

HD-MD402 4x2 4K60 4:2:0 AV Switcher

Web Interface Guide
Crestron Electronics, Inc.

Original Instructions

The U.S. English version of this document is the original instructions. All other languages are a translation of the original instructions.

Regulatory Model: M202028001

Crestron product development software is licensed to Crestron dealers and Crestron Service Providers (CSPs) under a limited nonexclusive, nontransferable Software Development Tools License Agreement. Crestron product operating system software is licensed to Crestron dealers, CSPs, and end-users under a separate End-User License Agreement. Both of these Agreements can be found on the Crestron website at www.crestron.com/legal/software_license_agreement.

The product warranty can be found at www.crestron.com/warranty.

The specific patents that cover Crestron products are listed at www.crestron.com/legal/patents.

Certain Crestron products contain open source software. For specific information, visit www.crestron.com/opensource.

Crestron, the Crestron logo, and DM Lite are either trademarks or registered trademarks of Crestron Electronics, Inc. in the United States and/or other countries. macOS and Safari are either trademarks or registered trademarks of Apple, Inc. in the United States and/or other countries. Chrome is either a trademark or a registered trademark of Google Inc. in the United States and/or other countries. HDMI is either a trademark or a registered trademark of HDMI Licensing LLC in the United States and/or other countries. Internet Explorer, Microsoft Edge, and Windows are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Firefox is either a trademark or a registered trademark of the Mozilla Foundation in the United States and/or other countries. Other trademarks, registered trademarks, and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Crestron disclaims any proprietary interest in the marks and names of others. Crestron is not responsible for errors in typography or photography.

©2021 Crestron Electronics, Inc.

Contents

Introduction	
Web Interface Configuration	1
Access the Web-based Configuration Interface	1
Access the Web Interface with a Web Browser	2
Astions Mon.	2
Actions Menu	
Rebooting the HD-MD402	
Updating Firmware Version	
EDID Management	
To Load a Custom EDID File	
To Delete a Custom EDID File	
Downloading Configuration	
Uploading Configuration	8
Status	9
General	9
Input/Output Status	
Inputs	
Outputs	
Network	
Settings	13
System Setup	
Firmware	
Front Panel	
Network	
Network	14
Configure DHCP	14 15
Configure DHCP RS-232 Port Settings	14 15 16
Configure DHCP RS-232 Port Settings User Management	14 15 16
Configure DHCP RS-232 Port Settings	14 15 16 17
Configure DHCP RS-232 Port Settings User Management Inputs Global EDID	14 15 16 17 17
Configure DHCP RS-232 Port Settings User Management Inputs Global EDID Inputs	
Configure DHCP RS-232 Port Settings User Management Inputs Global EDID Inputs Outputs	
Configure DHCP RS-232 Port Settings User Management Inputs Global EDID Inputs Outputs HDMI 1, DM Lite 1, and DM Lite 2	
Configure DHCP RS-232 Port Settings User Management Inputs Global EDID Inputs Outputs	
Configure DHCP RS-232 Port Settings User Management Inputs Global EDID Inputs Outputs HDMI 1, DM Lite 1, and DM Lite 2 Connected Display	
Configure DHCP RS-232 Port Settings User Management Inputs Global EDID Inputs Outputs HDMI 1, DM Lite 1, and DM Lite 2 Connected Display Output Signal	

Introduction

The HD-MD402 is a 4K60 4:2:0 AV switcher equipped with four HDMI® inputs, one mirrored HDMI and DM Lite® output, and one independent DM Lite output. The HD-MD402 supports advanced EDID management and native Crestron® control via Ethernet.

Web Interface Configuration

The web interface of the HD-MD402 allows you to view status information and configure network and device settings.

Access the Web-based Configuration Interface

The web-based configuration interface is accessed from a web browser. The following table lists various operating systems and the corresponding supported web browsers.

Operating System and Supported Web Browsers

- per aug - /	
OPERATING SYSTEM	SUPPORTED WEB BROWSERS
Windows® operating system	Chrome™ web browser, version 31 and later
	Firefox® web browser, version 31 and later
	Internet Explorer® web browser, version 11 and later
	Microsoft Edge® web browser, version 86 and later
macOS® operating system	Safari® web browser, version 6 and later
	Chrome web browser, version 31 and later
	Firefox web browser, version 31 and later

Access the Web Interface with a Web Browser

1. Enter the IP address of the HD-MD402 into a web browser.

NOTE: To obtain the IP address, press the **Setup** button on the HD-MD402 to display the IP address on the HDMI output. The IP address is displayed for 20 seconds.

- 2. Enter the username in the **Username** field. The default username is admin.
- 3. Enter the password in the **Password** field. The default password is *admin*.

NOTES:

- The username and password are case sensitive.
- It is recommended that the default username and password be changed. For information about changing the username and password, refer to User Management (on page 17).
- 4. Click Sign In.

Actions Menu

The **Actions** drop-down menu is displayed at the top right side of the interface and provides quick access to common device functionality of the HD-MD402, such as:

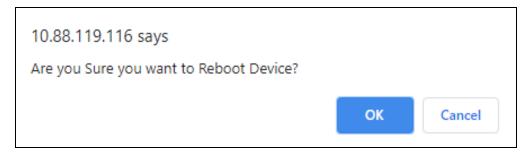
- Updating Firmware
- Restoring
- Rebooting
- EDID Management
- Uploading Configuration
- Downloading Configuration



Rebooting the HD-MD402

Certain changes to the settings may require the HD-MD402 to be rebooted to take effect. To reboot the device, do the following:

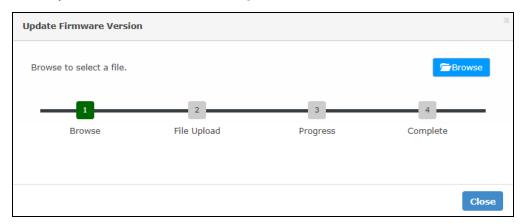
1. Click **Reboot Device** in the **Actions** drop-down menu. The **Confirmation** message box appears.



Click Ok to reboot the device. The Reboot message box appears.
 Wait for the device reboot to complete before attempting to reconnect to the device.

Updating Firmware Version

- 1. Click **Update Firmware Version** in the **Actions** drop-down menu.
- 2. In the **Update Firmware Version** dialog, click **Browse**.

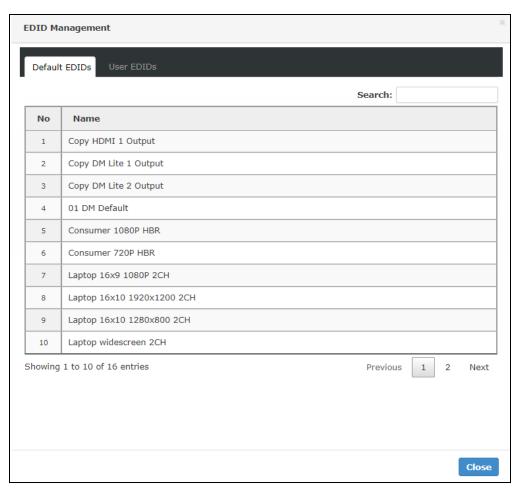


- 3. Locate and select the desired firmware file, and then click **Open**. The selected firmware file name is displayed in the **Update Firmware Version** dialog.
- 4. Click **Upload**. A success message is displayed.

The device with new firmware can now be accessed.

EDID Management

The EDID Management dialog displays available built-in EDID files and allows loading of a custom EDID file.



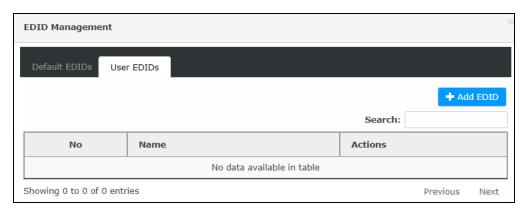
Built-in EDIDs are displayed in the **Default EDIDs** tab of the **EDID Management** dialog. The following EDIDs are available:

- 01 DM default
- Consumer 1080P HBR
- Consumer 720p HBR
- Laptop 16x9 1080P 2CH
- Laptop 16x10 1920x1200 2CH
- Laptop 16x10 1280x800 2CH
- Laptop widescreen 2CH
- Consumer 1080P50 HBR
- Consumer 720P50 HBR
- Laptop 16x9 1080P50 2CH

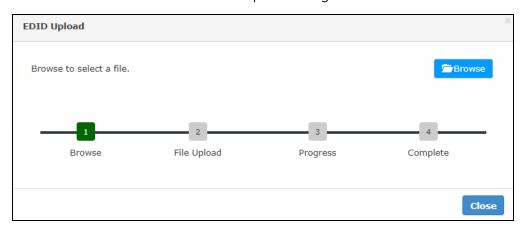
- DM Default 4k 30Hz 2CH
- DM Default 4k 60Hz 2CH
- DM Default 4k 60Hz HBR

To Load a Custom EDID File

1. In the EDID Management dialog, click the **User EDIDs** tab and then click the **+ Add EDID** button.



2. Click the **Browse** button in the EDID Upload dialog.



- 3. Navigate to the desired custom EDID file (.cedid extension), select the file, and then click **Open**.
- 4. Click **Upload**. A success message is displayed.
- 5. Click Close.

Once the EDID file is uploaded successfully the following occurs:

- In the Global EDID section of the Inputs panel, the custom EDID file name is added to the Send EDID to All Inputs drop-down menu.
- In the **Inputs** section of the **Inputs** panel, the custom EDID file name is added to each individual input **EDID** drop-down menu.

NOTE: Under the **Settings** tab, in the **Send EDID to ALL Inputs** drop-down menu, any custom EDIDs will be listed (in alphabetical order) after the last built-in EDID.

To Delete a Custom EDID File

NOTE: Only custom EDID files that are not applied to an input can be deleted. Built-in EDID files cannot be deleted.

1. Click the **User EDIDs** tab and then click the trashcan button () in the row of the custom EDID file to be deleted.

After a successful deletion, the custom EDID file is removed from the **Send EDID to Global Inputs** drop-down menu and also from each individual input **EDID** drop-down menu in the **Inputs** sections of the **Inputs** panel.

Downloading Configuration

The Configuration Management enables device settings to be downloaded and use it for easy configuration of multiple devices.

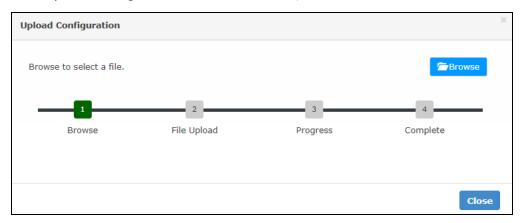
1. Click **Download Configuration** in the **Actions** drop-down menu.

The configuration file (.tgz) is downloaded to the Downloads folder of the PC.

Uploading Configuration

The Configuration Management enables to upload the device settings for easy configuration of the device.

1. Click **Upload Configuration** in the **Actions** drop-down menu.

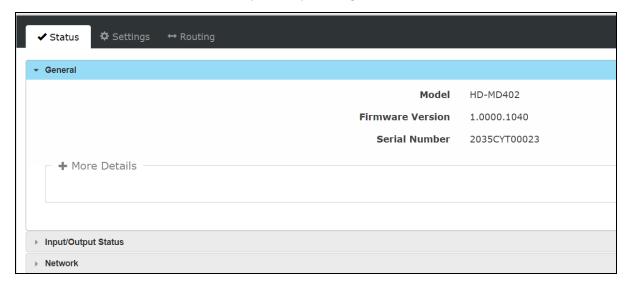


- 2. Click the **Browse** button.
- 3. Navigate to the configuration file, select the file, and then click Open.
- 4. Click the **Upload** button. The Confirmation dialog appears.
- 5. Click **Ok** to reboot the device.

Status

The **Status** tab is the first page displayed when starting the interface of the HD-MD402. It displays general information about the HD-MD402 (such as Model Name, Firmware Version, and Serial Number), current network settings (such as Host Name and IP Address, etc.), and input and output ports' current status.

The Status tab can be accessed at any time by clicking the **Status** tab of the HD-MD402 interface.



Information displayed on the **Status** tab is organized into different sections.

General

The General section displays the Model, Firmware Version, and Serial Number of the HD-MD402.



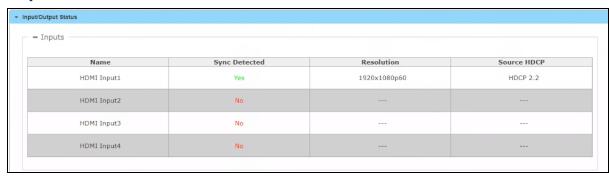
Click + More Details to review additional information about the HD-MD402.



Input/Output Status

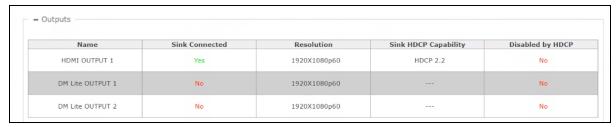
The **Input/Output Status** section displays information about available inputs and outputs of the HD-MD402.

Inputs



- Name: Displays the name of the input source.
- Sync Detected: Displays Yes if connection is detected or No if connection is not detected.
- **Resolution**: Displays resolution when video with valid resolution is detected. If no video is detected, the reported resolution will be ---.
- Source HDCP: Reports HDCP 1.X or HDCP 2.X when the HDCP source is connected. Reports Non-HDCP when a non-HDCP source is connected and reports --- when no source is connected.

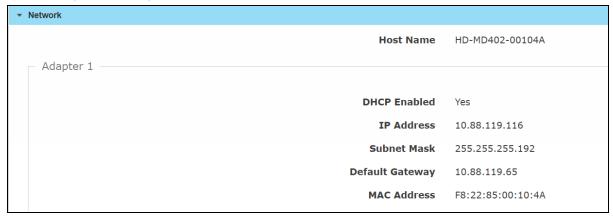
Outputs



- Name: Displays the name of the output source.
- Sink Connected: Displays Yes if connection is detected or No if connection is not detected.
- Resolution:
 - Displays --- when the video signal is not being transmitted. For example, no HDMI cable is connected.
 - Displays the detected resolution when a video signal is being transmitted. In the event an HDMI cable is connected to the display/downstream device, but the device is turned off, the last detected resolution will be displayed until a new video signal is received.
- Sink HDCP Capability: HDCP support 1.4 or 2.X.
- Disabled by HDCP: Yes or No.

Network

The **Network** section displays network-related information about the HD-MD402, including the Hostname, IP Address, and MAC Address.



Additionally, the following IPv4 addressing information is provided:

- Host Name
- DHCP Enabled
- IP Address
- Subnet Mask

- Default Gateway
- MAC Address

Settings

The **Settings** tab enables you to configure the HD-MD402 settings. The Settings page can be accessed at any time by clicking the **Settings** tab of the HD-MD402 interface.



Information displayed on the **Settings** tab is organized into different sections.

System Setup

The **System Setup** section displays information about the Firmware, Front Panel, Network, RS-232 Port Settings, and User Management.

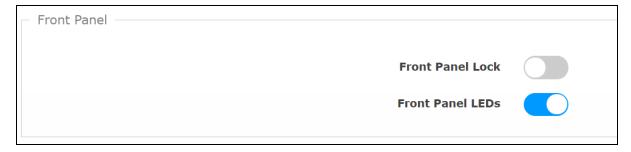
Firmware

The Firmware section displays the Model, Firmware Version, and Serial Number of the HD-MD402.



Front Panel

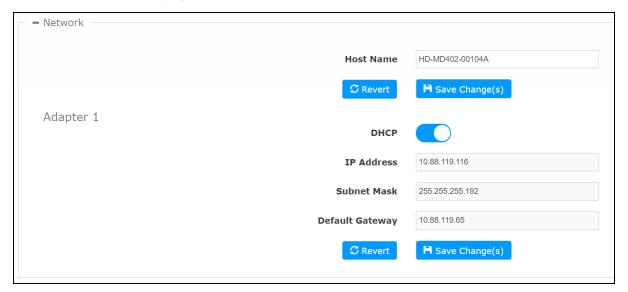
To prevent accidental changes to device settings, the Front Panel can be set to lock the front panel buttons on the HD-MD402. By default, the front panel is unlocked, allowing the front panel buttons to function. When the front panel is locked, pressing any of the buttons (with the exception of the **SETUP** button) has no effect. In addition, the LEDs on the front panel are enabled by default. When the front panel LEDs are disabled, the LEDs (except the **SETUP** LED) do not light.



- Front Panel Lock: To enable the front panel lock, move the Front Panel Lock slider to the right position. To disable the front panel lock, move the slider to the left position.
- Front Panel LEDs: To enable the front panel LEDs, move the Front Panel LEDs slider to the right position. To disable the front panel LEDs, move the slider to the left position.

Network

The Network section displays network-related information about the HD-MD402.



Adapter 1

Displays DHCP, IP Address, Subnet Mask, and Default Gateway of the HD-MD402.

Configure DHCP

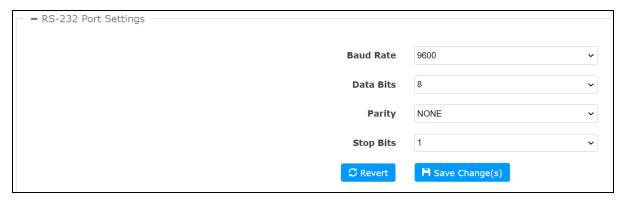
Set the **DHCP** slider to enabled (right) or disabled (left) to specify whether the IP address of the HD-MD402 is to be assigned by a DHCP (Dynamic Host Configuration Protocol) server.

- **Enabled**: When DHCP is enabled (default setting), the IP address of the HD-MD402 is automatically assigned by a DHCP server on the local area network (LAN) for a predetermined period of time.
- Disabled: When DHCP is disabled, manually enter information in the following fields:
 - IP Address: Enter a unique IP address for the HD-MD402.
 - Subnet Mask: Enter the subnet mask that is set on the network.
 - **Default Gateway**: Enter the IP address that is to be used as the network's gateway.

To save any new network entries, click **Save Change(s)** or click **Revert** to revert to the previous settings without saving.

RS-232 Port Settings

To adjust RS-232 communication parameters of HD-MD402, do the following:



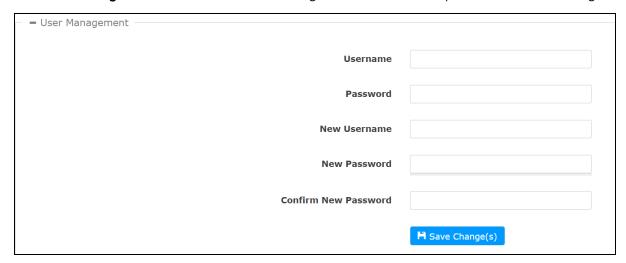
1. Select the desired speed of data transmission (baud rate) from the **Baud Rate** drop-down menu.

Valid values are as follows:

- 4800
- 7200
- 9600 (Default value)
- 14400
- 19200
- 28800
- 38400
- 57600
- 115200
- 2. Select the number of data bits as 8 from the Data Bits drop-down menu.
- 3. Select the error checking type from the **Parity** drop-down menu. Available options are as follows:
 - NONE (default)
 - Odd
 - Even
- 4. Select the number of stop bits (1 or 2) that will be used from the Stop Bits drop-down menu.
- 5. Click the **Save Change(s)** button to save your modifications or click **Revert** to revert to the previous settings without saving.

User Management

The User Management section enables to change the username and password of an existing user.



- 1. Enter the username in the **Username** field.
- 2. Enter the password in the **Password** field.
- 3. Enter the new username in the **New Username** field. A valid user name can consist of alphanumeric characters (letters a-z, A-Z, numbers 0-9) and the underscore "_" character.
- 4. Enter a new password in the **New Password** field; re-enter the same password in the **Confirm New Password** field.
- 5. Click **Save Change(s)** to save the changes.

Inputs

The **Inputs** section can be used to configure the HDMI input settings of the HD-MD402 by renaming one or more inputs, changing and applying EDID to specific inputs or to all inputs at once (Global EDID), and enabling or disabling HDCP (High-bandwidth Digital Content Protection) on individual inputs.



Global EDID

In the **Send EDID to All Inputs** drop-down menu, select a built-in EDID file from a list of built-in predefined EDID files.

- Copy HDMI 1 Output
- Copy DM Lite 1 Output
- Copy DM Lite 2 Output
- 01 DM Default
- Consumer 1080P HBR
- Consumer 720P HBR
- Laptop 16x9 1080P 2CH
- Laptop 16x10 1920x1200 2CH
- Laptop 16x10 1280x800 2CH
- Laptop widescreen 2CH
- Consumer 1080P50 HBR
- Consumer 720P50 HBR
- Laptop 16x9 1080P50 2CH
- DM Default 4k 30Hz 2CH
- DM Default 4k 60Hz 2CH
- DM Default 4k 60Hz HBR

The selected EDID is automatically sent to all inputs and appears in the EDID drop-down menu in the Inputs section of the page.

Inputs

The Inputs section displays information and allows settings to be modified for available inputs.

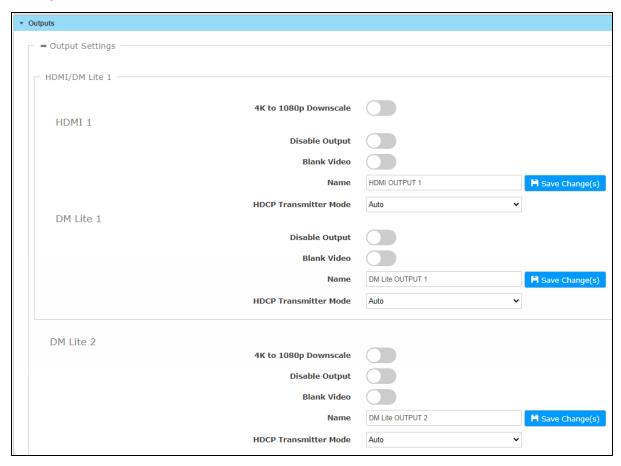
- Name: Displays the name of the input. To modify the name of the input, enter the new name in this field.
- Sync Detected: Indicates whether a valid video signal is detected at the corresponding input.
- **EDID:** Displays the selected predefined EDID file. To modify the existing setting, select an EDID from the **EDID** drop-down menu.
- **Resolution:** Displays resolution when video with valid resolution is detected. If no video is detected, the reported resolution will be ---.
- HDCP Receiver Capability: Specifies whether HDCP Support for this input will be Disabled, Auto, HDCP 1.X or HDCP 2.X. To modify the existing setting, select the desired option from the HDCP Receiver Capability drop-down menu.
- **Status**: Click 1 to view the Input Signal details including Sync Detected, Resolution, and Source HDCP. Click + **More Details** to review additional information about the Input Signal.

Click **Save Change(s)** to save the changes.

Click **Revert** to revert to the previous settings without saving.

Outputs

The **Outputs** section can be used to configure the HDMI, DM Lite 1, DM Lite 2, and Audio output settings of the HD-MD402.



The Outputs section displays information and allows settings to be modified for available outputs.

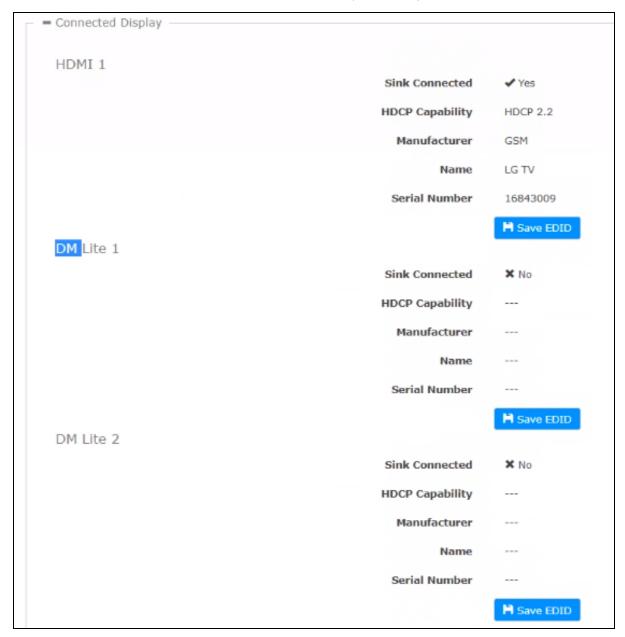
HDMI 1, DM Lite 1, and DM Lite 2

- 4K to 1080p Downscale: To enable the 4K to 1080p Downscale (automatically downscale the
 input resolutions to 1080p regardless of the resolution capabilities of the display device),
 move the 4K to 1080p Downscale slider to the right. To disable the 4K to 1080p Downscale,
 move the slider to the left.
- **Disable Output**: Move the **Disable Output** slider to the right to disable the audio and video output. To enable the audio and video output, move the slider to the left.
- **Blank Video**: Move the **Blank Video** slider to the right to disable video. To enable video, move the slider to the left.

- Name: Displays the name of the output source. To modify the name, enter the new name in this field. Click Save Change(s) to save the new name.
- **HDCP Transmitter Mode**: Select the desired option from the **HDCP Transmitter Mode** drop-down menu to set the HDCP Mode as follows:
 - Auto (Default): When non-HDCP content is routed, the content will pass through and not be authenticated until HDCP content is routed. When HDCP content is routed, the scaler will latch onto the highest HDCP level. The scaler will not attempt to re-authenticate unless hot-plugged or the HDCP support level changes.
 - **Follow Input**: Authenticates each time the input sync changes its state. The output will authenticate to the level reported at the Input.
 - Always: Authenticates to and keeps synced with the highest level HDCP.
 - Never: The HDMI output will blank if the input is HDCP encrypted.

Connected Display

The **Connected Display** section displays read-only information that identifies the displays connected to the HDMI 1, DM Lite 1, and DM Lite 2 outputs (if any).

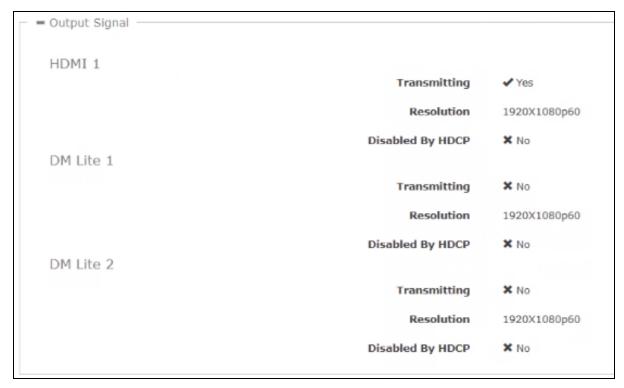


The **Manufacturer**, **Name**, and **Serial Number** fields display additional information about the connected display's manufacturer, model and serial number, respectively.

Click the **Save CEDID** button to save the CEDID file of the connected output. The saved CEDID file can be loaded later, if desired.

Output Signal

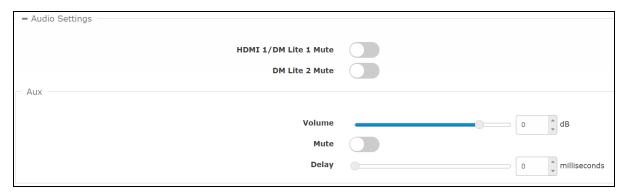
The Output Signal section displays read-only information about the HDMI 1, DM Lite 1, and DM Lite 2 output resolution of the device and whether the device is transmitting or not.



- Transmitting: Yes or No.
- Resolution: Reports the output resolution of the device (if transmitting).
- **Disabled By HDCP**: Yes or No.

Audio Settings

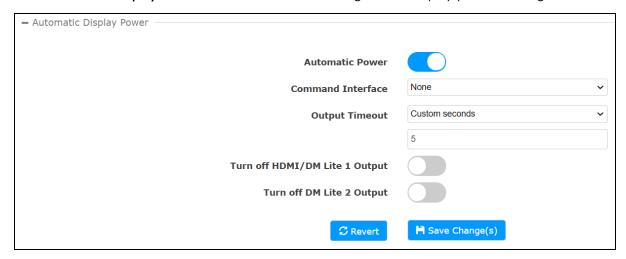
The Audio Settings section enables configuration of the audio settings of the HD-MD402.



- HDMI 1/DM Lite 1 Mute: To mute the HDMI 1 and DM Lite 1 output audio, move the HDMI
 1/DM Lite 1 Mute slider to the right. To unmute the HDMI 1 and DM Lite 1 output audio, move
 the slider to the left.
- **DM Lite 2 Mute**: To mute the DM Lite 2 output audio, move the **DM Lite 2 Mute** slider to the right. To unmute the DM Lite 2 output audio, move the slider to the left.
- Volume: To set the volume, do one of the following:
 - Move the Volume slider to the right to increase or to the left to decrease the AUX volume.
 - Click the **dB** arrows to increase or decrease the AUX volume.
 - Manually enter a value in the Volume field. Values range from -80 dB to 20 dB, adjustable in 0.5 dB increments.
- **Mute**: To mute the AUX audio, move the **Mute** slider to the right. To unmute the AUX audio, move the slider to the left.
- Delay: To set the delay, do one of the following:
 - Move the Delay slider to the right to increase or to the left to decrease the delay.
 - Click the **milliseconds** arrows to increase or decrease the delay.
 - Manually enter a value in the **Delay** field. Values range from 0 milliseconds to 150 milliseconds, adjustable in 1 millisecond increments.

Automatic Display Power

The Automatic Display Power section enables to configure the display power settings.

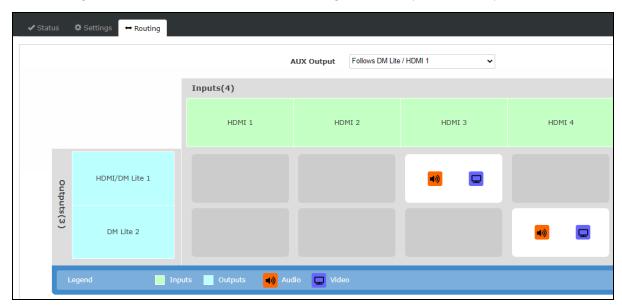


- **Automatic Power**: To enable the automatic power, move the **Automatic Power** slider to the right position. To disable the automatic power, move the slider to the left position.
- Command Interface: Select between None or RS-232 from the Command Interface drop-down menu.
- Output Timeout: Select the output timeout value from the Output Timeout drop-down menu. Values are 5, 10, 15, 30, 60, 90, or Custom in seconds. If Custom is selected, enter the value in seconds in the Output Timeout field.
- Turn off HDMI/DM Lite 1 Output: To turn off the HDMI 1 and DM Lite 1 output, move the Turn off HDMI/DM Lite 1 Output slider to the right. To display the HDMI 1 and DM Lite 1 output, move the slider to the left.
- Turn off DM Lite 2 Output: To turn off the DM Lite 2 output, move the Turn off DM Lite 2 Output slider to the right. To display the DM Lite 2 output, move the slider to the left.
 - Click **Save Change(s)** to save the changes.
 - Click **Revert** to revert to the previous settings without saving.

Routing

The Routing page can be accessed at any time by clicking the Routing tab of the HD-MD402 interface.

The Routing section can be used to establish routing between inputs and outputs.



To select the source to play the Aux Audio Output, select between Follows DM Lite / HDMI 1 or Follows DM Lite 2 from the AUX OUTPUT drop-down menu.

To route an input to the output, click the output box against the name of the corresponding input. The input is routed to the output.

This page is intentionally left blank.

Fax: 201.767.7656 www.crestron.com