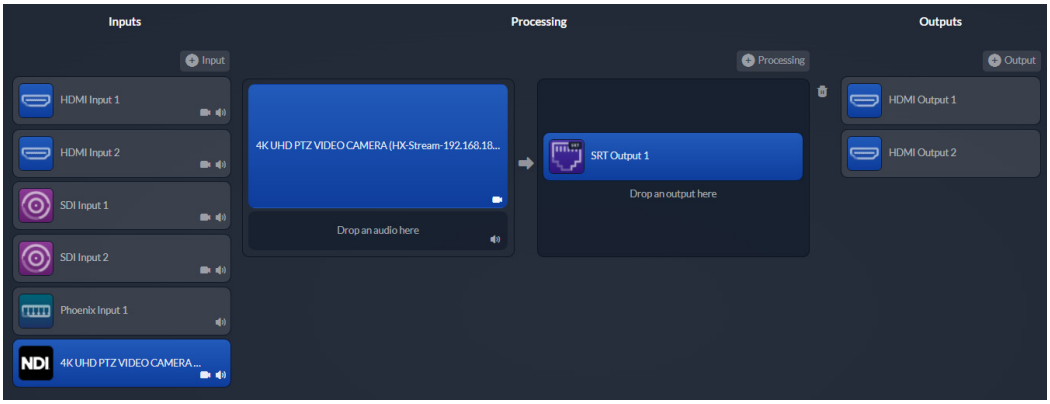


Step 6. Add SRT Output:

- Click on (**+Output**), then select **SRT**.
- Choose the appropriate SRT mode (**Caller**, **Listener**, or **Rendezvous**).
- Select the **Network interface** that the device should use to send the SRT stream. You can choose a specific IPv4 or IPv6 address assigned to LAN1 or LAN2, or use one of the automatic interface options if available.
- Adjust other settings as needed.

Step 7. Drag and drop the SRT output you created into the Output processing area.

Example: SRT added to processing pipeline:



Step 8. Click **Start Processing** to start the pipeline.

Result of this task: The processing pipeline is now active, and the display will change to the pipeline viewer (see *Viewing an Active Pipeline*).

Example workflow 2: Creating an HDMI to RTSP pipeline

This task guides you through setting up a pipeline that captures a local HDMI video source and streams it over RTSP. This configuration is ideal for viewing live video on local network clients using standard RTSP-compatible media players.

NOTE For detailed settings and advanced configurations, refer to the *Matrox Vion Settings Reference*.

To create the processing pipeline:

Step 1. Log in to Matrox Vion (see *Logging in to the user interface*).

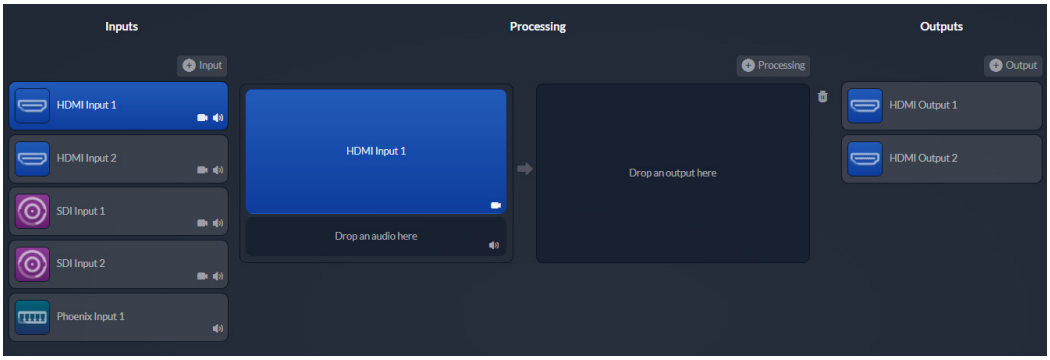
Step 2. Go to the **Processing** section.

Step 3. Select the HDMI Input:

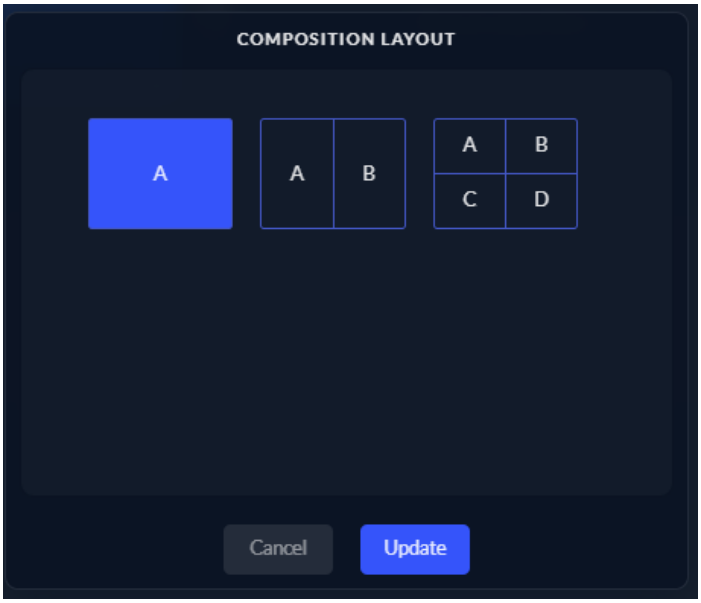
- Specify the **No signal action** to take in the event of signal loss.

Step 4. Drag and drop the HDMI input you created into the processing pipeline.

Example: HDMI added to processing pipeline



Step 5. (Optional) Click on the HDMI block in the Processing pipeline to adjust the **Composition layout**, then click **Update**.

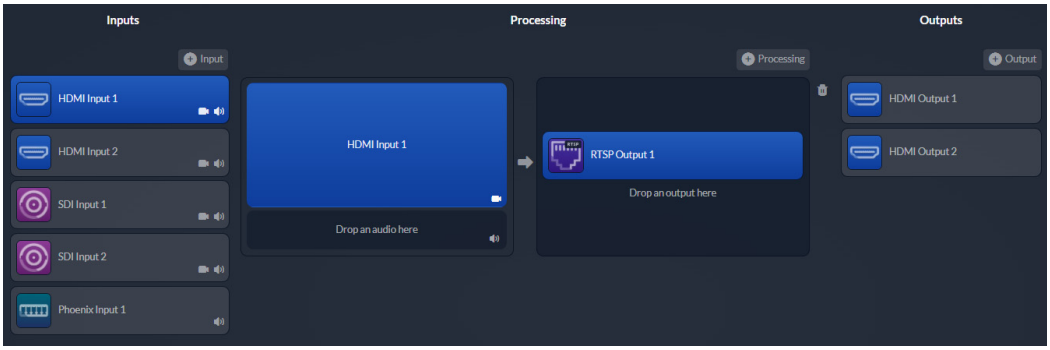


Step 6. Add RTSP Output:

- Click on (**+Output**), then select **RTSP**.
- Enter a **Stream name** (e.g., stream1).
- Select the **Network interface** that the device should use to send the RTSP stream. You can choose a specific IPv4 or IPv6 address assigned to LAN1 or LAN2, or use one of the automatic interface options if available.
- Set the **RTSP port** (e.g., 554).
- Choose the **Network scheme**.
- Adjust other settings as needed.

Step 7. Drag and drop the RTSP Output input you created into the Output processing area.

Example: RTSP added to processing pipeline:

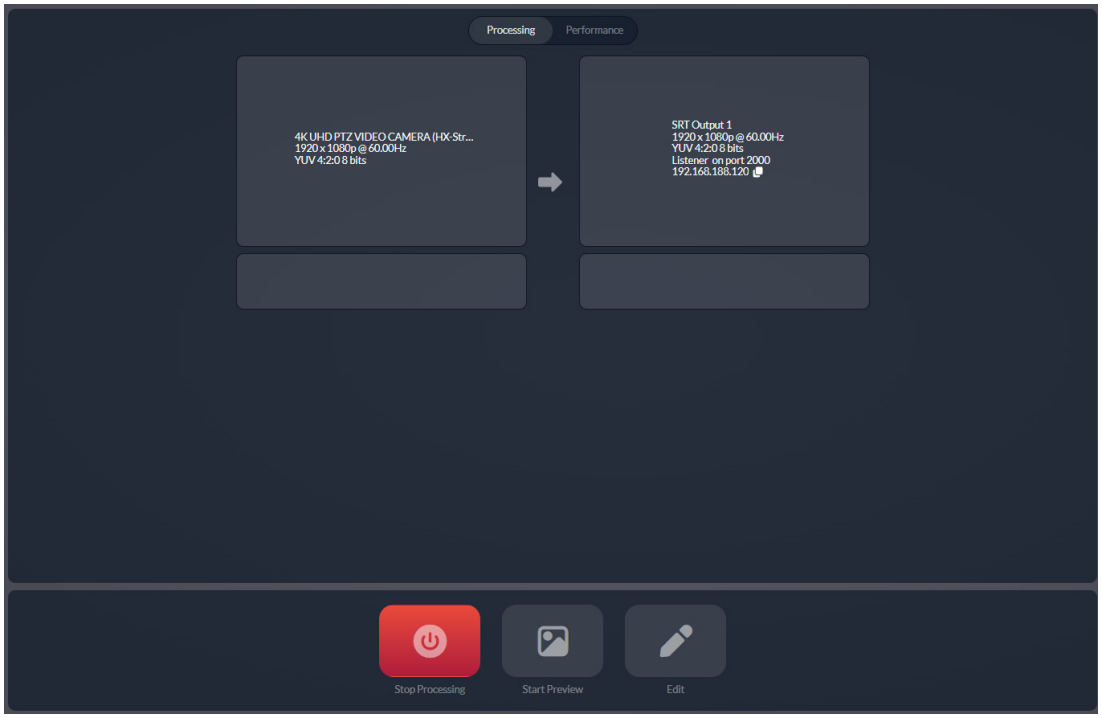


Step 8. Click **Start Processing** to start the pipeline.

Result of this task: The processing pipeline is now active, and the display will change to the pipeline viewer (see *Viewing an Active Pipeline*).

Viewing an Active Pipeline

Once a pipeline is started, the **Processing** view updates to show real-time connection details between sources and outputs. Each block displays stream information such as resolution, frame rate, color format, and transmission mode.



- **Source block**: Shows the connected input name, resolution, and video format.
- **Output block**: Displays the configured output type (e.g., SRT Output 1), network details, and encoding parameters.
- **Control bar (bottom)**:
  - **Stop Processing**: Ends the current pipeline session.
  - **Start Preview**: Opens a preview of the active video stream, if available.
  - **Edit**: Returns to the editable pipeline layout for changes.

This view confirms that the system is actively routing and processing video. To stop or modify the stream, use the buttons in the control bar.

Configuring Network settings

Use this section to view and configure the IP settings for **LAN1** and **LAN2**, which are used by all network-based streaming protocols. These settings affect how Vion sends and receives data over the network and are used by RTSP, SRT, MPEG-2 TS, IPMX, and NDI.

- The interface selected in a stream configuration (e.g., LAN1 automatic IPv4) must be correctly configured and physically connected.
- Click **LAN1** or **LAN2** to configure that port. The selected interface is highlighted in blue and shows the link speed, MAC address, and current IP addresses.
- For each interface, you can configure **IPv4** and **IPv6** separately:
  - **DHCP** automatically obtains an IP address from the network.
  - **Static** allows you to enter a fixed IP address, netmask, gateway, and DNS servers.
  - **Disable** turns off the protocol on the selected interface.
- When using **Static** mode, you must manually enter the network configuration. The following fields are available:
  - **IPv4 address**: The fixed IP address assigned to the device (e.g., 192.168.1.100).
  - **IPv4 netmask**: Defines the size of the local subnet (e.g., 255.255.255.0).
  - **IPv4 gateway** (optional): The IP address of the router used to access other networks.
  - **IPv4 DNS servers** (optional): One or more DNS server IPs used to resolve hostnames (e.g., 8.8.8.8). Separate multiple entries with commas.
  - **IPv6 address**: The device's IPv6 address in full notation (e.g., 2001:db8::1).
  - **IPv6 prefix length**: Indicates the size of the IPv6 subnet (e.g., 64).
  - **IPv6 gateway** (optional): The IPv6 address of the default gateway for external traffic.
  - **IPv6 DNS servers** (optional): One or more DNS servers for IPv6 name resolution. Separate entries with commas.
  - **Search domains** (optional): Domain suffixes used when resolving unqualified hostnames. For example, if *matrox.com* is listed, a lookup for *device1* becomes *device1.matrox.com*. You can list multiple domains, separated by commas.
- If a stream is not working, verify that the network interface has a valid IP address and an active link.

Configuring Date and time settings

Use this section to synchronize the device clock using NTP and optionally enable PTP on one of the available network interfaces.

- Click on the main NTP/PTP status block to open the settings.
- Displays the current system date and time, with the option to switch between local time and UTC.
- Synchronizes the system clock using a user-defined NTP server.
- Shows the current NTP synchronization status and the server in use.
- Allows PTP (Precision Time Protocol) to be enabled on **LAN1** or **LAN2**.
- Lets you specify the PTP domain number used for clock hierarchy in a multi-device environment.
- Indicates PTP lock status per interface and the detected grandmaster if applicable.

Creating user accounts

Administrators have full access to all configuration, system, and network settings on the Matrox Vion. They can manage all users, change security and network configurations, and control the device at every level.

Users have limited access, focused on daily operational tasks. A user can configure and run processing pipelines, download logs, reboot the device if needed, and manage their own credentials. This role is designed for day-to-day use without the ability to alter critical system settings.

To create a user, click the **(+)** button in the **List of users** section. Enter the username, assign a role (User or Admin), and set a password.

Administrator	User
• Modify EDID • Create, modify, and start processing sessions • Change the device name • Update device firmware • Erase device and processing data • Reboot the device • Configure network settings • Configure date and time settings (NTP and PTP) • Add, delete, and change passwords for all users • Delete device logs • Download updates and device logs • Add and delete certificates • Download and disable certificates • Modify NDI discovery settings • Modify NMOS settings	• Create, modify, and start processing sessions • Change their own password • Download updates and device logs • Reboot the device • Download certificates

Configuring Other settings

This section includes advanced device controls and service integrations. While most fields are covered in the *Matrox Vion Settings Reference*, this page allows you to:

- Download or delete device logs.
- Erase all device data.
- Manage certificates for secure connections (see *Configuring SSL certificates*).
- Set NDI discovery parameters (server address, group, discovery servers).
- View and configure NMOS registry settings.

Settings are mostly view-only unless you click the edit icon. Only administrators can make changes.

CHAPTER 4

Matrox Vion Settings Reference

This chapter includes the following topics:

- *Dashboard*
- *Processing*
- *Network*
- *Date and time*
- *Users*
- *Other*

Dashboard

This section describes the configurable settings on the Vion **Dashboard** page.

Field	Description
Device name	The Vion device label. You can use this label instead of the IP address to connect from a web browser (via DNS). **NOTE** You can change this name. However, changing the name disables DNS, and your browser will not be able to resolve the address.
Reboot	Reboots the Vion device. This action does not delete configuration data or user credentials.
Update	Performs a firmware update (see *Updating your device firmware*).
EDID	
Download	Exports the current EDID from the selected HDMI input connector to a file. Use this to back up or inspect the EDID configuration.
Upload	Replaces the current EDID with a previously saved file. This lets you manually override the default EDID so that connected sources detect the Vion device as if it were the device described in the uploaded EDID. For example, if you upload a monitor's EDID, the source will assume it is connected to that monitor, even though it is physically connected to the Vion.
Reset	Restores the EDID to its factory default settings. Use this to undo changes or resolve compatibility issues with connected devices.

Processing

This section describes the configurable settings on the Vion **Processing** page.

Input settings

Field	Description
HDMI	
Name	The label for the HDMI input. This field is read-only and used for identification in the interface.
No signal action	Defines the system behavior when the HDMI input signal is lost or unavailable. • **Do nothing**: Maintains the last displayed frame; no visual change occurs. • **Show blank screen**: Replaces the input with a black screen. • **Show 'No signal' message**: Displays an on-screen message indicating that the signal is missing.
SDI	
Name	The label for the SDI input. This field is read-only and used for identification in the interface.
No signal action	Defines the system behavior when the SDI input signal is lost or unavailable. • **Do nothing**: Maintains the last displayed frame; no visual change occurs. • **Show blank screen**: Replaces the input with a black screen. • **Show 'No signal' message**: Displays an on-screen message indicating that the signal is missing.
Phoenix input	
Name	The label for the Phoenix analog audio input. This field is read-only and used for identification in the interface.
Gain	Adjusts the input signal level in decibels (dB).

Field	Description
Analog configuration	Selects the wiring type for the analog input. • **Balanced**: Uses separate conductors for positive, negative, and ground signals. • **Unbalanced**: Uses a single signal conductor and ground.
NDI	
Source stream name	The name of the incoming NDI stream. This value is detected automatically or entered manually.
Sender address	The IP address of the NDI source device.
No signal action	Defines the system behavior when the NDI input signal is lost or unavailable. • **Do nothing**: Maintains the last displayed frame; no visual change occurs. • **Show blank screen**: Replaces the input with a black screen. • **Show 'No signal' message**: Displays an on-screen message indicating that the signal is missing.
Receiver stream name	Optional name for the incoming stream. Used for internal identification.
Stream groups	Optional group tags for stream filtering or organization.
Quality selection	Sets stream preference. • **Favor speed**: Use a lower-latency stream. • **Favor quality**: Use the highest-quality version of the stream.
Stream selection	Chooses the stream type when multiple are available. • **Program stream**: Default video output. • **Preview stream**: Typically lower quality or used for monitoring.
Capture and relay tally and metadata	When enabled, receives NDI tally and metadata and relays it to downstream systems.
Network interface	Selects the Ethernet interface used for receiving the NDI stream. • **No restriction**: The system automatically selects the interface. • **LAN1**: Performance depends on Vion model (NX or EX). See *Device connections and button functions*. • **LAN2:** Performance depends on Vion model (NX or EX). See *Device connections and button functions*.

Field	Description
Reliable UDP	Controls the use of Reliable UDP transport for NDI streams. • **No restriction**: The system selects automatically. • **Enabled**: Forces the use of Reliable UDP. • **Disabled**: Prevents the use of Reliable UDP.
TCP	Controls the use of TCP transport for NDI streams. • **No restriction**: The system selects automatically. • **Enabled**: Forces the use of TCP. • **Disabled**: Prevents the use of TCP.
Unicast	Controls whether the NDI stream uses Unicast transport. • **No restriction**: The system selects automatically. • **Enabled**: Forces Unicast transport. • **Disabled**: Prevents the use of Unicast.
Multicast	Controls whether the NDI stream uses Multicast transport. • **No restriction**: The system selects automatically. • **Enabled**: Forces Multicast transport. • **Disabled**: Prevents the use of Multicast.
Discovery server address(es)	Optional field for entering one or more IP addresses of NDI Discovery Servers. Separate multiple addresses with commas (e.g. 192.168.1.100, 192.168.1.101, 192.168.1.102, etc). Use Discovery Servers to locate NDI streams across different network subnets.
MPEG-2 TS	
Stream name	The label for the new input stream. This name is used to identify the input in the interface.
Network interface	Selects the Ethernet interface that receives the MPEG-2 TS stream from the sender.
Network scheme	Selects the network transport type. This setting must match the configuration of the sending device. For example, if you are sending a unicast stream, you *must* select **Unicast** here for the stream to connect. • **Unicast**: Stream is sent directly from one sender to one receiver. • **Multicast**: Stream is sent from one sender to a multicast group. **NOTE** This selection determines how the **Sender address** field below is used.

Field	Description
Sender address / Multicast address	The name of this field changes based on the selected **Network scheme**: • **Unicast**: Enter the IP address of the device sending the MPEG-2 TS stream. • **Multicast**: Enter the multicast group address for the stream.
Sender port	The port number used by the sender to transmit the MPEG-2 TS stream. This field is required.
Avoid stream reconnection	Prevents the system from automatically trying to reconnect if the stream connection is lost.
No signal action	Defines the system behavior when the stream signal is lost or unavailable. • **Do nothing**: Maintains the last displayed frame; no visual change occurs. • **Show blank screen**: Replaces the input with a black screen. • **Show 'No signal' message**: Displays an on-screen message indicating that the signal is missing.
RTSP	
Stream name	The label for the new RTSP input. This name is used to identify the input in the interface.
Network interface	Selects the Ethernet interface that receives the RTSP stream from the sender.
Network scheme	Selects the network transport type. This setting must match the configuration of the sending device. • **Unicast**: Stream is sent directly from one sender to one receiver. • **Multicast**: Stream is sent from one sender to a multicast group. • **TCP interleave**: Stream is transmitted over a single TCP connection using RTSP interleaved mode, which embeds RTP packets within the RTSP control channel.
Stream URI	Specifies the full RTSP Uniform Resource Identifier (URI) for the stream source. Must include the correct protocol prefix (e.g., rtsp://).
Base port	Specifies the base port number for receiving media streams.
Avoid stream reconnection	Prevents the system from automatically trying to reconnect if the RTSP stream connection is lost.

Field	Description
No signal action	Defines the system behavior when the stream signal is lost or unavailable. • **Do nothing**: Maintains the last displayed frame; no visual change occurs. • **Show blank screen**: Replaces the input with a black screen. • **Show 'No signal' message**: Displays an on-screen message indicating that the signal is missing.
Use authentication	Enables authentication for the RTSP connection.
User	The username required to access the RTSP stream if authentication is enabled.
Password	The password required to access the RTSP stream if authentication is enabled.
SRT	
Source stream name	The label for the SRT input. Used to identify the input in the interface.
SRT connection mode	Selects the connection mode for the SRT stream. • **Caller**: Initiates a connection to the remote SRT listener. • **Listener**: Waits for an incoming SRT connection. • **Rendezvous**: Both sides simultaneously establish the connection.
Network interface	Selects the Ethernet interface that receives the SRT stream.
Sender address	The IP address of the device sending the SRT stream.
Sender port	The UDP port number used by the sender for the SRT connection.
Receiver port	The UDP port number used by the receiver for the SRT connection.
Latency	Sets the buffering time (in milliseconds) to compensate for network jitter.
Encryption	Selects the encryption method for the SRT stream. • **Unencrypted**: No encryption is applied. • **AES-128**: Uses AES encryption with a 128-bit key. • **AES-192**: Uses AES encryption with a 192-bit key. • **AES-256**: Uses AES encryption with a 256-bit key. **NOTE** If you encrypt your stream, you will be asked to choose a passphrase (between 10 and 79 alphanumeric characters).

Field	Description
Avoid stream reconnection	Prevents the system from automatically trying to reconnect if the SRT stream connection is lost.
No signal action	Defines the system behavior when the stream signal is lost or unavailable. • **Do nothing**: Maintains the last displayed frame; no visual change occurs. • **Show blank screen**: Replaces the input with a black screen. • **Show 'No signal' message**: Displays an on-screen message indicating that the signal is missing.
IPMX[1]	
Stream name	The label for the IPMX input. Used to identify the input in the interface.
Network interface	Selects the Ethernet interface that receives the video portion of the IPMX stream.
SDP mode	Selects the method for obtaining the SDP (Session Description Protocol) file. • **URL**: Loads the SDP from a specified URL. • **File**: Loads the SDP from an uploaded local file.
SDP file URL	Specifies the URL from which to retrieve the video SDP file when the mode is set to URL.
Stream state	Sets the operational state of the video stream. • **Master enabled**: Activates streaming. • **Master disabled**: Deactivates streaming.

1. **Video Network** and **Audio Network** include identical setting options. Each section is configured separately, but the descriptions apply to both.

Output settings

Field	Description
HDMI	
Name	The label for the HDMI output. Used to identify the output in the interface.
Resolution	Selects the output resolution. • **Use stream resolution**: Matches the resolution of the active input stream. • **Use preferred resolution**: Automatically uses the resolution preferred by the connected display. • Select a specific resolution and frame rate from the list.
Scaling type	Selects how the output image is scaled. • **Keep aspect ratio**: Maintains the original aspect ratio, adding black bars if needed. • **No scale**: Outputs the image without any scaling. • **Fullscreen**: Stretches the image to fill the entire screen, which may alter the original aspect ratio.
NDI	
Stream name	The name of the incoming NDI stream. This value is detected automatically or entered manually.
Stream groups	Optional tags for stream grouping or filtering in NDI discovery.
NDI codec	Selects the compression mode for the NDI output stream. • **Speed HQ**: High-quality, low-latency codec optimized for production workflows. • **NDI HX**: Compressed NDI stream with lower bandwidth requirements, suitable for constrained networks. **NOTE** Selecting **NDI HX** displays additional configuration options specific to this codec.
Capture and relay tally and metadata	When enabled, receives tally and metadata from NDI sources and relays them to the output stream.

Field	Description
Resolution	Selects the output resolution. • **Use stream resolution**: Matches the resolution of the active video source. • **3840×2160p**: Sets the output resolution to Ultra HD 2160p. • **1920×1080p**: Sets the output resolution to Full HD 1080p. • **Custom**: Allows manual entry of the output Width and Height (in pixels).
Width	Specifies the horizontal resolution of the output in pixels. Available only when **Custom** resolution is selected.
Height	Specifies the vertical resolution of the output in pixels. Available only when **Custom** resolution is selected.
Pixel format	Selects the color format and bit depth for the output video. The available options change depending on the selected NDI codec. • **Use stream pixel format**: Maintains the pixel format of the input stream. • **YUV 4:2:0 8 bits**: Chroma subsampling 4:2:0 with 8-bit color depth, optimized for bandwidth efficiency. • **YUV 4:2:2 8 bits**: Chroma subsampling 4:2:2 with 8-bit color depth for standard quality. • **YUV 4:4:4 8 bits**[1]: No chroma subsampling (4:4:4) with 8-bit color depth for full color fidelity. • **YUV 4:2:0 10 bits**: Chroma subsampling 4:2:0 with 10-bit color depth for better gradient handling. • **YUV 4:2:2 10 bits**: Chroma subsampling 4:2:2 with 10-bit color depth for high-quality production workflows. • **YUV 4:4:4 10 bits**[1]: No chroma subsampling (4:4:4) with 10-bit color depth for maximum quality.
Scaling type	Selects how the video is scaled to fit the output resolution. • **Keep aspect ratio**: Maintains the original aspect ratio, adding black bars if necessary. • **No scale**: Outputs the video without scaling. • **Fullscreen**: Stretches the video to fill the entire output frame, which may distort the aspect ratio.

Field	Description
Encoder mode	Selects the encoding mode. • **High quality H.265**: Encodes video using the H.265 (HEVC) codec with a focus on maintaining higher visual quality. • **High quality H.264**: Encodes video using the H.264 (AVC) codec with a focus on maintaining higher visual quality.
Target bit rate	Specifies the average target bit rate for the encoded video in kilobits per second (Kb/s).
HRD mode	Selects the Hypothetical Reference Decoder (HRD) buffering model mode. • **VBR**: Variable Bitrate mode. • **CBR**: Constant Bitrate mode.
Max bit rate mode	Selects how the maximum bit rate is determined. • **Automatic**: The system automatically manages the maximum bit rate. • **Custom**: Allows manual entry of a specific maximum bit rate value. When **Custom** is selected, an entry field appears allowing manual input of the maximum bit rate value (in kilobits per second).
CPB size	Sets the size of the Coded Picture Buffer (CPB) in kilobits (Kb).
Minimum QP	Specifies the minimum Quantization Parameter (QP) value. Lower values improve quality but increase bitrate.
Maximum QP	Specifies the maximum Quantization Parameter (QP) value. Higher values lower quality but reduce bitrate.
GOP length	Sets the number of frames between I-frames (Group of Pictures length). Affects video compression efficiency and latency.
SubGOP length	Sets the interval between P-frames or B-frames within a GOP.
Profile	Selects the encoding profile. • **Automatic**: The system selects an appropriate profile based on resolution, frame rate, and other settings. • **H264 Baseline**: Simplified profile with lower compression efficiency, typically used for compatibility with older devices. • **H264 Main**: Provides better compression efficiency than Baseline; suitable for most applications. • **H264 High**: Offers the highest compression efficiency and best image quality among the available profiles.

Field	Description
Level	Selects the encoding level for the codec. The level defines maximum resolution, frame rate, and bitrate limits. • **Automatic**: The system selects an appropriate level based on the output configuration. • Manual selection is available if a specific level is required for compatibility.
Tier (H.265 only)	Selects the encoding tier for H.265 (HEVC) video. • **Automatic**: The system selects the appropriate tier based on bitrate and output settings. • Manual selection allows choosing between **Main** or **High** tiers, depending on the network or playback requirements.
Force CAVLC (H.264 only)	Forces use of Context-Adaptive Variable Length Coding (CAVLC) instead of CABAC for entropy coding. Useful for compatibility with certain decoders.
Encoder mode	Displays the audio codec used for encoding. This field is fixed and cannot be changed. • **AAC-LC**: Low Complexity AAC, offering good quality at lower bitrates.
Target bit rate	Sets the target bitrate for the encoded audio in kilobits per second (Kb/s).
Audio format	Displays the audio stream container format. This field is fixed and cannot be changed. • **ADTS**: Audio Data Transport Stream, commonly used for AAC audio transport.
Network Interface	Selects the Ethernet interface used for NDI transmission. • **No restriction**: Allows the system to select any available network interface. • **LAN1**: Performance depends on Vion model (NX or EX). See *Device connections and button functions*. • **LAN2**: Performance depends on Vion model (NX or EX). See *Device connections and button functions*.
Reliable UDP	Enables or disables Reliable UDP transport for the NDI stream. • **No restriction**: The system selects automatically. • **Enabled**: Forces use of Reliable UDP. • **Disabled**: Prevents use of Reliable UDP.
TCP	Enables or disables TCP transport for the NDI stream. • **No restriction**: The system selects automatically. • **Enabled**: Forces use of TCP. • **Disabled**: Prevents use of TCP.

Field	Description
Unicast	Enables or disables Unicast transport for the NDI stream. • **No restriction**: The system selects automatically. • **Enabled**: Forces Unicast. • **Disabled**: Prevents Unicast.
Multicast	Enables or disables Multicast transport for the NDI stream. • **Enabled**: Forces Multicast. • **Disabled**: Prevents Multicast. • **No restriction**: The system selects automatically.
Discovery server address(es)	Specifies one or more IP addresses of NDI Discovery Servers. Separate multiple addresses with commas.
MPEG-2 TS	
Stream name	The label for the MPEG-2 TS output stream. Used to identify the stream in the interface.
Network interface	Selects the Ethernet interface used for transmitting the MPEG-2 TS stream.
Network scheme	Selects the network transport type for the output stream. • **Multicast**: Sends the stream to multiple receivers using a multicast IP address. • **Unicast**: Sends the stream directly to a single receiver.
Multicast address	Specifies the multicast IP address used when **Multicast** is selected as the network scheme.
Receiver address	Specifies the unicast IP address of the receiving device when **Unicast** is selected as the network scheme.
Base port	Specifies the starting port number used for the MPEG-2 TS stream.
Time to live	Sets the Time to Live (TTL) value for multicast packets. Defines how many network hops the packets are allowed before being discarded.
Type of service	Sets a network priority value for the stream traffic.
Resolution	Selects the output resolution. • **Use stream resolution**: Matches the resolution of the active video source. • **3840×2160p**: Sets the output to Ultra HD 2160p. • **1920×1080p**: Sets the output to Full HD 1080p. • **Custom**: Allows manual entry of Width and Height in pixels.

Field	Description
Width	Specifies the horizontal resolution of the output in pixels. Available only when **Custom** resolution is selected.
Height	Specifies the vertical resolution of the output in pixels. Available only when **Custom** resolution is selected.
Pixel format	Selects the color format and bit depth for the output video. • **Use stream pixel format**: Matches the pixel format of the active video source. • Manual selection allows choosing from several YUV chroma subsampling formats (such as 4:2:0, 4:2:2, or 4:4:4) with 8-bit or 10-bit depth.
Scaling type	Selects how the video is scaled to fit the output resolution. • **Keep aspect ratio**: Maintains the original aspect ratio, adding black bars if necessary. • **No scale**: Outputs the video without scaling. • **Fullscreen**: Stretches the video to fill the output frame, which may distort the aspect ratio.
Encoder mode	Selects the encoding mode. • **High quality H.265**: Encodes video using the H.265 (HEVC) codec with a focus on maintaining higher visual quality. • **High quality H.264**: Encodes video using the H.264 (AVC) codec with a focus on maintaining higher visual quality.
Target bit rate	Specifies the average target bit rate for the encoded video in kilobits per second (Kb/s).
HRD mode	Selects the Hypothetical Reference Decoder (HRD) buffering model mode. • **VBR**: Variable Bitrate mode. • **CBR**: Constant Bitrate mode.
Max bit rate mode	Selects how the maximum bit rate is determined. • **Automatic**: The system automatically manages the maximum bit rate. • **Custom**: Allows manual entry of a specific maximum bit rate value. When **Custom** is selected, an entry field appears allowing manual input of the maximum bit rate value (in kilobits per second).
CPB size	Sets the size of the Coded Picture Buffer (CPB) in kilobits (Kb).
Minimum QP	Specifies the minimum Quantization Parameter (QP) value. Lower values improve quality but increase bitrate.

Field	Description
Maximum QP	Specifies the maximum Quantization Parameter (QP) value. Higher values lower quality but reduce bitrate.
GOP length	Sets the number of frames between I-frames (Group of Pictures length). Affects video compression efficiency and latency.
SubGOP length	Sets the interval between P-frames or B-frames within a GOP.
Profile	Selects the encoding profile. The available options depend on the selected codec. • **Automatic**: The system selects an appropriate profile based on resolution, frame rate, and other settings. For H.264: • **H264 Baseline**: Simplified profile with lower compression efficiency, typically used for compatibility with older devices. • **H264 Main**: Provides better compression efficiency than Baseline; suitable for most applications. • **H264 High**: Offers the highest compression efficiency and best image quality among the available profiles. For H.265 (HEVC): • **Main**: Standard HEVC profile for 8-bit video. • **Main 10 bits**: Adds support for 10-bit color depth for improved image quality. • **Main 4:2:2 10 bits**: Supports 4:2:2 chroma subsampling with 10-bit depth for higher fidelity. • **Main 4:4:4**: Enables 4:4:4 chroma subsampling for full color detail. • **Main 4:4:4 10 bits**: Combines 4:4:4 chroma subsampling with 10-bit color for maximum quality.
Level	Selects the encoding level for the codec. The level defines maximum resolution, frame rate, and bitrate limits. • **Automatic**: The system selects an appropriate level based on the output configuration. • Manual selection is available if a specific level is required for compatibility.
Tier (H.265 only)	Selects the encoding tier for H.265 (HEVC) video. • **Automatic**: The system selects the appropriate tier based on bitrate and output settings. • Manual selection allows choosing between **Main** or **High** tiers, depending on the network or playback requirements.

Field	Description
Force CAVLC (H.264 only)	Forces use of Context-Adaptive Variable Length Coding (CAVLC) instead of CABAC for entropy coding. Useful for compatibility with certain decoders.
Encoder mode	Displays the audio codec used for encoding. This field is fixed and cannot be changed. • **AAC-LC**: Low Complexity AAC, offering good quality at lower bitrates.
Target bit rate	Sets the target bitrate for the encoded audio in kilobits per second (Kb/s).
Audio format	Displays the audio stream container format. This field is fixed and cannot be changed. • **ADTS**: Audio Data Transport Stream, commonly used for AAC audio transport.
RTSP	
Stream name	The label for the RTSP output stream. Used to identify the stream in the interface.
Stream key	Optional identifier for the RTSP session.
Network interface	Selects the Ethernet interface used for transmitting the RTSP stream.
RTSP port	Specifies the TCP port used for RTSP control messages. Default is typically 554, but it can be customized.
Network scheme	Selects the transport method for media delivery. • **No restriction**: The system selects the most appropriate method. • **Unicast and TCP interleave**: Streams are sent via unicast; RTP and RTSP messages are interleaved over a single TCP connection. • **Multicast only**: Streams are sent using multicast transport.
Base port	Specifies the starting UDP port for RTP media streams when using unicast or multicast.
Multicast address	Specifies the multicast IP address if the network scheme is set to **Multicast only** or **No restriction**.
Time to live	Sets how many network hops multicast packets are allowed before being discarded.
Type of service	Sets a network priority value for the stream traffic.

Field	Description
Resolution	Selects the output resolution. • **Use stream resolution**: Matches the resolution of the active video source. • **3840×2160p**: Sets the output resolution to Ultra HD 2160p. • **1920×1080p**: Sets the output resolution to Full HD 1080p. • **Custom**: Allows manual entry of **Width** and **Height** in pixels. Minimum is 640 × 480, maximum is the maximum resolution supported by Vion (see *Matrox Vion Hardware Specifications*).
Pixel format	Selects the color format and bit depth for the output video. • **Use stream pixel format**: Matches the pixel format of the active video source. • Manual selection allows choosing from several YUV chroma subsampling formats (such as 4:2:0, 4:2:2, or 4:4:4) with 8-bit or 10-bit depth.
Scaling type	Selects how the video is scaled to fit the output resolution. • **Keep aspect ratio**: Maintains the original aspect ratio, adding black bars if necessary. • **No scale**: Outputs the video without scaling. • **Fullscreen**: Stretches the video to fill the output frame, which may distort the aspect ratio.
Encoder mode	Selects the encoding mode. • **High quality H.265**: Encodes video using the H.265 (HEVC) codec with a focus on maintaining higher visual quality. • **High quality H.264**: Encodes video using the H.264 (AVC) codec with a focus on maintaining higher visual quality.
Target bit rate	Sets the average target bit rate for the encoded video in kilobits per second (Kb/s).
HRD mode	Selects the Hypothetical Reference Decoder (HRD) buffering model mode. • **VBR**: Variable Bitrate mode. • **CBR**: Constant Bitrate mode. • **No HRD**: Disables HRD modeling.

Field	Description
Max bit rate mode	Selects how the maximum bit rate is determined. • **Automatic**: The system automatically manages the maximum bit rate. • **Manual**: Allows manual control of maximum bit rate settings. • **Custom**: Allows manual entry of a specific maximum bit rate value. When **Custom** is selected, an entry field appears to specify the maximum bit rate.
CPB size	Sets the size of the Coded Picture Buffer (CPB) in kilobits (Kb).
Minimum QP	Specifies the minimum Quantization Parameter (QP) value. Lower values improve quality but increase bitrate.
Maximum QP	Specifies the maximum Quantization Parameter (QP) value. Higher values lower quality but reduce bitrate.
GOP length	Sets the number of frames between I-frames (Group of Pictures length). Affects video compression efficiency and latency.
SubGOP length	Sets the interval between P-frames or B-frames within a GOP.
Profile	Selects the encoding profile. The available options depend on the selected codec. • **Automatic**: The system selects an appropriate profile based on resolution, frame rate, and other settings. For H.264: • **H264 Baseline**: Simplified profile with lower compression efficiency, typically used for compatibility with older devices. • **H264 Main**: Provides better compression efficiency than Baseline; suitable for most applications. • **H264 High**: Offers the highest compression efficiency and best image quality among the available profiles. For H.265 (HEVC): • **Main**: Standard HEVC profile for 8-bit video. • **Main 10 bits**: Adds support for 10-bit color depth for improved image quality. • **Main 4:2:2 10 bits**: Supports 4:2:2 chroma subsampling with 10-bit depth for higher fidelity. • **Main 4:4:4**: Enables 4:4:4 chroma subsampling for full color detail. • **Main 4:4:4 10 bits**: Combines 4:4:4 chroma subsampling with 10-bit color for maximum quality.

Field	Description
Level	Selects the encoding level for the codec. Defines limits for resolution, frame rate, and bitrate. • **Automatic**: The system selects an appropriate level. • Manual selection is available if specific compatibility is needed.
Tier (H.265 only)	Selects the encoding tier for H.265 (HEVC). • **Automatic**: The system selects the appropriate tier. • Manual selection allows choosing between **Main** or **High** tiers.
Force CAVLC (H.264 only)	Forces use of Context-Adaptive Variable Length Coding (CAVLC) instead of CABAC for H.264 entropy coding. Useful for compatibility with certain decoders.
Encoder mode	Displays the audio codec used for encoding. This field is fixed and cannot be changed. • **AAC-LC**: Low Complexity AAC, offering good quality at lower bitrates.
Target bit rate	Sets the target bitrate for the encoded audio in kilobits per second (Kb/s).
Audio format	Selects the audio stream container format. • **Raw**: Outputs audio data without additional transport encapsulation. • **ADTS**: Audio Data Transport Stream, commonly used for AAC audio transport.
Use authentication	Enables authentication for the stream connection. When selected, you must enter a username and password.
User	Specifies the username required to authenticate the connection. Available only when **Use authentication** is enabled.
Password	Specifies the password required to authenticate the connection. This field is available only when **Use authentication** is enabled. The password must include at least one ASCII character.
SRT	
Source stream name	The label for the SRT output stream. Used to identify the stream in the interface.
SRT connection mode	Selects the connection mode for the SRT stream. • **Caller**: Initiates the connection to the receiver. • **Listener**: Waits for incoming SRT connection requests. • **Rendezvous**: Both sides simultaneously initiate the connection.

Field	Description
Network interface	Selects the Ethernet interface used for transmitting the SRT stream.
Sender port	Specifies the port used for sending SRT packets.
Latency	Sets the buffer size (in milliseconds) to compensate for network jitter and packet loss. Higher values improve reliability but add delay.
Time to live (TTL)	Sets how many network hops multicast packets are allowed before being discarded.
Type of service (ToS)	Sets a network priority value for the SRT stream traffic.
Encryption	Selects the encryption mode for SRT traffic. • **Unencrypted**: No encryption applied. • **AES-128**: Encrypts stream data with a 128-bit key. • **AES-192**: Encrypts stream data with a 192-bit key. • **AES-256**: Encrypts stream data with a 256-bit key. **NOTE** If you encrypt your stream, you will be asked to choose a passphrase (between 10 and 79 alphanumeric characters).
Resolution	Selects the output resolution. • **Use stream resolution**: Matches the resolution of the active video source. • **3840×2160p**: Sets the output resolution to Ultra HD 2160p. • **1920×1080p**: Sets the output resolution to Full HD 1080p. • **Custom**: Allows manual entry of Width and Height in pixels.
Width	Specifies the horizontal resolution in pixels. Available only when **Custom** resolution is selected.
Height	Specifies the vertical resolution in pixels. Available only when **Custom** resolution is selected.
Pixel format	Selects the color format and bit depth for the output video. • **Use stream pixel format**: Matches the pixel format of the active video source. • Manual selection allows choosing from several YUV chroma subsampling formats (such as 4:2:0, 4:2:2, or 4:4:4) with 8-bit or 10-bit depth.

Field	Description
Scaling type	Selects how the video is scaled to fit the output resolution. • **Keep aspect ratio**: Maintains the original aspect ratio, adding black bars if necessary. • **No scale**: Outputs the video without scaling. • **Fullscreen**: Stretches the video to fill the output frame, which may distort the aspect ratio.
Encoder mode	Selects the encoding mode. • **High quality H.265**: Encodes video using the H.265 (HEVC) codec with a focus on maintaining higher visual quality. • **High quality H.264**: Encodes video using the H.264 (AVC) codec with a focus on maintaining higher visual quality.
Target bit rate	Sets the average target bit rate for video encoding in kilobits per second (Kb/s).
HRD mode	Selects the Hypothetical Reference Decoder buffering model. • **VBR**: Variable Bit Rate. • **CBR**: Constant Bit Rate. • **No HRD**: Disables HRD modeling.
Max bit rate mode	Selects how the maximum bit rate is determined. • **Automatic**: The system automatically manages the maximum bit rate. • **Manual**: Allows manual control of maximum bit rate settings. • **Custom**: Allows manual entry of a specific maximum bit rate value. When **Custom** is selected, an entry field appears to specify the maximum bit rate.
CPB size	Sets the size of the Coded Picture Buffer (CPB) in kilobits (Kb).
Minimum QP	Specifies the minimum Quantization Parameter (QP) value. Lower values improve quality but increase bitrate.
Maximum QP	Specifies the maximum Quantization Parameter (QP) value. Higher values lower quality but reduce bitrate.
GOP length	Sets the number of frames between I-frames (Group of Pictures length). Affects video compression efficiency and latency.
SubGOP length	Sets the interval between P-frames or B-frames within a GOP.

Field	Description
Profile	Selects the encoding profile. The available options depend on the selected codec. • **Automatic**: The system selects an appropriate profile based on resolution, frame rate, and other settings. For H.264: • **H264 Baseline**: Simplified profile with lower compression efficiency, typically used for compatibility with older devices. • **H264 Main**: Provides better compression efficiency than Baseline; suitable for most applications. • **H264 High**: Offers the highest compression efficiency and best image quality among the available profiles. For H.265 (HEVC): • **Main**: Standard HEVC profile for 8-bit video. • **Main 10 bits**: Adds support for 10-bit color depth for improved image quality. • **Main 4:2:2 10 bits**: Supports 4:2:2 chroma subsampling with 10-bit depth for higher fidelity. • **Main 4:4:4**: Enables 4:4:4 chroma subsampling for full color detail. • **Main 4:4:4 10 bits**: Combines 4:4:4 chroma subsampling with 10-bit color for maximum quality.
Level	Selects the encoding level for the codec. The level defines maximum resolution, frame rate, and bitrate limits. • **Automatic**: The system selects an appropriate level based on the output configuration. • Manual selection is available if a specific level is required for compatibility.
Tier (H.265 only)	Selects the encoding tier for H.265 (HEVC). • **Automatic**: The system selects the appropriate tier. • **Main**: Standard tier. • **High**: Higher-tier encoding for demanding use cases.
Force CAVLC (H.264 only)	Forces use of Context-Adaptive Variable Length Coding (CAVLC) instead of CABAC for H.264 entropy coding. Useful for compatibility with certain decoders.
Audio encoder mode	Displays the audio codec used for encoding. This field is fixed and cannot be changed. • **AAC-LC**: Low Complexity AAC, offering good quality at lower bitrates.
Audio target bit rate	Sets the target bitrate for the encoded audio in kilobits per second (Kb/s).

Field	Description
Audio format	Selects the audio stream container format. • **Raw**: Outputs audio data without additional transport encapsulation. • **ADTS**: Audio Data Transport Stream, commonly used for AAC audio transport.
Use authentication	Enables authentication for the stream connection. When selected, you must enter a username and password.
User	Specifies the username required to authenticate the connection. Available only when **Use authentication** is enabled.
Password	Specifies the password required to authenticate the connection. Available only when **Use authentication** is enabled.
IPMX[2]	
Stream name	The label for the IPMX output stream. Used to identify the stream in the interface.
Jitter buffer	Sets the buffer size (in milliseconds) to compensate for network jitter when receiving IPMX streams. The default value is 50 ms. A larger buffer improves stability on unstable networks but increases latency.
Resolution	Selects the output resolution. • **Use stream resolution**: Matches the resolution of the active video source. • **3840×2160p**: Sets the output resolution to Ultra HD 2160p. • **1920×1080p**: Sets the output resolution to Full HD 1080p. • **Custom**: Allows manual entry of Width and Height in pixels.
Width	Specifies the horizontal resolution in pixels. Available only when **Custom** resolution is selected.
Height	Specifies the vertical resolution in pixels. Available only when **Custom** resolution is selected.
Pixel format	Selects the color format and bit depth for the output video. • **Use stream pixel format**: Matches the pixel format of the active video source. • Manual selection allows choosing from several YUV chroma subsampling formats (such as 4:2:2, or 4:4:4) with 8-bit or 10-bit depth.

Field	Description
Scaling type	Selects how the video is scaled to fit the output resolution. • **Keep aspect ratio**: Maintains the original aspect ratio, adding black bars if necessary. • **No scale**: Outputs the video without scaling. • **Fullscreen**: Stretches the video to fill the output frame, which may distort the aspect ratio.
Encoder mode	Displays the video encoder used for compression. • **JPEG XS**: Visually lossless, low-latency codec compliant with ISO/IEC 21122.
Target bit rate	Sets the average target bit rate for the JPEG XS encoder in kilobits per second (Kb/s).
Encoder mode	Displays the audio codec used for encoding. This field is fixed and cannot be changed. • **PCM**: Pulse-Code Modulation (uncompressed audio).
Network interface	Selects the Ethernet interface used for transmitting the IPMX video stream.
Destination address (multicast)	Specifies the multicast IP address used for the video stream.
Destination UDP port	Specifies the UDP port used to send the video stream to the network.
Network interface	Selects the Ethernet interface used for transmitting the IPMX audio stream.
Destination address (multicast)	Specifies the multicast IP address used for the audio stream.
Destination UDP port	Specifies the UDP port used to send the audio stream to the network.

1. Not a standard NDI|HX pixel format. Not interoperable with other NDI devices.
2. **Video Network** and **Audio Network** include identical setting options. Each section is configured separately, but the descriptions apply to both.

Network

This section describes the configurable settings on the Vion **Network** page.

Field	Description
IPv4 address	Specifies the static IPv4 address assigned to the selected network interface. Must be a valid IPv4 format (e.g., 192.168.1.100).
IPv4 netmask	Defines the subnet mask for the IPv4 address (e.g., 255.255.255.0).
IPv4 gateway	(Optional) Specifies the default gateway used for outbound IPv4 traffic.
IPv4 DNS servers	(Optional) Specifies one or more DNS server IPs for hostname resolution. Separate multiple addresses with commas.
IPv6 address	Specifies the static IPv6 address assigned to the selected network interface. Must be a valid IPv6 format (e.g., 2001:0db8::1).
IPv6 prefix length	Defines the network prefix length in bits (must be between 1 and 128).
IPv6 gateway	(Optional) Specifies the default gateway used for outbound IPv6 traffic.
IPv6 DNS servers	(Optional) Specifies one or more DNS server addresses for IPv6. Separate multiple addresses with commas.
Search domains	(Optional) Specifies one or more domain suffixes to use when resolving unqualified hostnames.

Date and time

This section describes the configurable settings on the Vion **Date and time** page.

Field	Description
NTP server	Specifies the hostname or IP address of the Network Time Protocol (NTP) server used to synchronize the device's system clock.
PTP control	Selects the network interface used for Precision Time Protocol (PTP) synchronization. • **LAN1** or **LAN2**: Enables PTP on the selected interface. • **Disabled**: Disables PTP operation.
PTP domain number	Sets the domain number for the PTP instance. The domain number allows multiple PTP domains to coexist on the same network. Valid values are typically between 0 and 127.

Users

For information on how to create and manage Vion users, see *Creating user accounts*.

Other

This section describes the configurable settings on the Vion **Other** page.

Field	Description
Download device logs	Downloads the device's current log files.
Delete device logs	Deletes all stored device logs.
Erase data	Clears all stored data, including processing sessions.
Add / Delete certificates	Allows importing or removing trusted certificates used for secure communication (see *Configuring SSL certificates*).
Download certificate	Exports the current certificate in use.
Disable certificate	Disables use of the selected certificate.
NDI server address	Specifies the IP address of the local NDI server.
NDI groups	Defines one or more NDI group names to join or advertise to.
NDI discovery servers	Lists additional NDI discovery server addresses to query.
Network interface	Selects which interface the device uses to reach the NMOS registry.
Control	Selects how the device discovers or configures its NMOS registry connection. • **Disable**: Disables NMOS registry interaction entirely. • **DNS**: Uses unicast DNS-SD to discover the registry. • **mDNS**: Uses multicast DNS (mDNS) for discovery on the local network. • **Automatic**: Attempts discovery using all available methods (recommended default). • **Manual**: Enables manual entry of the registry address, port, and domain.
Domain	Optional NMOS domain value to associate with registry entries.
Status	Indicates the registry configuration state (e.g., applied, pending).

Field	Description
Registry address	Specifies the IP address of the NMOS registry server.
Registry port	Sets the UDP or TCP port used to communicate with the registry (e.g., 8235).
Registry version	Displays the version of the NMOS API in use (e.g., v1.3).

CHAPTER 5

Matrox Vion Hardware Specifications

This chapter includes the following topics:

- *Matrox Vion Hardware Specifications*

Matrox Vion Hardware Specifications

Product	Vion EX	Vion NX
Part numbers	VION-EXY-NA VION-EXY-EU VION-EXY-UA	VION-NXY-NA VION-NXY-EU VION-NXY-UA
Connectivity		
Input connections	**HDMI** • 2 × mini-HDMI (Type C) with retention screw **SDI** • 2 × HD-BNC 12G-SDI, compliant with SMPTE ST 2082. Level A mapping only when 1080p60 is used as input • 2 × HD-BNC to BNC adapters provided • 8 channels of embedded audio per input • Maximum of two baseband inputs available at a time **Audio** • 1 × balanced stereo input via Phoenix connector • 1 × unbalanced stereo input via 3.5 mm (1/8 in.) TRS connector[1]	N/A
Output connections	**HDMI** • 2 × full-size HDMI (Type A) • 8 channels of embedded audio per input **Audio** • 1 × unbalanced stereo output via 3.5 mm (1/8 in.) TRS connector[1]	
Network	**LAN 1** • 100/1000BASE-T, RJ-45 **LAN 2** • 1000/2500BASE-T, RJ-45	**LAN 1** • 1000/2500BASE-T, RJ-45 **LAN 2** • 100/1000BASE-T, RJ-45

Product	Vion EX	Vion NX
Other	**USB** • 3 × USB 3.0 Type-A[1] • 1 × USB 2.0 Type-A[1] • 1 × USB 2.0 Type-B[1]	**USB** • 5 × USB 3.0 Type-A • 1 × USB Type-C
Baseband Video Input Formats		
SDI	**Resolutions** • 4096 × 2160 progressive[1], 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 fps • 3840 × 2160 progressive, 23.98[1], 24[1], 25[1], 29.97[1], 30[1], 50, 59.94, 60 fps • 1920 × 1080 progressive, 23.98[1], 24[1], 25, 29.97, 30, 50, 59.94, 60 fps • 1920 × 1080 interlaced, 25, 29.97, 30 fps • 1280 × 720 progressive, 50, 59.94, 60 fps **Color sampling** • Y'CbCr 4:2:2 10-bit	N/A

Product	Vion EX	Vion NX
HDMI	**Resolutions** • 3840 × 2160 progressive, 23.98[1], 24[1], 25[1], 29.97[1], 30[1], 50, 59.94, 60 fps • 2560 × 1440 progressive, 30, 60 fps • 1920 × 1080 interlaced, 25, 29.97, 30 fps • 1920 × 1080 progressive, 23.98[1], 24[1], 25, 29.97, 30, 50, 59.94, 60 fps • 1280 × 720 progressive, 25, 29.97, 30 fps • 1024 × 768 progressive, 30, 60 fps • 800 × 600 progressive, 30, 60 fps • 640 × 480 progressive, 30, 60 fps **NOTE** A number of other non 16:9 resolution can be supported. **Color sampling** • Y'CbCr 4:2:2 10-bit • sRGB 4:4:4 8-bit or 10-bit	N/A

Product	Vion EX	Vion NX
Supported Codecs		
Codecs	**Video codecs** • **H.264 / MPEG-4 Part 10 (AVC):** 4:2:0 8-bit, up to 100 Mbps • **H.265 (HEVC):** 4:2:0 8-/10-bit, 4:2:2 8-/10-bit, 4:4:4 8-/10-bit, up to 100 Mbps • **JPEG XS:** 4:2:2 8-/10-bit, 4:4:4 8-/10-bit, up to 2000 Mbps • **NDI|6 (SpeedHQ):** 4:2:2 8-/10-bit, up to 300 Mbps • **NDI|HX3 (H.264 / H.265):** 4:2:0 8-/10-bit, up to 100 Mbps **Audio codecs** • Uncompressed audio: supported in IPMX/ST 2110 and NDI streaming formats • AAC-LC / AAC-HE: 32–256 Kbps per stereo pair	
Supported Streaming Formats		
Streaming formats	• **RTP / RTSP:** H.264 and H.265 only • **SRT (caller, listener, and rendezvous modes):** H.264 and H.265 only • **MPEG-2 TS:** H.264 and H.265 only • **NDI|6:** SpeedHQ • **NDI|HX3:** H.264 or H.265 • **IPMX:** JPEG XS • **SMPTE ST 2110-22:** JPEG XS[2]	
Performance		
Encode /decode	• **JPEG XS:** 1x 4Kp60 encode or decode, 4x 1080p60 encode or decode • **NDI6[Full]:** 1x 4Kp60 encode or decode, 4x 1080p60 encode or decode • **H.264:** 2x 4Kp60 encode or decode, 8x 1080p60 encode or decode • **H.265 4:2:0 and 4:4:4 8/10-bit:** 2x 4Kp60 encode or decode, 8x 1080p60 encode or decode • **H.265 4:2:2 10-bit:** 2x HD encode and decode **NOTE** Only two HDMI outputs are available. To view more than two simultaneous decodes, use composition mode.	

Product	Vion EX	Vion NX
Transcode Combinations		
Transcode combinations	• **JPEG XS <----> NDI:** 1 × 4Kp60 transcode, 3 × 1080p60 transcodes • **JPEG XS <----> H.264:** 1 × 4Kp60 transcode, 4 × 1080p60 transcodes • **JPEG XS <----> H.265 4:2:0, 4:4:4:** 1 × 4Kp60 transcode, 4 × 1080p60 transcodes • **JPEG XS <----> H.265 4:2:2 10-bit:** 2 × 1080p60 transcodes • **NDI|6 <----> H.264 (including NDI|HX3):** 2 × 4Kp60 transcodes, 4 × 1080p60 transcodes[1] • **NDI|6 <----> H.265 4:2:0 or 4:4:4 (including NDI|HX3):** 2 × 4Kp60 transcodes, 4 × 1080p60 transcodes • **NDI|6 <----> H.265 4:2:2 10-bit:** 2 × 1080p60 transcodes • **H.264 <----> H.265:** 1 × 4Kp60 transcode, 4 × 1080p60 transcodes **NOTE** Many simultaneous encodes and transcodes are possible. The combinations above provide guidelines for potential limits. When resolutions and frame rates are reduced to 1080i/25 or 1080i/30, or to 720p/50 or 720p/60, even more operations are possible. The NDI and JPEG XS codecs each have a hard limit of four simultaneous operations. These limits are independent of each other. For example, up to four NDI <----> JPEG XS transcodes are possible, but only two NDI|6 <----> NDI|HX3 transcodes are supported.	
Scaling and Color Space Conversion Operations		
Color space conversion	**Input video formats** • **Y'CbCr BT.709 (SDI or HDMI):** conversion from any baseband format to any codec format • Y'CbCr BT.2020 (SDI or HDMI) • sRGB (HDMI) **Codec formats** • **YUV 4:2:0 8-/10-bit:** conversion between codec formats • YUV 4:2:2 8-/10-bit • RGB 4:4:4 8-/10-bit	**Codec formats** • **YUV 4:2:0 8-/10-bit:** conversion between codec formats • YUV 4:2:2 8-/10-bit • RGB 4:4:4 8-/10-bit
Scaling and frame rate conversion	• Upscaling / downscaling, including anamorphic scaling between HD and 4K • Deinterlacing and interlace-to-progressive conversion • Frame rate conversion using frame skip and repeat	

Product	Vion EX	Vion NX
General		
Physical	**Product dimensions** • 190 mm (7.48 in.) × 148 mm (5.83 in.) × 30 mm (1.18 in.) **Weight** • Device only: ~1.5 kg (3.3 lb) **Operating conditions** • 0–35 °C (32–95 °F) **Power supply** • 120–240 V AC, 120 W **Power input** • 19 V DC, 5.5 A maximum (4 A typical)	**Product dimensions** • 210 mm (8.27 in.) × 175 mm (6.89 in.) × 42 mm (1.65 in.) **Weight** • Device only: ~1.0 kg (2.2 lb) **Operating conditions** • 0–35 °C (32–95 °F) **Power supply** • 120–240 V AC, 90 W **Power input** • 19 V DC, 4.5 A maximum
Regulatory	• CE (EU), FCC (US), ICES-003 (Canada), KC (Korea), RCM (Australia/New Zealand) • REACH, EU RoHS • UL 60950-1, UL 62368-1, CSA C22.2 No. 60950-1, CSA C22.2 No. 62368-1, TÜV EN 60950-1, EN 62368-1 • GB 9254-2008, GB 4943.1-2011, GB 17625.1-2012	
Hardware and Software		
Hardware included	**Power supply** • 120 W power supply **Power cords** • VION-EXY-NA: NEMA 5-15 power cord (North America) • VION-EXY-EU: CEE 7/7 power cord (European Union) • VION-EXY-UA: Power cord (United Kingdom and Australia/New Zealand) **Adapters** • 2 × 12 in. HD-BNC to BNC cable adapters for SDI connectivity **Other** • 1 × mounting plate with screws	**Power supply** • 90 W power supply **Power cords** • VION-NXY-NA: NEMA 5-15 power cord (North America) • VION-NXY-EU: CEE 7/7 power cord (European Union) • VION-NXY-UA: Power cord (United Kingdom and Australia/New Zealand) **Adapters** • 2 × 12 in. HD-BNC to BNC cable adapters for SDI connectivity **Other** • 1 × mounting plate with screws

Product	Vion EX	Vion NX
User interfaces	• **Matrox Update Utility:** Free application used to discover and update Vion devices on the network • **Web UI:** Primary interface for configuration and monitoring • **NMOS IS-04 and IS-05 APIs:** Discovery and routing of IPMX and ST 2110 signals	
Warranty	• **Standard warranty:** 2 years • **Extended warranty:** Available; contact a Matrox sales representative	
Accesories and options	• **Rack kit:** Rack kit part number[3] • **ConductIP Media Routing Appliance:** CDTCIP-MRA • **HD-BNC adapter cables:** HDBNC/I	• **Rack kit:** Rack kit part number[3] • **ConductIP Media Routing Appliance:** CDTCIP-MRA

1. To be supported in a future release.
2. SMPTE ST 2110-22 transmit support may not meet jitter specifications. Some receivers might not receive a stable stream.
3. Not yet available.

Appendix A

Restoring Matrox Vion to factory default settings

This appendix includes the following topics:

- *Restoring Matrox Vion to factory default settings*

Restoring Matrox Vion to factory default settings

IMPORTANT Matrox Video recommends using this factory restore method with guidance from technical support.

To restore Matrox Vion to its factory default settings, you must connect a monitor and keyboard to the device and access the boot menu.

For details about port locations and button functions, see "*Device connections and button functions*" on page *7*.

To access the boot menu:

Step 1. Connect a monitor to the **HDMI Out 1** port on the Matrox Vion device.

Step 2. Connect a keyboard to any **USB** port.

Step 3. Use a paperclip or similar tool to press the reset button and reboot the device.

Step 4. While the device is booting, hold down the **Esc** key.

The boot menu appears with the following options:

```
[1] Restore factory image
[2] Reboot
[3] Reset Configuration Settings
```

Step 5. Press `1` to select `Restore factory image`.

Step 6. You will see the following message:

```
About to do a factory restore, this will wipe all content on
your device, continue? [y/n]
```

Step 7. Press `y` to confirm.

Result of this task: After the process completes, Matrox Vion is restored to factory default settings.

Appendix B

Customer support

This appendix includes the following topics:

- *Matrox Video website*
- *Technical support*
- *Register your Matrox Video product*

Customer support

In this section, you will find customer support information for your Matrox product.

Matrox Video website

Our website has product literature, press releases, technical material, a sales office list, trade show information, and other relevant material. Visit the Matrox Video website at *video.matrox.com*.

Technical support

Matrox Video values your business and offers professional support for your Matrox Video product.

If your product was purchased through a Matrox Video dealer, contact your dealer for product support. This is the quickest and most effective method of technical assistance. Your dealer is familiar with your complete system.

If your product was purchased through Matrox Video, contact your Matrox Video representative or visit our technical support Web site at *video.matrox.com/en/support*.

To serve you better, please provide a complete description of the problem, and include:

- Matrox product serial number, model number, revision number, and firmware number.
- Source specifications
- Specific web UI or OSD options and features used.

Register your Matrox Video product

Please register online (*video.matrox.com/en/apps/registration*) to be eligible for customer support, new product announcements, and information on special offers and upcoming events.

Compliance Statements

USA

FCC Compliance Statement
Remark for the Matrox hardware products supported by this guide

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING

Changes or modifications to this unit not expressly approved by the party responsible for the compliance could void the user's authority to operate this equipment. The use of shielded cables for connection of equipment and other peripherals to the card is required to meet FCC requirements.

Canada

(English) Innovation, Science and Economic Development Canada
CAN ICES-3 (A)/NMB-3 (A)
Remark for the Matrox hardware products supported by this guide

These digital devices do not exceed the Class A limits for radio noise emission from digital devices set out in the Radio Interference Regulation of Innovation, Science and Economic Development Canada.

(Français) Innovation, Sciences et Développement économique Canada
CAN ICES-3 (A)/NMB-3 (A)
Remarque sur les produits matériels Matrox couverts par ce guide

Ces appareils numériques n'émettent aucun bruit radioélectrique dépassant les limites applicables aux appareils numériques de Classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par Innovation, Sciences et Développement économique Canada.

Europe

CE

(English) European user's information – Declaration of Conformity
Remark for the Matrox hardware products supported by this guide

These devices comply with EC Directive 2014/30/EU for a Class A digital device. They have been tested and found to comply with EN55032/CISPR32 and EN55024/CISPR24. In a domestic environment these products may cause radio interference in which case the user may be required to take adequate measures. To meet EC requirements, shielded cables must be used to connect equipment and other peripherals. These products have been tested in a typical Class A compliant host system. It is assumed that these products will also achieve compliance in any Class A compliant system.

(Français) Informations aux utilisateurs Européens – Déclaration de conformité
Remarque sur les produits matériels Matrox couverts par ce guide

Ces unités sont conformes à la directive communautaire 2014/30/EU pour les unités numériques de classe A. Les tests effectués ont prouvé qu'elles sont conformes aux normes EN55032/CISPR32 et EN55024/CISPR24. Le fonctionnement de ces produits dans un environnement résidentiel peut causer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre les mesures appropriées. Pour respecter les impératifs communautaires, les câbles de connexion entre l'équipement et ses périphériques doivent être blindés. Ces produits ont été testés dans un système hôte typique compatible classe A. On suppose qu'ils présenteront la même compatibilité dans tout système compatible classe A.

(Deutsch) Information für europäische Anwender – Konformitätserklärung
Anmerkung für die Matrox Hardware-Produktunterstützung durch dieses Handbuch

Diese Geräte entsprechen EG Direktive 2014/30/EU für ein digitales Gerät Klasse A. Sie wurden getestet und entsprechen demnach EN55032/CISPR32 und EN55024/CISPR24. In einer Wohnumgebung können diese Produkte Funkinterferenzen erzeugen, und der Benutzer kann genötigt sein, entsprechende Maßnahmen zu ergreifen. Um EG-Anforderungen zu entsprechen, müssen zum Anschließen des ausrüstung und anderer Peripheriegeräte abgeschirmte Kabel verwendet werden. Diese Produkt wurden in einem typischen, der Klasse A entsprechenden, Host-System getestet. Es wird davon ausgegangen, daß diese Produkte auch in jedem Klasse A entsprechenden System entsprechend funktionieren.

(Italiano) Informazioni per gli utenti europei – Dichiarazione di conformità
Nota per i prodotti hardware Matrox supportati da questa guida

Questi dispositivi sono conformi alla direttiva CEE 2014/30/EU relativamente ai dispositivi digitali di Classe A. Sono stati provati e sono risultati conformi alle norme EN55032/CISPR32 e EN55024/CISPR24. In un ambiente domestico, questi prodotti possono causare radiointerferenze, nel qual caso all'utente potrebbe venire richiesto di prendere le misure adeguate. Per soddisfare i requisiti CEE, l'apparecchiatura e le altre periferiche vanno collegati con cavi schermati. Questi prodotti sono stati provati in un tipico sistema host conforme alla Classe A. Inoltre, si dà per scontato che questi prodotti acquisiranno la conformità in qualsiasi sistema conforme alla Classe A.

(Español) Información para usuarios europeos – Declaración de conformidad
Observación referente a los productos de hardware de Matrox apoyados por este manual

Estos dispositivos cumplen con la directiva de la CE 2014/30/EU para dispositivos digitales de Clase A. Dichos dispositivos han sido sometidos a prueba y se ha comprobado que cumplen con las normas EN55032/CISPR32 y EN55024/CISPR24. En entornos residenciales, estos productos pueden causar interferencias en las comunicaciones por radio; en tal caso el usuario deberá adoptar las medidas adecuadas. Para satisfacer las disposiciones de la CE, deberán utilizarse cables apantallados para conectar el equipo y demás periféricos. Estos productos han sido sometidos a prueba en un típico sistema anfitrión que responde a los requisitos de la Clase A. Se supone que estos productos cumplirán también con las normas en cualquier sistema que responda a los requisitos de la Clase A.

Korea

A 급 기기 (업무용 방송통신기자재)
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