USER MANUAL

MODEL:

VS-611DT
UHD 6x1:2 Auto Switcher
VS-611DT Quick Start Guide

This guide helps you install and use your VS-611DT for the first time.

Go to www.kramerav.com/downloads/VS-611DT to download the latest user manual and check if firmware upgrades are available.

Step 1: Check what’s in the box
- VS-611DT UHD 8x1:2 Auto Switcher
- Power supply (12V DC)
- 4 Rubber feet
- 1 Quick start guide

Step 2: Get to know your VS-611DT

<table>
<thead>
<tr>
<th>#</th>
<th>Feature</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ON LED</td>
<td>Lights when the unit is powered on</td>
</tr>
<tr>
<td>2</td>
<td>LAST LED</td>
<td>Lights when last connect is active</td>
</tr>
<tr>
<td>3</td>
<td>AUTO LED</td>
<td>Lights when auto switching is active</td>
</tr>
<tr>
<td>4</td>
<td>AUTO/MAN. Button</td>
<td>Press to select between auto-switching or manual switching mode</td>
</tr>
<tr>
<td>5</td>
<td>LAST/PRIIO. Button</td>
<td>Press to select between last connected mode or priority switching mode</td>
</tr>
<tr>
<td>6</td>
<td>INPUT Buttons (1-6)</td>
<td>Press to select an HDMI source to route to the output</td>
</tr>
<tr>
<td>7</td>
<td>OFF Button</td>
<td>Press to mute the output</td>
</tr>
<tr>
<td>8</td>
<td>EDID Button</td>
<td>Press to capture the EDID</td>
</tr>
<tr>
<td>9</td>
<td>LOCK Button</td>
<td>Press and hold to toggle locking and unlocking the front panel buttons</td>
</tr>
</tbody>
</table>
# Feature | Function
10 | INPUT HDMI Connectors (1-6) | Connect to up to 6 HDMI sources
11 | AUDIO OUT Terminal Block | Connects to a balanced stereo audio acceptor
12 | PROG USB C Connector | Used for upgrading firmware
13 | RS-232 LOCAL/WA HDBT Button | Press to select between a local RS-232 source, or RS-232 over HDBT
14 | RS-232 LOCAL LED | Lights when local RS-232 is active
15 | INPUT SELECT Contact Closure Terminal Block | Connects to external contact closure input switches
16 | RS-232 Terminal Block | Connects to a local RS-232 source
17 | ETHERNET RJ-45 Connector | Connects to a network for control
18 | IR 3.5mm Mini Jack | Connects to an HDBT IR transmitter/receiver
19 | HDMI OUT RJ-45 Connector | Connects to an HDBT TP line
20 | HDMI OUT Connector | Connects to an HDMI acceptor
21 | 12V DC Connector | Connects to a power supply for the unit

**Step 3: Install the VS-611DT**

Attach the rubber feet and place on a table or mount the VS-611DT in a rack (using an optional RK-1 rack mount).

**Step 4: Connect the inputs and outputs**

Always switch OFF the power on each device before connecting it to your VS-611DT. For best results, we recommend that you always use Kramer high-performance cables to connect AV equipment to the VS-611DT.
Step 5: Connect the power

Connect the 12V DC power adapter power cord to the VS-611DT and plug it into the mains electricity.

Safety Instructions:
- Caution: There are no operator serviceable parts inside the unit.
- Warning: Do not attempt to repair the VS-611DT. Only qualified service personnel should repair it. See the VS-611DT User Manual for more information.

Step 6: Configure the VS-611DT

Capture the EDID:
1. Press the EDID button to cycle through the EDID sources. The EDID source is indicated by the number of times all the front panel LEDs flash:
   - 1 flash — EDID captured to all ports from HDMI.
   - 2 flashes — EDID captured to all ports from HDBT.
   - 3 flashes — EDID on all ports set to default EDID.
2. Press the button of the input that receives the EDID.
3. Press and hold the EDID button for 5 seconds.

Set the switching mode:
- Auto switching — press Auto.
- Last connected — press Last.
- Priority switching — release Last.

Step 7: Operate the VS-611DT

RS-232 and Ethernet:

<table>
<thead>
<tr>
<th>Protocol 3000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud Rate: 9600</td>
</tr>
<tr>
<td>Data Bits: 8</td>
</tr>
<tr>
<td>Stop Bits: 1</td>
</tr>
<tr>
<td>Parity: None</td>
</tr>
<tr>
<td>Command Format: ASCII</td>
</tr>
<tr>
<td>TCP/IP Parameters</td>
</tr>
<tr>
<td>IP Address: 192.168.1.39</td>
</tr>
<tr>
<td>Subnet mask: 255.255.0.255</td>
</tr>
<tr>
<td>Default gateway: 192.168.0.254</td>
</tr>
</tbody>
</table>

Web Pages

Contact Closure

![Contact Closure Diagram]

Protocol 3000

Example ROUTE command using K-Config:

```
"ROUTE 1,1,2,0x0D"
```
Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront video, audio, presentation, and broadcasting professionals on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Our 1,000-plus different models now appear in 14 groups that are clearly defined by function: GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Routers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters; GROUP 11: Sierra Video Products; GROUP 12: Digital Signage; GROUP 13: Audio; and GROUP 14: Collaboration.

Congratulations on purchasing your Kramer **VS-611DT UHD 6x1:2 Auto Switcher**, which is ideal for the following typical applications:

- Education
- Corporate
- Any other AV installation that requires selecting and switching between several HDMI sources automatically
2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual

Go to www.kramerav.com/manual/VS-611DT to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

2.1 Achieving the Best Performance

To achieve the best performance:

- For optimum range and performance, use the recommended Kramer cables available at www.kramerav.com/product/VS-611DT
- Do not secure the cables in tight bundles or roll the slack into tight coils.
- Avoid interference from neighbouring electrical appliances that may adversely influence signal quality.
- Position your VS-611DT away from moisture, excessive sunlight and dust.

This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.

2.2 Safety Instructions

Caution: There are no operator serviceable parts inside the unit.

Warning: Use only the Kramer Electronics power supply that is provided with the unit.

Warning: Disconnect the power and unplug the unit from the wall before installing.
2.3 **Recycling Kramer Products**

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer’s recycling arrangements in your particular country go to our recycling pages at [www.kramerav.com/support/recycling/](http://www.kramerav.com/support/recycling/).
3 Overview

The **VS-611DT** is a high-performance automatic switcher for HDMI video signals with resolution up to 4K@60 UHD (4:2:0). With six HDMI inputs, the unit can automatically or manually switch to a predefined or last connected input whenever the currently active video signal is interrupted or whenever a higher-priority video signal is introduced. The output signal is distributed to HDBaseT and HDMI (4K) outputs.

The **VS-611DT** features:

- A maximum data rate of up to 8.91Gbps (2.97Gbps per graphic channel)
- Extended Range (100m) of HDBaseT 4K@60Hz (4:2:0)
- HDTV compatible
- HDCP and HDMI compliant
- Six HDMI inputs and HDBT and HDMI outputs (DA)
- HDMI support for Deep Color, Ethernet, ARC, up to 7.1 audio channels
- HDMI ARC de-embedding from output to balanced stereo audio line out uncompressed
- Step-in support
- Automatic input detection and selection
- Auto-power off when no HDMI input for 30 seconds (selectable)
- HDCP on/off switching
- EDID configuration options
- Selectable switching – manual or fast auto switching according to last connected or preset priority
- Full HDBaseT certification (including bidirectional RS-232, Ethernet, IR and POE)
- POE source for HDBaseT receiver (that is PoE compliant)
- Contact closure for remote manual switching override
- Firmware upgrade over mini-USB, RS-232, RJ-45
• Varied control options – front panel keyboard, HDBaseT (local and through HDBaseT), Ethernet, RS-232 (local and through remote HDBaseT source with K-Link support), IR (local and through HDBaseT)

• Built-in Web server

• Support for Protocol 3000 and K-Upload

3.1 About Fast Switching

Older display devices required a longer time between the loss of one digital signal and the introduction of another, as well as a physical disconnection of the interconnecting cable in order to be able to detect and adjust to the new video attributes and parameters. Normal switching, therefore, introduced a 5V signal disconnection along with a delay in switching. Many newer display devices, however, are now capable of “on-the-fly” switching.

Depending on the display device in use, the VS-611DT allows for fast switching (minor reset and the connection kept alive) and extra fast switching (no reset and the connection kept alive). Using the fast switching mode allows for fraction-of-a-second switching times when using high performance display devices or when using a scaler on the video output.
### 3.2 Defining the VS-611DT UHD 6x1:2 Auto Switcher

This section defines the **VS-611DT**.

![VS-611DT UHD 6x1:2 Auto Switcher](image)

#### Feature Function

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<td><strong>ON LED</strong></td>
<td>Lights when the unit is powered on</td>
</tr>
<tr>
<td>2</td>
<td><strong>LAST LED</strong></td>
<td>Lights when in Last Connected mode</td>
</tr>
<tr>
<td>3</td>
<td><strong>AUTO LED</strong></td>
<td>Lights when in Auto Switching mode</td>
</tr>
<tr>
<td>4</td>
<td><strong>AUTO/MAN. Button</strong></td>
<td>Press to select between auto-switching or manual switching mode (see Section 5.1)</td>
</tr>
<tr>
<td>5</td>
<td><strong>LAST/PRIOR. Button</strong></td>
<td>Press to select between last connected mode or priority switching mode (see Section 5.1)</td>
</tr>
</tbody>
</table>
| 6 | **INPUT Buttons (1-6)** | Press to select an HDMI source to route to the output. The LEDs indicate:  
Lit: the input is selected  
Dim: the input signal is active but not selected  
Off: the input signal is not active and not selected |
<p>| 7 | <strong>OFF Button</strong> | Press to disconnect the output mode (see Section 5.4) |
| 8 | <strong>EDID Button</strong> | Press to capture the EDID (see Section 5.5) |
| 9 | <strong>LOCK Button</strong> | Press and hold to toggle locking and unlocking the front panel buttons (see Section 5.3) |
| 10 | <strong>INPUT HDMI Connectors (1-6)</strong> | Connect to up to 6 HDMI sources |
| 11 | <strong>AUDIO OUT Terminal Block</strong> | Connects to a balanced stereo audio acceptor |</p>
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</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>PROG USB Mini-B Connector</td>
<td>Used for upgrading firmware (see Section 5.10)</td>
</tr>
<tr>
<td>13</td>
<td>RS-232 LOCAL/VIA HDBT Button</td>
<td>Press to select between a local RS-232 source, or RS-232 over HDBT</td>
</tr>
<tr>
<td>14</td>
<td>RS-232 LOCAL LED</td>
<td>Lights when local RS-232 is active</td>
</tr>
<tr>
<td>15</td>
<td>INPUT SELECT Contact Closure Terminal Block</td>
<td>Connects to external contact closure input switches (see Section 5.13)</td>
</tr>
<tr>
<td>16</td>
<td>RS-232 Terminal Block</td>
<td>Connects to a local RS-232 source (see Section 4.1)</td>
</tr>
<tr>
<td>17</td>
<td>ETHERNET RJ-45 Connector</td>
<td>Connects to a network for control</td>
</tr>
<tr>
<td>18</td>
<td>IR 3.5mm Mini Jack</td>
<td>Connects to an HDBT IR transmitter</td>
</tr>
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<td>19</td>
<td>HDBT OUT RJ-45 Connector</td>
<td>Connects to an HDBT TP line</td>
</tr>
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<td>20</td>
<td>HDMI OUT Connector</td>
<td>Connects to an HDMI acceptor</td>
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<td>21</td>
<td>12V DC Connector</td>
<td>Connects to a power supply for the unit</td>
</tr>
</tbody>
</table>
Connecting the VS-611DT

Always switch off the power to each device before connecting it to your VS-611DT. After connecting your VS-611DT, connect its power and then switch on the power to each device.

You do not have to connect all the inputs and outputs, connect only those that are required.

To connect the VS-611DT as illustrated in the example in Figure 2:

1. Connect up to six HDMI sources (for example, KDS-MP4(s), laptop(s), DIP-31(s)) to INPUTs 1-6 using HDMI cables.

2. Connect the HDBT OUT RJ-45 connector to an HDBaseT acceptor (for example, a TP-780Rxr HDBaseT receiver or an HDBaseT projector) using an HDBT twisted pair cable.

3. Connect the HDMI OUT connector to an HDMI acceptor (for example, a 4K display) using an HDMI cable.

4. Connect the AUDIO OUT terminal block (line out) to a balanced audio acceptor (for example, a power amplifier with speakers) using an audio cable.

5. If needed for control, connect the ETHERNET RJ-45 and/or the RS-232 terminal block ports to a network or a serial control device.

6. If needed, connect the INPUT SELECT terminal block to up to six contact closure switches.

7. If needed, connect an HDBT IR transmitter to the IR 3.5mm mini jack.
4.1 Connecting a Serial Controller to the VS-611DT via RS-232

The VS-611DT operates at 9600 baud rate (see all communication parameters in Section 9.1).

To connect a serial controller to the VS-611DT:

- From the RS-232 9-pin D-sub serial port on the serial controller connect:
  - Pin 2 to the TX pin on the VS-611DT RS-232 terminal block.
  - Pin 3 to the RX pin on the VS-611DT RS-232 terminal block.
  - Pin 5 to the GND pin on the VS-611DT RS-232 terminal block.
5 Operating the VS-611DT

This section describes how to operate the VS-611DT.

5.1 Switching – Manual and Auto

Switching can be performed automatically or manually using the device’s keypad, Web pages (see Section 6.1), or control commands (see Section 10.3.2). This section describes using the keypad buttons to select Auto or Manual switch modes.

5.1.1 Manual Switch Mode

In Manual switch mode, the VS-611DT does not automatically switch to another channel even if an input signal is not detected on the manual input.

To select the manual switch mode:

1. Press the Auto/Man. button to turn the Auto/Man. LED off.

2. Press any of the Input 1-6 buttons to switch the input.
   The keys respond as follows:
   - Input LED bright: input active and selected
   - Input LED dim: input active and not selected
   - Input LED off: input is not active and not selected

5.1.2 Auto Switch Mode

In Auto switch mode, the VS-611DT automatically switches one of six HDMI inputs to a predefined or the last connected input whenever the currently active video signal is interrupted or whenever a higher-priority video signal is detected.
To select the auto switch mode:

1. Press the Auto/Man button to turn the Auto LED on.

2. Press the Last/Prio button to select an auto switch mode:
   - Last connected (Last LED on) – The device always switches to a newly
detected active video source. When the device is powered on, the
output switches to the highest priority input.
   - Priority (Last LED off) – The device always switches to the highest
priority input source. The default priority is Input 1 then Input 2.

### 5.1.3 Manual Override Mode

Auto switch mode can be overridden by a manual command, such as pressing an
input button or sending a control command. In such a case, the system switches to
the manually selected source. If this manually selected source is not active, the
system waits a set amount of time (10 seconds, default, adjustable on the Web
page) and then switches back to Auto mode. Manual override selection is not stored
in non-volatile memory.

A step-in command is considered a manual switching command.

### 5.2 Performing a Factory Reset

Factory reset returns all the parameters of the device to their factory default
settings.

To perform a factory reset:

1. Disconnect device power.

2. Press and hold Input 1 while reconnecting device power.
   - All indicators flash while resetting to the factory default parameters. When all
   the lights turn off the reset is complete.
5.3 Locking the Front Panel Buttons

Lock the front panel buttons to prevent tampering.

- Press and hold Lock until the button lights. The front panel buttons are locked.

- Press and hold Lock until the button goes off. The front panel buttons are unlocked.

5.4 Turning the Output Off

- Press the Off button to turn off the outputs. Both HDMI and HDBaseT outputs turn off.

5.5 Copying the EDID

The EDID is a data structure transmitted by the display that enables the VS-611DT to recognize the display connected to the output. The VS-611DT acquires and stores the EDID to make reconnection to the display effortless.

You can acquire the EDID from the:

- HDMI output to the selected inputs.
- HDBaseT output to the selected inputs.
- Default EDID to the selected inputs (for the default EDID, see Section 9.3).

Pressing the front panel EDID button captures the EDID either from the HDMI output port or from the HDBaseT output port to all inputs according to the following scenario:

**To copy the EDID from the HDMI output:**

1. Press the EDID button to cycle through the EDID sources until all front panel LEDs flash once, indicating that the EDID is copied from HDMI.

2. Press the button of the input that receives the EDID.

3. Press and hold EDID for 5 seconds to copy.
To copy the EDID from the HDBT output:

1. Press the EDID button to cycle through the EDID sources until all front panel LEDs flash twice, indicating that the EDID is copied from HDBT.

2. Press the button of the input that receives the EDID.

3. Press and hold EDID for 5 seconds to copy.

To copy the default EDID:

1. Press the EDID button to cycle through the EDID sources until all front panel LEDs flash three times, indicating that the default EDID is copied.

2. Press the button of the input that receives the EDID.

3. Press EDID and hold for 5 sec to copy.

5.6 Setting the 5V Output Time Delay

When there is no signal clock or 5V input on all inputs for 15 minutes, the device shuts down the 5V output. This enables output devices such as projectors or displays to go to sleep. The 15 minute default time delay can be changed to 5 minutes or 10 minutes using the Auto Sync Off feature on the Device Settings Web page (see Section 6.3).

5.7 Setting HDCP Capability

Each input can be individually set to HDCP support on or off.

To set HDCP support:

1. Disconnect device power.

2. Press and hold the Lock button while reconnecting device power.
   The Lock LED flashes indicating HDCP setup mode.

3. Press the Input 1-6 button(s) to set HDCP.

4. If the LED is on, HDCP passes to the port.
   If flashing, HDCP does not.
5. Press the Lock button to confirm the choice or the Off button to quit. If no button is pressed, the mode quits after 10 seconds.

5.8 Setting the Audio Output

The audio output can be set to ARC or de-embedded audio output.

When inputting ARC or HDMI multi-channel LPCM audio, the analog outputs the front right and front left components. If the device is in ARC mode and compressed audio is input, speakers connected to the analog output produce noise.
To set the audio output:

1. Press and hold the Off + Input 3 buttons.
   The Lock and Input 3 LEDs flash.

2. Press the Input 3 button to set ARC/de-embedding audio:
   - ARC audio out – Flashing LED 3
   - De-embedding audio out – Solid LED 3

5.9 Setting the Switching Speed

The VS-611DT supports setting normal and fast (default) switching speeds.

To set switching speed modes:

1. Disconnect device power.

2. Press and hold one of the following buttons together with the OFF button:
   - IN 1 button – for setting fast switching speed mode.
   - IN 2 button – for setting normal switching speed mode.

3. Power the device on.
   The device switching speed is modified.

Switching speed can also be set using the Routing Web page (see Section 6.1).

5.10 Using VCOM on USB

The device’s USB port can work as a virtual COM (VCOM) port. Verify that the USB port on the PC that connects to the VS-611DT is configured as a VCOM port. You may need to install a driver to do this. Use a tool such as Hercules or K-Config to use P3K over USB. For more information on using the commands see Section 10.
5.11 Upgrading the Firmware

The VS-611DT can be upgraded via USB or RS-232.


5.12 Step-In Support

The VS-611DT supports programmable step-in functionality when used in conjunction with compatible step-in devices, such as the SID-X3N and DIP-31 (using an HDMI cable that supports HEC, the HDMI Ethernet Channel).

When ARC mode is enabled, Input 1 step-in mode is disabled. If you require step-in mode on Input 1, set the audio output to the device inputs (see Section 6.1).

5.13 Controlling the VS-611DT via the Terminal Block Connector

The INPUT SELECT terminal block connector includes six input pins and a G pin for selecting an input.

The contact closure remote control pins operate in a similar way to the input buttons (see Section 5.1.1). Using the contact closure remote control (also known as push-to-make momentary contact) you can select any of the inputs. To do so, momentarily connect the required input pin (1 to 6) to the G (ground) pin of the INPUT SELECT terminal block connector, as Figure 3 illustrates.

Do not connect more than one input pin to the G pin at the same time.

Figure 3: Connecting the Contact Closure Remote Control Pins
6 Using the Web Pages

Use the Web page to control the device: switch the input, set the switch mode, set the ARC link, import HDCP and more.

To access the Web page:

- Enter the IP address (192.168.1.39) in the browser.
  The Router window opens.

6.1 Routing Inputs to Outputs

- On the left side, click the Routing tab.
  The Routing window opens:
<table>
<thead>
<tr>
<th>Feature</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode Dropdown</td>
<td>Click to select Manual, Priority or Last</td>
</tr>
<tr>
<td>Fast Switching Checkbox</td>
<td>Click to select/de-select fast switching</td>
</tr>
<tr>
<td>Connected Display</td>
<td>Click to select HDMI or HDBaseT</td>
</tr>
<tr>
<td></td>
<td>Click small insert box to mute/un-mute video</td>
</tr>
<tr>
<td>Inputs (1 through 6)</td>
<td>Click to select Input 1 through Input 6</td>
</tr>
<tr>
<td></td>
<td>Click HDCP insert box to select/de-select HDCP</td>
</tr>
<tr>
<td></td>
<td>Click Remote insert box to set remote device settings</td>
</tr>
<tr>
<td>Control – Audio Output Options</td>
<td>Click to select Input HDMI Audio or ARC</td>
</tr>
<tr>
<td>Control – RS-232 Options</td>
<td>Click to select Local RS-232 or HDBaseT Data</td>
</tr>
<tr>
<td>Set Port Priority</td>
<td>Click to open the priority selector. Click the Set dropdown and choose a numerical priority for the port (1 to 6)</td>
</tr>
</tbody>
</table>

To select a switching mode:

1. Click the Select switching mode dropdown.


![Routing](image.png)

To set port priority:

1. Click **Set Port Priority**.
   
The Set Port Priority window opens.

![Set Port Priority](image.png)

2. Click the **Set** dropdown for the desired port.

3. Set a priority from 1 to 6.

4. Click **OK** to set.
6.2 Using EDID Settings

- On the left side, click the EDID tab. The EDID window opens:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read From</td>
<td>Click to select the Default EDID, or the Outputs (HDMI monitor or HDBaseT monitor)</td>
</tr>
<tr>
<td>File Browse</td>
<td>Click to open a window that allows you to browse and select an EDID saved to the computer disk</td>
</tr>
<tr>
<td>Inputs Capability</td>
<td>Click to select/deselect: RGB color space only</td>
</tr>
<tr>
<td></td>
<td>Deep color Off</td>
</tr>
<tr>
<td></td>
<td>2-Channel LPCM only</td>
</tr>
<tr>
<td>Short Summary</td>
<td>Describes the characteristics of the EDID source device</td>
</tr>
<tr>
<td>Copy To</td>
<td>Click the Inputs checkbox to select/de-select all input devices</td>
</tr>
<tr>
<td></td>
<td>Click each input to which to copy the chosen EDID</td>
</tr>
</tbody>
</table>
To copy EDID data from an output or an EDID file to inputs:

1. Click the source button (output) from which to copy the EDID. The button changes color and the EDID summary shows the EDID data.

2. To copy an EDID file, click the source Browse button. The Windows Browser opens.


4. Select the required file and click Open.

5. Click the input capability checkbox.

6. When Set Color Space selected, the EDID color space is set to RGB only when copying the EDID.

7. When Set Deep Color selected, the EDID deep color is set to 24-bits only when copying the EDID.

8. Click one or more destination inputs, or select all inputs by checking the Inputs check-box. All selected input buttons change color and the EDID summary information reflects the input selection(s).

9. Click the Copy button. The “EDID was copied” success message is displayed and EDID data is copied to the selected input(s).

10. Click OK.

When selecting the EDID file, if the path indicates \fakepath\ as shown in the following illustration, allow the browser to upload the file in the browse Tool/Internet. Safari does not support file upload.
6.3 Setting Device ID Parameters

The Device Settings page enables you modify some communication parameters and view others.

To modify serial or Ethernet communication parameters:

1. Adjust the parameters as required, either by entering the parameters directly or by using the drop-down list.
2. Click **Set**. The changes are saved.
3. Re-power the device.
6.4 Contacting Kramer

The About Us screen displays the version of the Web software, Kramer’s address, phone, email and Web site.
# Technical Specifications

<table>
<thead>
<tr>
<th>INPUTS:</th>
<th>6 HDMI connectors, 1 IR on a 3.5mm mini-jack</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTPUTS:</td>
<td>1 HDMI connector, 1 HDBaseT on an RJ-45 connector, 1 balanced stereo audio on a 5-pin terminal block</td>
</tr>
<tr>
<td>PORTS:</td>
<td>1 Ethernet on an RJ-45 connector, 1 RS-232 connector on a 3-pin terminal block, 6 contact closures on a 7-pin terminal block, 1 USB mini-B connector for firmware upgrading</td>
</tr>
<tr>
<td>MAX. DATA RATE:</td>
<td>9Gbps (3Gbps per graphic channel) with 4K support</td>
</tr>
<tr>
<td>COMPLIANCE WITH HDMI STANDARD:</td>
<td>Deep Color, Ethernet, ARC, up to 7.1 Audio Channels, CEC</td>
</tr>
<tr>
<td>OUTPUT RESOLUTIONS:</td>
<td>Up to UXGA, 4K x 2K, 4K@60Hz (4:2:0)</td>
</tr>
<tr>
<td>CONTROLS:</td>
<td>Front panel keyboard, HDBaseT Ethernet, RS-232, IR, contact closure</td>
</tr>
<tr>
<td>SOFTWARE SUPPORT:</td>
<td>Protocol 3000, K-Router Plus, EDID Designer, K-Upload</td>
</tr>
<tr>
<td>OPERATING TEMPERATURE:</td>
<td>0° to +40°C (32° to 104°F)</td>
</tr>
<tr>
<td>STORAGE TEMPERATURE:</td>
<td>-40° to +70°C (-40° to 158°F)</td>
</tr>
<tr>
<td>HUMIDITY:</td>
<td>10% to 90%, RHL non-condensing</td>
</tr>
<tr>
<td>POWER CONSUMPTION:</td>
<td>12V DC, 2.8A</td>
</tr>
<tr>
<td>DIMENSIONS:</td>
<td>21.5cm x 16.3cm x 4.4cm (8.5” x 6.4” x 1.7”) W, D, H (1/2 19” 1U)</td>
</tr>
<tr>
<td>WEIGHT:</td>
<td>0.95kg (2.1lbs) approx.</td>
</tr>
<tr>
<td>SHIPPING DIMENSIONS:</td>
<td>35.1cm x 21.2cm x 7.2cm (13.8” x 8.4” x 2.8”) W, D, H</td>
</tr>
<tr>
<td>SHIPPING WEIGHT:</td>
<td>1.58kg (3.5lbs)</td>
</tr>
<tr>
<td>INCLUDED ACCESSORIES:</td>
<td>Power cord</td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice
For the most updated resolution list, go to our Web site at [www.kramerav.com](http://www.kramerav.com)
### Supported Resolutions

<table>
<thead>
<tr>
<th>VIC Number</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No Signal (for input) / Native – EDID (for output)</td>
</tr>
<tr>
<td>1</td>
<td>640x480p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>2</td>
<td>720x480p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>3</td>
<td>720x480p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>4</td>
<td>1280x720p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>5</td>
<td>1920x1080i @59.94Hz/60Hz</td>
</tr>
<tr>
<td>6</td>
<td>720(1440)x480i @59.94Hz/60Hz</td>
</tr>
<tr>
<td>7</td>
<td>720(1440)x480i @59.94Hz/60Hz</td>
</tr>
<tr>
<td>8</td>
<td>720(1440)x240p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>9</td>
<td>720(1440)x240p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>10</td>
<td>2880x480i @59.94Hz/60Hz</td>
</tr>
<tr>
<td>11</td>
<td>2880x480i @59.94Hz/60Hz</td>
</tr>
<tr>
<td>12</td>
<td>2880x240p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>13</td>
<td>2880x240p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>14</td>
<td>1440x480p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>15</td>
<td>1440x480p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>16</td>
<td>1920x1080p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>17</td>
<td>720x576p @50Hz</td>
</tr>
<tr>
<td>18</td>
<td>720x576p @50Hz</td>
</tr>
<tr>
<td>19</td>
<td>1280x720p @50Hz</td>
</tr>
<tr>
<td>20</td>
<td>1920x1080i @50Hz</td>
</tr>
<tr>
<td>21</td>
<td>720(1440)x576i @50Hz</td>
</tr>
<tr>
<td>22</td>
<td>720(1440)x576i @50Hz</td>
</tr>
<tr>
<td>23</td>
<td>720(1440)x288p @50Hz</td>
</tr>
<tr>
<td>24</td>
<td>720(1440)x288p @50Hz</td>
</tr>
<tr>
<td>25</td>
<td>2880x576i @50Hz</td>
</tr>
<tr>
<td>26</td>
<td>2880x576i @50Hz</td>
</tr>
<tr>
<td>27</td>
<td>2880x288p @50Hz</td>
</tr>
<tr>
<td>28</td>
<td>2880x288p @50Hz</td>
</tr>
<tr>
<td>29</td>
<td>1440x576p @50Hz</td>
</tr>
<tr>
<td>30</td>
<td>1440x576p @50Hz</td>
</tr>
<tr>
<td>31</td>
<td>1920x1080p @50Hz</td>
</tr>
<tr>
<td>32</td>
<td>1920x1080p @23.97Hz/24Hz</td>
</tr>
<tr>
<td>33</td>
<td>1920x1080p @25Hz</td>
</tr>
<tr>
<td>34</td>
<td>1920x1080p @29.97Hz/30Hz</td>
</tr>
<tr>
<td>35</td>
<td>2880x480p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>36</td>
<td>2880x480p @59.94Hz/60Hz</td>
</tr>
<tr>
<td>37</td>
<td>2880x576p @50Hz</td>
</tr>
<tr>
<td>38</td>
<td>2880x576p @50Hz</td>
</tr>
<tr>
<td>39</td>
<td>1920x1080i @50Hz</td>
</tr>
<tr>
<td>40</td>
<td>1920x1080i @100Hz</td>
</tr>
<tr>
<td>VIC Number</td>
<td>Resolution</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>41</td>
<td>1280x720p @100Hz</td>
</tr>
<tr>
<td>42</td>
<td>720x576p @100Hz</td>
</tr>
<tr>
<td>43</td>
<td>720x576p @100Hz</td>
</tr>
<tr>
<td>44</td>
<td>720(1440)x576i @100Hz</td>
</tr>
<tr>
<td>45</td>
<td>720(1440)x576i @100Hz</td>
</tr>
<tr>
<td>46</td>
<td>1920x1080i @119.88/120Hz</td>
</tr>
<tr>
<td>47</td>
<td>1280x720p @119.88/120Hz</td>
</tr>
<tr>
<td>48</td>
<td>720x480p @119.88/120Hz</td>
</tr>
<tr>
<td>49</td>
<td>720x480p @119.88/120Hz</td>
</tr>
<tr>
<td>50</td>
<td>720(1440)x480i @119.88/120Hz</td>
</tr>
<tr>
<td>51</td>
<td>720(1440)x480i @119.88/120Hz</td>
</tr>
<tr>
<td>52</td>
<td>720x576p @200Hz</td>
</tr>
<tr>
<td>53</td>
<td>720x576p @200Hz</td>
</tr>
<tr>
<td>54</td>
<td>720(1440)x576i @200Hz</td>
</tr>
<tr>
<td>55</td>
<td>720(1440)x576i @200Hz</td>
</tr>
<tr>
<td>56</td>
<td>720x480p @239.76/240Hz</td>
</tr>
<tr>
<td>57</td>
<td>720x480p @239.76/240Hz</td>
</tr>
<tr>
<td>58</td>
<td>720(1440)x480i @239.76/240Hz</td>
</tr>
<tr>
<td>59</td>
<td>720(1440)x480i @239.76/240Hz</td>
</tr>
<tr>
<td>60</td>
<td>1280x720p @23.97Hz/24Hz</td>
</tr>
<tr>
<td>61</td>
<td>1280x720p @25Hz</td>
</tr>
<tr>
<td>62</td>
<td>1280x720p @29.97Hz/30Hz</td>
</tr>
<tr>
<td>63</td>
<td>1920x1080p @119.88/120Hz</td>
</tr>
<tr>
<td>64</td>
<td>1920x1080p @100Hz</td>
</tr>
</tbody>
</table>
9 Default Settings

The **VS-611DT** has the following default settings for communication, first power on and EDID.

### 9.1 Default Communication Settings

<table>
<thead>
<tr>
<th>RS-232</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Protocol</td>
<td>3000 (Default)</td>
</tr>
<tr>
<td>Baud Rate</td>
<td>9600</td>
</tr>
<tr>
<td>Data Bits</td>
<td>8</td>
</tr>
<tr>
<td>Stop Bits</td>
<td>1</td>
</tr>
<tr>
<td>Parity</td>
<td>None</td>
</tr>
<tr>
<td>Command Format</td>
<td>ASCII</td>
</tr>
</tbody>
</table>

### 9.2 First Power On Default Settings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out HDCP mode</td>
<td>Follow</td>
</tr>
<tr>
<td>Communication Format</td>
<td>KMR3000 (KMR device)</td>
</tr>
<tr>
<td>Close Output 5v Time</td>
<td>30sec</td>
</tr>
<tr>
<td>Current Input Source Port</td>
<td>Input port 1</td>
</tr>
<tr>
<td>Manual/Auto Switch Mode</td>
<td>Auto mode</td>
</tr>
<tr>
<td>Pr/Lc Switch Mode</td>
<td>Priority mode</td>
</tr>
<tr>
<td>ARC/De-embed Audio Out</td>
<td>De-embed audio out</td>
</tr>
<tr>
<td>RS-232 Connection</td>
<td>CPU</td>
</tr>
<tr>
<td>Input Port HDCP</td>
<td>All ON</td>
</tr>
<tr>
<td>EDID</td>
<td>Default</td>
</tr>
<tr>
<td>USB for Virtual Com</td>
<td>Virtual Com</td>
</tr>
<tr>
<td>IP Address</td>
<td>192.168.1.39</td>
</tr>
<tr>
<td>Mask Number</td>
<td>255.255.0.0</td>
</tr>
<tr>
<td>Gateway Number</td>
<td>192.168.0.254</td>
</tr>
<tr>
<td>DHCP</td>
<td>Disabled (OFF)</td>
</tr>
</tbody>
</table>
9.3 Default EDID

Model name: VS-611DT
Manufacturer: KMR
Plug and Play ID: KMR03ED
Serial number: 1
Manufacture date: 2014, ISO week 15
Filter driver: None

EDID revision: 1.3
Input signal type: Digital (HDMI-a)
Color bit depth: Undefined
Display type: RGB color
Screen size: 700 x 390 mm (31.5 in)
Power management: Not supported
Extension blocks: 1 (CEA-EXT)

DDC/CI: Not supported

Color characteristics
Default color space: Non-sRGB
Display gamma: 2.20
Red chromaticity: Rx 0.640 - Ry 0.341
Green chromaticity: Gx 0.286 - Gy 0.610
Blue chromaticity: Bx 0.146 - By 0.069
White point (default): Wx 0.284 - Wy 0.293
Additional descriptors: None

Timing characteristics
Horizontal scan range: 31-94kHz
Vertical scan range: 50-85Hz
Video bandwidth: 170MHz
CVT standard: Not supported
GTF standard: Not supported
Additional descriptors: None
Preferred timing: Yes
Native/preferred timing: 1280x720p at 60Hz
Modeline: "1280x720" 74.250 1280 1390 1430 1650 720 725 730 750 +hsync +vsync
Detailed timing #1: 1920x1080p at 60Hz (16:9)
Modeline: "1920x1080" 148.500 1920 2008 2052 2200 1080 1084 1089 1125 +hsync +vsync

Standard timings supported
720 x 400p at 70Hz - IBM VGA
720 x 400p at 88Hz - IBM VGA
640 x 480p at 60Hz - IBM VGA
640 x 480p at 67Hz - Apple Mac II
640 x 480p at 72Hz - VESA
640 x 480p at 75Hz - VESA
800 x 600p at 56Hz - VESA
800 x 600p at 60Hz - VESA
800 x 600p at 72Hz - VESA
800 x 600p at 75Hz - VESA
832 x 624p at 75Hz - Apple Mac II
1024 x 768i at 87Hz - IBM
1024 x 768p at 60Hz - VESA
1024 x 768p at 70Hz - VESA
1024 x 768p at 75Hz - VESA
1280 x 1024p at 75Hz - VESA
1152 x 870p at 75Hz - Apple Mac II
1280 x 720p at 60Hz - VESA STD
1280 x 800p at 60Hz - VESA STD
1440 x 900p at 60Hz - VESA STD
1280 x 960p at 60Hz - VESA STD
1280 x 1024p at 60Hz - VESA STD
1400 x 1050p at 60Hz - VESA STD
1680 x 1050p at 60Hz - VESA STD
1600 x 1200p at 60Hz - VESA STD

EIA/CEA-861 Information
Revision number: 3
IT underscan............. Not supported
Basic audio.............. Supported
YCbCr 4:4:4 .............. Not supported
YCbCr 4:2:2 .............. Not supported
Native formats ........... 1

Detailed timing #1....... 720x480p at 60Hz (4:3)
Modeline.................. "720x480" 7.00 720 736 798 858 480 489 495 525 -hsync -vsync

Detailed timing #2....... 1920x1080i at 60Hz (16:9)
Modeline.................. "1920x1080" 7.25 1920 2008 2052 2200 1080 1084 1094 1124 interface +hsync +vsync

Detailed timing #3....... 1920x1080 at 50Hz (16:9)
Modeline.................. "1920x1080" 7.45 1920 2448 2492 2640 1080 1084 1094 1124 interface +hsync +vsync

Detailed timing #4....... 1280x720i at 60Hz (16:9)
Modeline.................. "1280x720" 7.25 1280 1390 1430 1650 720 725 730 750 +hsync +vsync

Detailed timing #5....... 1280x720p at 50Hz (16:9)
Modeline.................. "1280x720" 7.25 1280 1720 1760 1980 720 725 730 750 +hsync +vsync

CE video identifiers (VICs) - timing/formats supported
720 x 576p at 50Hz - EDTV (4:3, 16:15)
1280 x 720p at 50Hz - HDTV (16:9, 1:1)
1920 x 1080i at 60Hz - HDTV (16:9, 1:1)
1920 x 1080i at 50Hz - HDTV (16:9, 1:1)
1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native]
1920 x 1080p at 60Hz - HDTV (16:9, 1:1)
1920 x 1080p at 50Hz - HDTV (16:9, 1:1)

NB: NTSC refresh rate = (Hz*1000)/1001

CE audio data (formats supported)
LPCM 2-channel, 24-bits at 44/48 kHz

CE speaker allocation data
Channel configuration...... 2.0
Front left/right.......... Yes
Front LFE.................. No
Front center.............. No
Rear left/right........... No
Rear center............... No
Front left/right center.. No
Rear left/right center... No
Rear LFE.................. No

CE vendor specific data (VSDB)
IEEE registration number. 0x000C03
CEC physical address...... 1.0.0.0
Maximum TMDS clock....... 165MHz

Report information
Date generated............. 03/11/2015
Software revision.......... 2.60.0.972
Data source................ Real-time 0x0042
Operating system.......... 6.1.7601.2.Service Pack 1

Raw data
00,FF,FF,FF,FF,FF,00,2D,B2,ED,03,01,00,00,00,0F,18,01,03,82,46,27,78,0A,D5,7C,AC,57,49,9C,25,
11,48,4B,FF,FF,80,B1,00,95,00,81,40,81,80,90,40,B3,00,A9,40,01,1D,00,72,51,DO,1E,20,6E,28,
55,00,7E,88,42,00,00,1E,02,3A,80,18,17,38,2D,40,58,2C,45,00,C4,8E,21,00,00,1E,00,00,00,FC,00,56,
53,2D,36,31,44,54,0A,20,20,20,20,00,00,00,FD,00,32,55,1F,5E,11,00,0A,20,20,20,20,20,20,01,B1,
02,03,1A,41,47,11,13,05,14,84,10,1F,23,09,06,04,83,01,00,00,65,03,0C,00,10,00,08,0C,0A,DO,8A,20,E0,
2D,10,10,3E,96,00,56,C2,21,00,00,18,01,1D,80,18,71,1C,16,20,58,2C,26,00,C4,8E,21,00,00,9E,01,1D,
80,DO,72,1C,16,20,10,2C,25,80,C4,8E,21,00,00,9E,01,1D,00,72,51,DO,1E,20,6E,28,55,00,C4,8E,21,00,
00,1E,01,1D,00,BC,52,DO,1E,20,B8,28,55,40,C4,8E,21,00,00,1E,00,00,00,00,00,00,00,00,00,00,00,00,00,
The **VS-611DT** can be operated using the Kramer Protocol 3000 serial commands. The command framing varies according to how you interface with the **VS-611DT**. In the following example, a basic video input switching command that routes a layer 1 video signal to HDBT out 1 from HDMI input 2 (ROUTE 1, 1, 2), is entered as follows:

- Terminal communication software, such as Hercules:

![Hercules setup utility](image)

The framing of the command varies according to the terminal communication software.

- K-Touch Builder (Kramer software):

![Data code properties](image)

- K-Config (Kramer configuration software):
All the examples provided in this section are based on using the K-Config software.

You can enter commands directly using terminal communication software (e.g., Hercules) by connecting a PC to the serial, Ethernet or the USB (VCOM) port on the VS-611DT. To enter CR press the Enter key (LF is also sent but is ignored by the command parser).

Commands sent from various non-Kramer controllers (e.g., Crestron) may require special coding for some characters (such as, /X##). For more information, refer to your controller’s documentation.

For more information about:

- Using Protocol 3000 commands, see Section 10.1
- General syntax used for Protocol 3000 commands, see Section 10.2
- Protocol 3000 commands available for the VS-611DT, see Section 10.3

10.1 Understanding Protocol 3000

Protocol 3000 commands are structured according to the following:

- **Command** – A sequence of ASCII letters (A–Z, a–z and –). A command and its parameters must be separated by at least one space.

- **Parameters** – A sequence of alphanumeric ASCII characters (0–9, A–Z, a–z and some special characters for specific commands). Parameters are separated by commas.

- **Message string** – Every command entered as part of a message string begins with a message starting character and ends with a message closing character.

A string can contain more than one command. Commands are separated by a pipe (|) character. The maximum string length is 64 characters.
• **Message starting character:**
  - ## – For host command/query
  - ~ – For device response
• **Device address** – K-NET Device ID followed by @ (optional, K-NET only)
• **Query sign** – ? follows some commands to define a query request
• **Message closing character:**
  - CR – Carriage return for host messages (ASCII 13)
  - CR LF – Carriage return for device messages (ASCII 13) and line-feed (ASCII 10)
• **Command chain separator character** – Multiple commands can be chained in the same string. Each command is delimited by a pipe character (|). When chaining commands, enter the message starting character and the message closing character only at the beginning and end of the string.

Spaces between parameters or command terms are ignored. Commands in the string do not execute until the closing character is entered. A separate response is sent for every command in the chain.

### 10.2 Kramer Protocol 3000 Syntax

The Kramer Protocol 3000 syntax uses the following delimiters:

- **CR** = Carriage return (ASCII 13 = 0x0D)
- **LF** = Line feed (ASCII 10 = 0x0A)
- **SP** = Space (ASCII 32 = 0x20)

Some commands have short name syntax in addition to long name syntax to enable faster typing. The response is always in long syntax.
The Protocol 3000 syntax is in the following format:

- **Host Message Format:**

<table>
<thead>
<tr>
<th>Start</th>
<th>Address (optional)</th>
<th>Body</th>
<th>Delimiter</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>Device_id@</td>
<td>Message</td>
<td>CR</td>
</tr>
</tbody>
</table>

- **Simple Command** – Command string with only one command without addressing:

<table>
<thead>
<tr>
<th>Start</th>
<th>Body</th>
<th>Delimiter</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>Command [SP] Parameter_1, Parameter_2,…</td>
<td>CR</td>
</tr>
</tbody>
</table>

- **Command String** – Formal syntax with command concatenation and addressing:

<table>
<thead>
<tr>
<th>Start</th>
<th>Address</th>
<th>Body</th>
<th>Delimiter</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>Device_id@</td>
<td>Command_1 Parameter_1, Parameter_1_2,…</td>
<td>CR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Command_2 Parameter_2, Parameter_2_2,…</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Command_3 Parameter_3, Parameter_3_2,…</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CR</td>
</tr>
</tbody>
</table>

- **Device Message Format:**

<table>
<thead>
<tr>
<th>Start</th>
<th>Address (optional)</th>
<th>Body</th>
<th>Delimiter</th>
</tr>
</thead>
<tbody>
<tr>
<td>~</td>
<td>Device_id@</td>
<td>Message</td>
<td>CR</td>
</tr>
</tbody>
</table>

- **Device Long Response – Echoing command:**

<table>
<thead>
<tr>
<th>Start</th>
<th>Address (optional)</th>
<th>Body</th>
<th>Delimiter</th>
</tr>
</thead>
<tbody>
<tr>
<td>~</td>
<td>Device_id@</td>
<td>Command [SP] [Param1, Param2 …] result</td>
<td>CR LF</td>
</tr>
</tbody>
</table>
10.3 Protocol 3000 Commands

This section lists and describes all the Protocol 3000 commands supported by the VS-611DT.

- System Commands (see Section 10.3.1)
- Switching/Routing Commands (see Section 10.3.2)
- Communication Commands (see Section 10.3.3)
- EDID Handling Commands (see Section 10.3.4)

### 10.3.1 System Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Type</th>
<th>Permission</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>Protocol handshaking</td>
<td>System – mandatory</td>
<td>End User</td>
</tr>
<tr>
<td>BUILD-DATE</td>
<td>Get device build date</td>
<td>System – mandatory</td>
<td>End User</td>
</tr>
<tr>
<td>FACTORY</td>
<td>Reset to factory default configuration</td>
<td>System – mandatory</td>
<td>End User</td>
</tr>
<tr>
<td>HELP</td>
<td>Get command list</td>
<td>System – mandatory</td>
<td>End User</td>
</tr>
<tr>
<td>IDV</td>
<td>Set visual indication from device</td>
<td>System</td>
<td>End User</td>
</tr>
<tr>
<td>INFO-IO</td>
<td>Get in/out count</td>
<td>System</td>
<td>End User</td>
</tr>
<tr>
<td>LOCK-FP</td>
<td>Set/get front panel lock</td>
<td>System</td>
<td>Administrator</td>
</tr>
<tr>
<td>MODEL</td>
<td>Get device model</td>
<td>System-mandatory</td>
<td>End User</td>
</tr>
<tr>
<td>NAME</td>
<td>Set/get machine (DNS) name</td>
<td>System – Ethernet</td>
<td>Administrator</td>
</tr>
<tr>
<td>PROT-VER</td>
<td>Get device protocol version</td>
<td>System – mandatory</td>
<td>End User</td>
</tr>
<tr>
<td>RESET</td>
<td>Reset device</td>
<td>System – mandatory</td>
<td>Administrator</td>
</tr>
<tr>
<td>SIGNAL</td>
<td>Get input signal lock status</td>
<td>System</td>
<td>End User</td>
</tr>
<tr>
<td>SN</td>
<td>Get device serial number</td>
<td>System – mandatory</td>
<td>End User</td>
</tr>
<tr>
<td>VERSION</td>
<td>Get device firmware version</td>
<td>System – mandatory</td>
<td>End User</td>
</tr>
</tbody>
</table>
### 10.3.1.1 #

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: #</td>
<td>End User</td>
<td>Public</td>
</tr>
<tr>
<td>Get: -</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Description**

Protocol handshaking

**Syntax**

Set: Protocol handshaking

Get: -

**Response**

```
RESPONSE: OK CR LF
```

**Parameters**

**Response Triggers**

**Notes**

Validates the Protocol 3000 connection and gets the machine number

Step-in master products use this command to identify the availability of a device

**K-Config Example**

```
"#", 0x0D
```

---

### 10.3.1.2 BUILD-DATE

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: -</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Get: BUILD-DATE?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

**Description**

Get device build date

**Syntax**

Set: -

Get: BUILD-DATE?

**Response**

```
RESPONSE: BUILD-DATE<CR>LF
```

**Parameters**

- **date** — Format: YYYY/MM/DD where **YYYY** = Year, **MM** = Month, **DD** = Day
- **time** — Format: hh:mm:ss where **hh** = hours, **mm** = minutes, **ss** = seconds

**Response Triggers**

**Notes**

**K-Config Example**

```
"BUILD-DATE?", 0x0D
```
### 10.3.1.3 FACTORY

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: FACTORY</td>
<td>End User</td>
<td>Public</td>
</tr>
<tr>
<td>Get: -</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Description**

Set: Reset device to factory default configuration

**Syntax**

Set: `#FACTORY CR`

Get: -

**Response**

```
~nn@FACTORY SP OK CR LF
```

**Parameters**

**Response Triggers**

**Notes**

This command deletes all user data from the device. The deletion can take some time. Your device may require powering off and powering on for the changes to take effect.

**K-Config Example**

```
"#FACTORY",0x0D
```

### 10.3.1.4 HELP

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: -</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Get: HELP</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

**Description**

Set: Get command list or help for specific command

**Syntax**

Set: -

Get: Get command list or help for specific command

1. `#HELP CR`
2. `#HELP SP COMMAND_NAME CR`

**Response**

1. Multi-line:

```
~nn@Device available protocol 3000 commands: CR LF command, SP command... CR LF
```

2. Multi-line:

```
```

**Parameters**

`COMMAND_NAME` – name of a specific command

**Response Triggers**

**Notes**

To get help for a specific command use: `HELP SP COMMAND_NAME CR LF`

**K-Config Example**

```
"#HELP",0x0D
```
### 10.3.1.5 IDV

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: IDV</td>
<td>End User</td>
<td>Public</td>
</tr>
<tr>
<td>Get: -</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Description**

Set: Set visual indication from device

Get: -

**Response**

```
~nn@IDV CR LF
```

**Parameters**

- **inputs_count** – number of inputs in the unit
- **outputs_count** – number of outputs in the unit

**Notes**

Using this command, some devices can light a sequence of buttons or LEDs to allow identification of a specific device from similar devices.

**K-Config Example**

```
“#IDV”,0xD
```

### 10.3.1.6 INFO-IO

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: -</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Get: INFO-IO?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

**Description**

Set: -

Get: Get in/out count

**Response**

```
~nn@INFO-IO? CR LF
```

**Parameters**

- **inputs_count** – number of inputs in the unit
- **outputs_count** – number of outputs in the unit

**Notes**

**K-Config Example**

```
“#INFO-IO?”,0xD
```
### 10.3.1.7 LOCK-FP

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: LOCK-FP</td>
<td>End User</td>
<td>Public</td>
</tr>
<tr>
<td>Get: LOCK-FP?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

##### Description

**Set:** Lock front panel  
**Get:** Get front panel lock state

**Syntax**

**Set:** `LOCK-FP SP lock_mode CR`  
**Get:** `LOCK-FP? CR`

**Parameters**

`lock_mode` - 0/OFF (unlocks the front panel buttons), 1/ON (locks the front panel buttons)

##### Response Triggers

- K-Config Example

- Lock all the front panel buttons:  
  
  "#LOCK-FP", 0x0D

- Lock ???:  
  
  "#LOCK-FP", 0x0D

### 10.3.1.8 MODEL

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: -</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Get: MODEL?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

##### Description

**Set:** -  
**Get:** Get device model

**Syntax**

**Get:** `MODEL? CR`

**Parameters**

`model_name` - String of up to 19 printable ASCII chars

##### Response Triggers

- K-Config Example

- "#MODEL?", 0x0D

##### Notes

This command identifies equipment connected to Step-in master products and notifies of identity changes to the connected equipment. The Matrix saves this data in memory to answer REMOTE-INFO requests.
### 10.3.1.9 NAME

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: NAME</td>
<td>Administrator</td>
<td>Public</td>
</tr>
<tr>
<td>Get: NAME?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

**Description**

**Syntax**

**Set:**

```
#NAME machine_name CR
```

**Get:**

```
~nn@NAME? machine_name CR LF
```

**Parameters**

machine_name – String of up to 15 alpha-numeric chars (can include hyphens, not at the beginning or end)

**Response Triggers**

**Notes**

The machine name is not the same as the model name. The machine name is used to identify a specific machine or a network in use (with DNS feature on)

**K-Config Example**

Set the DNS name of the device to "room-442":

```
"#NAME room-442",0x0D
```

### 10.3.1.10 PROT-VER

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: -</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Get: PROT-VER?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

**Description**

**Syntax**

**Set:**

```
- PROT-VER?
```

**Get:**

```
~nn@PROT-VER? 3000:version CR LF
```

**Parameters**

Version – XX.XX where X is a decimal digit

**Response Triggers**

**Notes**

**K-Config Example**

```
"#PROT-VER?",0x0D
```
### 10.3.1.11 RESET

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: RESET</td>
<td>Administrator</td>
<td>Public</td>
</tr>
<tr>
<td>Get: -</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Description**

Set: Reset device

**Syntax**

Set: `RESET`

**Response**

```
~nn[RESET]okCR LF
```

**Parameters**

- `inp_id` - 1 (Input 1), 2 (Input 2), 3 (Input 3), 4 (Input 4), 5 (Input 5), 6 (Input 6)
- `status` - Lock status according to signal validation: 0 (signal or sink is not valid), 1 (signal or sink is valid), 2 (sink and EDID is valid)

**Response Triggers**

After execution, a response is sent to the com port from which the Get was received. Response is sent after every change in input signal status ON to OFF, or OFF to ON

**Notes**

To avoid locking the port due to a USB bug in Windows, disconnect USB connections immediately after running this command. If the port was locked, disconnect and reconnect the cable to reopen the port.

**K-Config Example**

```
"#RESET",0x0D
```

### 10.3.1.12 SIGNAL

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: -</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Get: SIGNAL?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

**Description**

Get: Get input signal lock status

**Syntax**

Get: `SIGNAL?`

**Response**

```
~nn[SIGNAL]inp_id,statusCR LF
```

**Parameters**

- `inp_id` - 1 (Input 1), 2 (Input 2), 3 (Input 3), 4 (Input 4), 5 (Input 5), 6 (Input 6)
- `status` - Lock status according to signal validation: 0 (signal or sink is not valid), 1 (signal or sink is valid), 2 (sink and EDID is valid)

**Response Triggers**

After execution, a response is sent to the com port from which the Get was received. Response is sent after every change in input signal status ON to OFF, or OFF to ON

**Notes**

**K-Config Example**

```
Get the input signal lock status of Input 3:
"#SIGNAL? 3",0x0D
```
### 10.3.1.13 SN

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set:</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Get:</td>
<td>SN?</td>
<td>End User</td>
</tr>
</tbody>
</table>

**Description**

**Syntax**

<table>
<thead>
<tr>
<th>Set:</th>
<th>Get:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Get device serial number</td>
</tr>
</tbody>
</table>

**Response**

```
~nn@SN5Fserial_numberCR LF
```

**Parameters**

serial_number—11 decimal digits, factory assigned

**Response Triggers**

**Notes**

This device has a 14 digit serial number, only the last 11 digits are displayed

**K-Config Example**

```
“#SN?”,0x0D
```

### 10.3.1.14 VERSION

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set:</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Get:</td>
<td>VERSION?</td>
<td>End User</td>
</tr>
</tbody>
</table>

**Description**

**Syntax**

<table>
<thead>
<tr>
<th>Set:</th>
<th>Get:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Get firmware version number</td>
</tr>
</tbody>
</table>

**Response**

```
~nn@VERSION5Efirmware_versionCR LF
```

**Parameters**

firmware_version—XX.XX.XXXXX where the digit groups are: major.minor.build version

**Response Triggers**

**Notes**

**K-Config Example**

```
“#VERSION?”,0x0D
```
## 10.3.2 Switching/Routing Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Type</th>
<th>Permission</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPLAY</td>
<td>Get output HPD status</td>
<td>Switching</td>
<td>End User</td>
</tr>
<tr>
<td>VID</td>
<td>Set/get video switch state</td>
<td>Switching</td>
<td>End User</td>
</tr>
<tr>
<td>ROUTE</td>
<td>Set/get layer routing</td>
<td>Switching</td>
<td>End User</td>
</tr>
</tbody>
</table>

### 10.3.2.1 DISPLAY

#### Functions

<table>
<thead>
<tr>
<th>Function</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set:</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Get:</td>
<td>DISPLAY?</td>
<td>End User</td>
</tr>
</tbody>
</table>

#### Description

- **Set:**
  - Syntax: Set: - - -
  - Parameters: out_id (1 (HDBT Out), 2 (HDMI Out))
- **Get:**
  - Syntax: Get output HPD status: #DISPLAY?
  - Parameters: out_id (1 (HDBT Out), 2 (HDMI Out)), status (HPD status according to signal validation: 0 (signal or sink is not valid), 1 (signal or sink is valid), 2 (sink and EDID is valid))

#### Response

```
~DISPLAY out_id, status\r\n```

#### Parameters

- **out_id** - (HDBT Out), 2 (HDMI Out)
- **status** - HPD status according to signal validation: 0 (signal or sink is not valid), 1 (signal or sink is valid), 2 (sink and EDID is valid)

#### Response Triggers

- After execution, response is sent to the com port from which the Get was received
- Response is sent after every change in output HPD status ON to OFF
- Response is sent after every change in output HPD status OFF to ON and ALL parameters (new EDID, etc.) are stable and valid

#### Notes

- K-Config Example

  Get the output HPD status of HDMI Out:
  ```
  "#DISPLAY? 2",0x0D
  ```
### Functions

<table>
<thead>
<tr>
<th>Set: VID</th>
<th>Get: VID?</th>
</tr>
</thead>
<tbody>
<tr>
<td>End User</td>
<td>End User</td>
</tr>
</tbody>
</table>

### Description

#### Syntax

**Set:**

- Set video switch state

  #VID\text{SP}in\text{out},in>out,...\text{CR}

**Get:**

- Get video switch state

  #VID?SP\text{out}\text{CR}

  #VID?SP\text{in}\text{out}\text{CR}

### Response

**Set:**

- ~nn@VID\text{SP}in\text{out}\text{CR LF}

**Get:**

- ~nn@VID\text{SP}in\text{out}\text{CR LF}

### Parameters

- **in** – Input number: 0 (disconnect output), 1 (Input 1), 2 (Input 2), 3 (Input 3), 4 (Input 4), 5 (Input 5), 6 (Input 6)
- **out** – Output number: * (all outputs), 1 (HDBT Out), 2 (HDMI Out)

### Response Triggers

- 1. Switch audio and video from input 1 to all outputs
- 2. Switch video input 3 to output 2, video input 2 to output 2, video input 2 to output 1 and disconnect video output 2
- 3. Switch video input 3 to output 9 (non-existent)
- 4. Disconnect audio output 1
- 5. Get status of all video links

### Notes

Command processing begins after entering \text{CR}.
A response is sent for each command after processing.

### Examples

- Switch video and audio input 3 to output 2
  
  \#AV 3>2\text{CR}

  ~01@AV 3>2\text{CRLF}

- Switch video input 6 to output 1
  
  #V 6>1\text{CR}

  ~01@VID 6>1\text{CRLF}

- Disconnect video and audio output 2
  
  #AV 0>2\text{CR}

  ~01@AV 0>2\text{CRLF}

- Switch video input 3 to all outputs
  
  #V 3>* \text{CR}

  ~01@VID 3>* \text{CRLF}

### Chaining multiple commands

- \#AV 1>*|V3>2,2>2,2>1,0>2|V3>9|A0>1|V?*\text{CR}
  
  1. Switch audio and video from input 1 to all outputs
  2. Switch video input 3 to output 2, video input 2 to output 2, video input 2 to output 1 and disconnect video output 2
  3. Switch video input 3 to output 9 (non-existent)
  4. Disconnect audio output 1
  5. Get status of all video links

  Command processing begins after entering \text{CR}.

  A response is sent for each command after processing.
### 10.3.2.3 ROUTE

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: ROUTE</td>
<td>End User</td>
<td>Public</td>
</tr>
<tr>
<td>Get: ROUTE?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

#### Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: #ROUTElayer,dest,srcCR</td>
<td>Set layer routing</td>
</tr>
<tr>
<td>Get: #ROUTE?layer,destCR</td>
<td>Get layer routing</td>
</tr>
</tbody>
</table>

#### Response

```
~nnROUTElayer,dest,srcCR
```

#### Parameters

- **layer**: 1 (video)
- **dest**: 1 (HDMI Out), 2 (HDBT Out)
- **src**: 1 (HDMI Input 1), 2 (HDMI Input 2), 3 (HDMI Input 3), 4 (HDMI Input 4), 5 (HDMI Input 5), 6 (HDMI Input 6)

#### Notes

- The get command identifies input switching on Step-in clients
- The set command is for remote input switching on Step-in clients (essentially via the Web)

#### Example

Set the remote input switching of video to HDMI Out from HDMI Input 2:
```
"#ROUTE 1,1,2",0x0D
```
10.3.3 Communication Commands

These commands are used by network devices running Protocol 3000.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Type</th>
<th>Permission</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETH-PORT</td>
<td>Set/get Ethernet port protocol</td>
<td>Communication</td>
<td>Administrator</td>
</tr>
<tr>
<td>NET-DHCP</td>
<td>Set/get DHCP mode</td>
<td>Communication</td>
<td>Administrator</td>
</tr>
<tr>
<td>NET-GATE</td>
<td>Set/get gateway IP</td>
<td>Communication</td>
<td>Administrator</td>
</tr>
<tr>
<td>NET-IP</td>
<td>Set/get IP address</td>
<td>Communication</td>
<td>Administrator</td>
</tr>
<tr>
<td>NET-MASK</td>
<td>Set/get subnet mask</td>
<td>Communication</td>
<td>Administrator</td>
</tr>
</tbody>
</table>

10.3.3.1 ETH-PORT

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: ETH-PORT</td>
<td>Administrator</td>
<td>Public</td>
</tr>
<tr>
<td>Get: ETH-PORT?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set:</td>
<td>#ETH-PORT\sp{portType,ETHPort}CR</td>
</tr>
<tr>
<td>Get:</td>
<td>#ETH-PORT?\sp{portType}CR</td>
</tr>
</tbody>
</table>

Response

```
~nn\#ETH-PORT\sp\{portType,ETHPort\}CR LF
```

Parameters

- `portType` – String of 3 letters indicating the port type: TCP, UDP
- `ETHPort` – TCP / UDP port number: 0-65565

Response Triggers

Notes

K-Config Example

Set the Ethernet port protocol for TCP to port 12457:
```
"#ETH-PORT TCP,12457",0x0D
```
### 10.3.3.2 NET-DHCP

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: NET-DHCP</td>
<td>Administrator</td>
<td>Public</td>
</tr>
<tr>
<td>Get: NET-DHCP?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

**Description**

Set: Set DHCP mode
Get: Get DHCP mode

**Syntax**

Set: `#NET-DHCP#mode#CR`
Get: `#NET-DHCP#CR`

**Response**

`~nn#NET-DHCP#mode#CR LF`

**Parameters**

`mode` – 0 (do not use DHCP; use the IP address set by the factory or the NET-IP command), 1 (try to use DHCP; if unavailable, use the IP address set by the factory or the NET-IP command)

**Response Triggers**

**Notes**

Connecting Ethernet to devices with DHCP may take more time in some networks. To connect with a randomly assigned IP by DHCP, specify the device DNS name (if available) using the `NAME` command. You can also get an assigned IP by direct connection to USB or RS-232 protocol port if available. Consult your network administrator for correct settings.

**K-Config Example**

Enable DHCP mode, if available:

```
"#NET-DHCP 1",0x0D
```

### 10.3.3.3 NET-GATE

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: NET-GATE</td>
<td>Administrator</td>
<td>Public</td>
</tr>
<tr>
<td>Get: NET-GATE?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

**Description**

Set: Set gateway IP
Get: Get gateway IP

**Syntax**

Set: `#NET-GATE#ip_address#CR`
Get: `#NET-GATE#CR`

**Response**

`~nn#NET-GATE#ip_address#CR LF`

**Parameters**

`ip_address` – Gateway IP address, in the following format: `xxx.xxx.xxx.xxx`

**Response Triggers**

**Notes**

A network gateway connects the device via another network and maybe over the Internet. Be careful of security problems. Consult your network administrator for correct settings.

**K-Config Example**

Set the gateway IP address to 192.168.0.1:

```
"#NET-GATE 192.168.000.001",0x0D
```
## 10.3.3.4 NET-IP

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: NET-IP</td>
<td>Administrator</td>
<td>Public</td>
</tr>
<tr>
<td>Get: NET-IP?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

**Description**
- **Set:** Set IP address
- **Get:** Get IP address

**Syntax**
- **Set:** \#NET-IP *ip_address* CR
- **Get:** \#NET-IP? CR

**Parameters**
- *ip_address – IP address, in the following format: xxx.xxx.xxx.xxx*

**Response Triggers**
- Consult your network administrator for correct settings

**Notes**
- K-Config Example

**Set the IP address to 192.168.1.39:**
“\#NET-IP 192.168.001.039”,0x0D

## 10.3.3.5 NET-MASK

<table>
<thead>
<tr>
<th>Functions</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: NET-MASK</td>
<td>Administrator</td>
<td>Public</td>
</tr>
<tr>
<td>Get: NET-MASK?</td>
<td>End User</td>
<td>Public</td>
</tr>
</tbody>
</table>

**Description**
- **Set:** Set subnet mask
- **Get:** Get subnet mask

**Syntax**
- **Set:** \#NET-MASK *net_mask* CR
- **Get:** \#NET-MASK? CR

**Parameters**
- *net_mask – Format: xxx.xxx.xxx.xxx*

**Response Triggers**
- The subnet mask limits the Ethernet connection within the local network
- For proper settings consult your network administrator

**Notes**
- K-Config Example

**Set the subnet mask to 255.255.0.0:**
“\#NET-MASK 255.255.000.000”,0x0D
### 10.3.4 EDID Handling Commands

Additional EDID data functions can be performed via the VS-611DT web pages or a compatible EDID management application, such as Kramer EDID Designer (see [www.kramerav.com/product/EDID%20Designer](http://www.kramerav.com/product/EDID%20Designer)).

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Type</th>
<th>Permission</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPEDID</td>
<td>Copy EDID data from the output to the input EEPROM</td>
<td>EDID Handling</td>
<td>End User</td>
</tr>
</tbody>
</table>

#### 10.3.4.1 CPEDID

<table>
<thead>
<tr>
<th>Function</th>
<th>Permission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set: CPEDID</td>
<td>End User</td>
<td>Public</td>
</tr>
<tr>
<td>Get: -</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Description**

Copy EDID data from the output to the input EEPROM

**Syntax**

Set:

```
#CPEDID src_type, src_id, dst_type, dest_bitmap CR LF
```

Get: -

**Response**

```
~nn@CPEDID [SP] src_type, src_id, dst_type, dest_bitmap [CR] [LF]
```

**Parameters**

- `src_type` – EDID source type (usually output): 0 (input), 1 (output), 2 (default EDID)
- `src_id` – for input source: 1 (Input 1), 2 (Input 2), 3 (Input 3), 4 (Input 4), 5 (Input 5), 6 (Input 6), for output source: 1 (HDBT Out), for default EDID source: 0 (default EDID)
- `dst_type` – EDID destination type (usually input): 0 (input), 1 (output), 2 (default EDID)
- `dest_bitmap` – bitmap representing destination IDs. Format: XXXX...X, where X is hex digit. The binary form of every hex digit represents corresponding destinations. Setting ‘1’ indicates that EDID data is copied to this destination. Setting ‘0’ indicates that EDID data is not copied to this destination.

**Response Triggers**

Response is sent to the com port from which the Set was received (before execution)

**Notes**

Destination bitmap size depends on device properties (for 64 inputs it is a 64-bit word)

Example: bitmap 0x0013 means inputs 1, 2 and 5 are loaded with the new EDID.

In this device, if the destination type is input (0), the bitmap size is 6 bits, for example bitmap 0x5 means inputs 1 and 3 are loaded with the new EDID.

**K-Config Example**

Copy the EDID data from the HDBT Out output (EDID source) to the HDMI In 1 input:

```
"#CPEDID 1,1,0,0x1",0x0D
```

Copy the EDID data from the default EDID source to HDMI In 1 and HDMI 4 In inputs:

```
"#CPEDID 2,0,0,0x5",0x0D
```
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