DMF and DMCF Series

DigitalMedia™ SFP+ 4K Fiber Transmitters and Receivers

Supplemental Guide

Crestron Electronics, Inc.

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

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

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

This document was written by the Technical Publications department at Crestron.

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DMF and DMCF Series: DigitalMedia™ SFP+ 4K Fiber Transmitters and Receivers

Introduction

The Crestron® DMF and DMCF series of fiber transmitters and receivers enable uncompressed 4K/60 video signal extension over fiber-optic cable. The transmitters and receivers are available as stand-alone endpoints (DMF-TX-4K-SFP and DMF-RMC-4K-SFP) and as cards (DMCF-TX-4K-SFP and DMCF-RX-4K-SFP). The DMF and DMCF series accept SFP+ (Small Form-factor Pluggable Plus) transceiver modules, which support multimode and single-mode fiber.

The DMF and DMCF series allow simplified setup through the use of a web browser. This guide provides information about configuration of the transmitters and receivers using a web browser.

Web Interface Overview

The web interface of the transmitters and receivers allows various configuration functions to be performed as well as status information to be viewed. The web interface of the DMF-TX-4K-SFP transmitter is the same as the web interface of the DMCF-TX-4K-SFP transmitter, and the web interface of the DMF-RMC-4K-SFP receiver is the same as the web interface of the DMCF-RX-4K-SFP receiver. Most of the configuration of a receiver is hosted by the web interface of the companion transmitter. As a result, the web interface of the DMF-TX-4K-SFP or DMCF-TX-4K-SFP transmitter hosts most of the configuration of the companion receiver (DMF-RMC-4K-SFP or DMCF-RX-4K-SFP).

Accessing the Web Interface

The web interface of the DMF and DMCF transmitters and receivers can be accessed from various web browsers. The following table lists operating systems and the corresponding web browsers that are supported by the web interfaces of the transmitters and receivers.

Operating System and Supported Web Browsers

OPERATING SYSTEM	SUPPORTED WEB BROWSERS
Windows® operating system	Internet Explorer® web browser, version 9 and later Chrome™ web browser, version 31 and later Firefox® web browser, version 31 and later
OS X® operating system	Safari® web browser, version 6 and later Chrome web browser, version 31 and later Firefox web browser, version 31 and later
iOS® operating system	Safari web browser, version 6 and later Chrome web browser, version 31 and later
Android™ operating system	Chrome web browser, version 31 and later

To access the web interface, do either of the following:

- Open a web browser directly (refer to "Opening a Web Browser Directly" below).
- Open a web browser within the Crestron Toolbox™ application (refer to "Opening a Web Browser within the Crestron Toolbox Application" on page 3).

NOTE: As discussed later in this guide, the Status page in the web interface of the transmitter also provides access to the web interface of the receiver. Conversely, the Status page in the web interface of the receiver also provides access to the web interface of the transmitter.

Opening a Web Browser Directly

To access the web interface by opening a web browser directly, do the following:

1. Find the IP address of a DMF endpoint or a DMCF card by doing either of the following as appropriate:
   - To find the IP address of a DMF endpoint, press the SETUP button on the device and note the IP address on the HDMI® output.
   - To find the IP address of a DMCF card, view the IP address using the front panel of the DMF-CI-8 chassis.
2. Open a compatible web browser.
3. Enter the IP address of the DMF endpoint or DMCF card.

   NOTE: A warning indicating a security certificate problem or privacy error may appear. Ignore the warning and continue to access the web interface.

   The user name and password dialog box opens. For login information, refer to "Logging In to the Transmitter or Receiver" on page 4.

Opening a Web Browser within the Crestron Toolbox Application

To access the web interface by opening a web browser within the Crestron Toolbox application, do the following:

1. Open the Crestron Toolbox application.
2. From the **Tools** menu, select **Device Discovery Tool**.

   NOTE: You can also access the Device Discovery Tool by clicking the Device Discovery Tool button () in the Crestron Toolbox toolbar.

   NOTE: The security software running on the computer may send a program alert regarding the attempt of the Crestron Toolbox application to connect to the network. Allow the connection so that the Device Discovery Tool can be used.

   The DMF endpoint or DMCF card is discovered and is listed in the device list on the left side of the screen. The associated host name, IP address, and firmware version are also displayed.
3. In the Device Discovery Tool list, double-click the name of the endpoint or card (**DMF-TX-4K-SFP**, **DMF-RMC-4K-SFP**, **DMCF-TX-4K-SFP**, or **DMCF-RX-4K-SFP**).

   The Authentication dialog box opens.
4. Do the following:
   a. Enter a user name and password. The default user name is *admin*, and the default password is *admin*.
   b. Click **OK**.

   A configuration pane appears for the endpoint or card.
5. Click the **Web Configuration** button in the **Configuration** page that appears on the left side of the Device Discovery Tool.

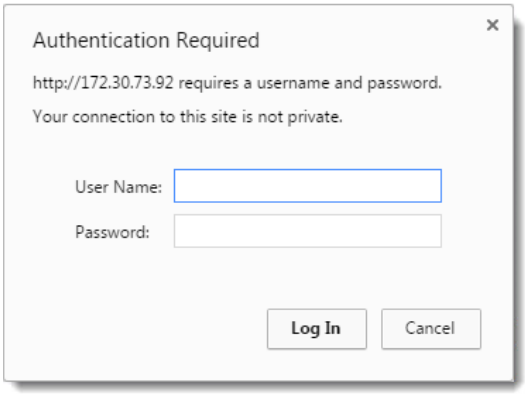
   The user name and password dialog box opens. For login information, refer to "Logging In to the Transmitter or Receiver" below.

Logging In to the Transmitter or Receiver

The user name and dialog box allows login to the transmitter or receiver.

NOTE: Depending on the web browser being used, the appearance of the user name and password dialog box may vary from the dialog box shown below.

User Name and Password Dialog Box



To log in to the transmitter or receiver, do the following:

1. Enter the user name and password. The default user name is *admin*, and the default password is *admin*.

   NOTE: The user name and password are case sensitive.

2. Click Log In.

   The Status page of the transmitter or receiver opens. The following sections provide information about the corresponding web interface of the transmitter and receiver.

Transmitter Web Interface

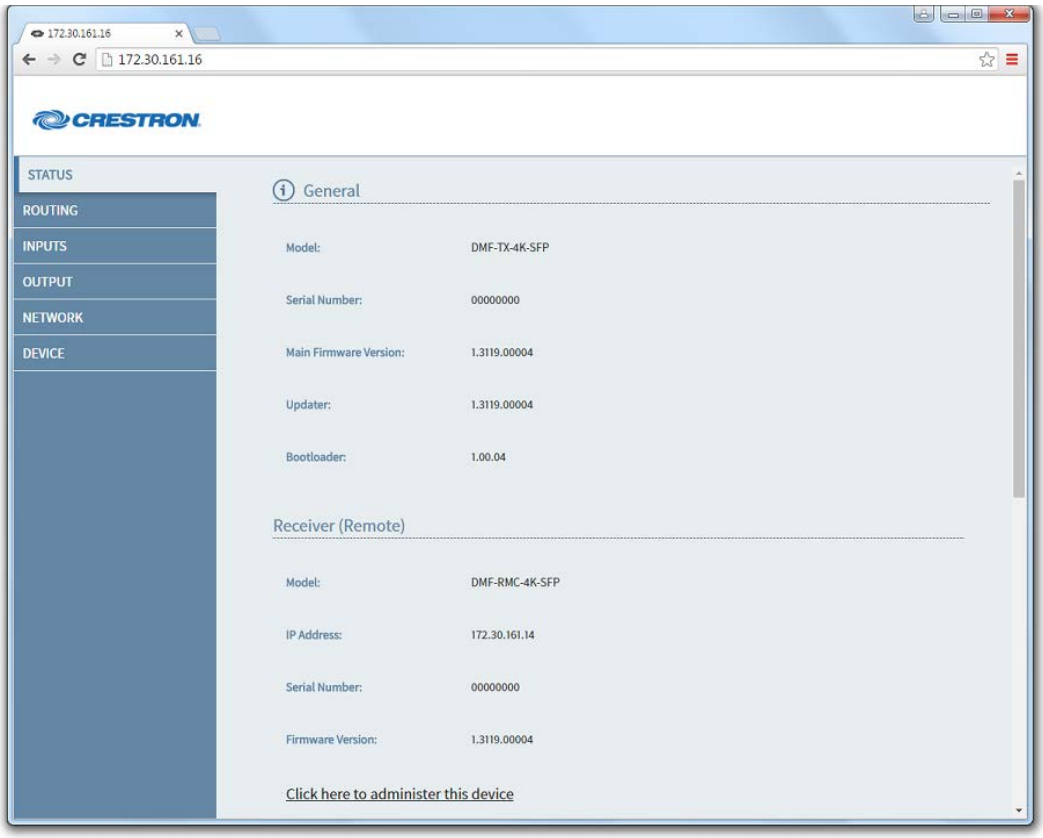
The web interface of the DMF-TX-4K-SFP transmitter is the same as the web interface of the DMCF-TX-4K-SFP transmitter. The web interface allows the status of the transmitter to be viewed. In addition, the routing, HDMI input, HDMI output, network, and device settings of the transmitter can be configured.

NOTE: The web interface of the transmitter also provides status information about the companion receiver (DMF-RMC-4K-SFP or DMCF-TX-4K-SFP) and hosts the routing, HDMI input, and HDMI output settings of the receiver.

Navigating the Web Interface of the Transmitter

The web interface of the transmitter provides a navigation bar that accesses the built-in web pages of the transmitter.

Transmitter Web Interface



The navigation bar provides access to the web pages as follows:

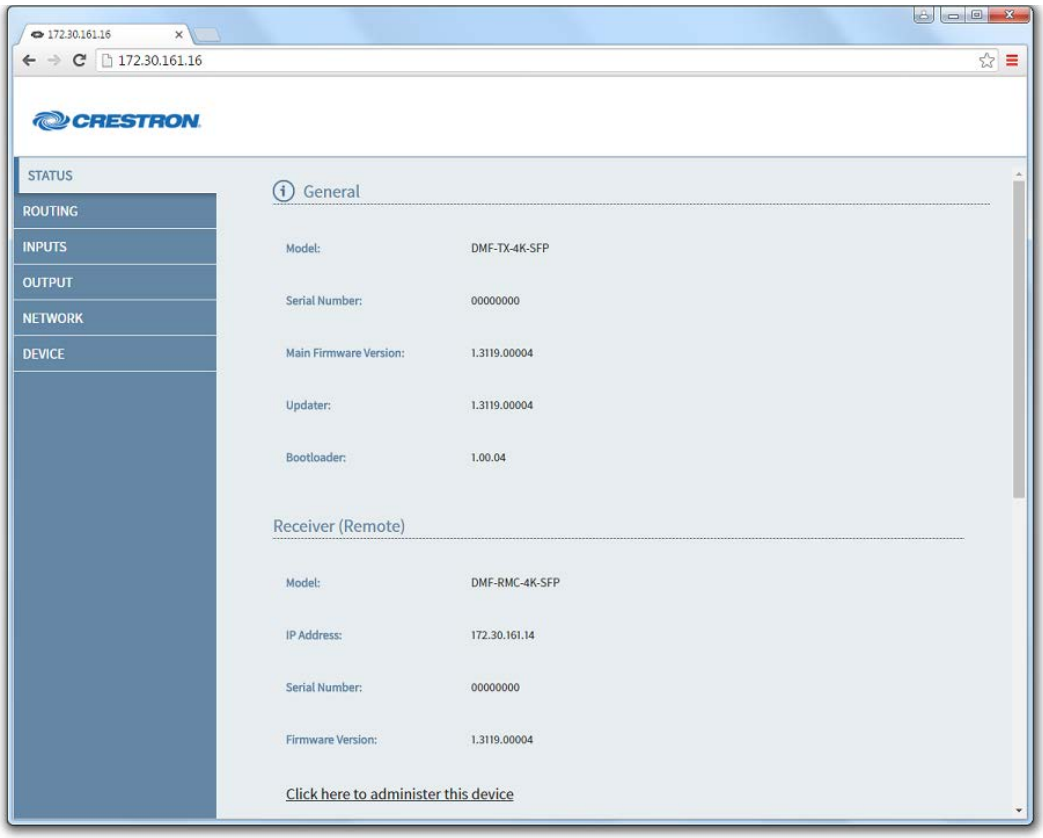
- Clicking STATUS accesses the Status page, which provides general information about the transmitter as well as network-related and control system information. Information about the companion receiver is also provided. For additional information, refer to “Viewing Status Information” on page 6.

- Clicking ROUTING accesses the Routing page, which allows selection of an HDMI input on the transmitter or companion receiver to be routed to the HDMI output on the receiver. For additional information, refer to “Configuring Routing Settings” on page 8.
- Clicking INPUTS accesses the Inputs page, which allows the desired EDID file to be selected and sent to the HDMI input. An EDID file can be selected for the receiver as well as for the transmitter. For additional information, refer to “Configuring Input Settings” on page 9.
- Clicking OUTPUT accesses the Output page, which allows the HDMI output of the companion receiver to be enabled or disabled and the output resolution to be set. For additional information, refer to “Configuring Output Settings” on page 14.
- Clicking NETWORK accesses the Network page, which allows network settings such as host name, domain name, and DHCP (Dynamic Host Configuration Protocol) mode of the transmitter to be set. For additional information, refer to “Configuring Network Settings” on page 17.
- Clicking DEVICE accesses the Device page, which sets up connection to a control system and controls various device functions of the transmitter. For additional information, refer to “Configuring Device Settings” on page 19.

Viewing Status Information

The Status page of the transmitter opens after logging in to the transmitter. To view status information at any time, click STATUS in the navigation bar of the web interface.

Transmitter Status Page



The Status page displays the following information:

- General information about the transmitter, which consists of the following:
  - Model name (DMF-TX-4K-SFP or DMCF-TX-4K-SFP)
  - Serial Number
  - Main Firmware Version
  - Updater Version
  - Bootloader Version
- Receiver (remote) information, which displays the following information about the companion receiver:
  - Model (DMF-RMC-4K-SFP or DMCF-RX-4K-SFP)
  - IP Address
  - Serial Number
  - Firmware Version

  In addition, the "Click here to administer this device" link allows access to the web interface of the companion receiver.
- Network-related information about the transmitter, which consists of the following:
  - Host Name

    NOTE: The default host name of the transmitter consists of the model name (DMF-TX-4K-SFP or DMCF-TX-4K-SFP) followed by a hyphen (-) and the MAC address of the transmitter (for example, DMF-TX-4K-SFP-00107F7C65F6).
  - IP Address
  - Subnet Mask
  - Default Gateway
  - MAC Address
- Control system connection information, which consists of the following:
  - Address of the control system
  - IP ID of the transmitter
  - Port number of the transmitter (the default port number is 41974)
  - Status (ONLINE or OFFLINE)

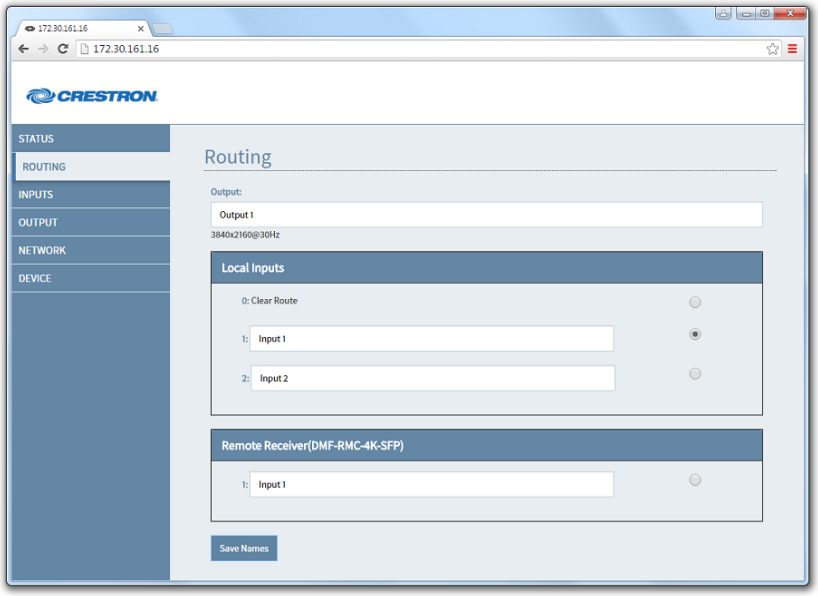
Configuring Routing Settings

The transmitter includes two HDMI inputs that can connect to HD and 4K sources. The remote receiver (DMF-RMC-4K-SFP or DMCF-RX-4K-SFP) includes one HDMI input. Any one of the HDMI inputs on the transmitter or receiver can be selected for routing to the HDMI output on the receiver.

To configure routing settings, do the following:

1. In the navigation bar, click **ROUTING**. The Routing page opens.

   Routing Page

   As shown above, the Routing page contains an **Output** text entry box, a **Local Inputs** section, and a **Remote Receiver (DMF-RMC-4K-SFP** or **DMCF-RX-4K-SFP)** section.

   The default name of the HDMI output on the companion receiver is **Output 1.** The default names of the local HDMI inputs on the transmitter are **Input 1** and **Input 2**. The default name of the HDMI input on the remote receiver is **Input 1.**

2. In the text entry boxes of the **Output**, **Local Inputs**, and **Remote Receiver (DMF-RMC-4K-SFP** or **DMCF-RX-4K-SFP)** sections, rename the output and inputs if desired, and then click the **Save Names** button.

3. To route an HDMI input on the transmitter or the HDMI input on the companion receiver to the HDMI output on the receiver, select the corresponding input radio button. The input is routed to the output.

   NOTE: Underneath the **Output** text box, the resolution and frame rate being transmitted to the HDMI output on the receiver are displayed. If the input resolution is changed, the resolution and frame rate are updated dynamically.

To disconnect a route for an input on the transmitter or receiver, click the **Clear Route** radio button in the **Local Inputs** section of the page.

Configuring Input Settings

The web interface of the transmitter allows a built-in EDID file or a custom EDID file to be selected and sent to the HDMI inputs on the transmitter and companion receiver. In addition, HDMI inputs can be renamed. HDCP support can also be configured for each HDMI input.

Configuration of HDMI inputs can be accomplished using the main Inputs page or the input-specific pages (HDMI Input 1, HDMI Input 2, and Remote HDMI Input). The main Inputs page allows all inputs to be configured and a global EDID to be selected. The EDID can be selected on a global basis and sent to all inputs simultaneously, or can be selected on an individual basis for each input.

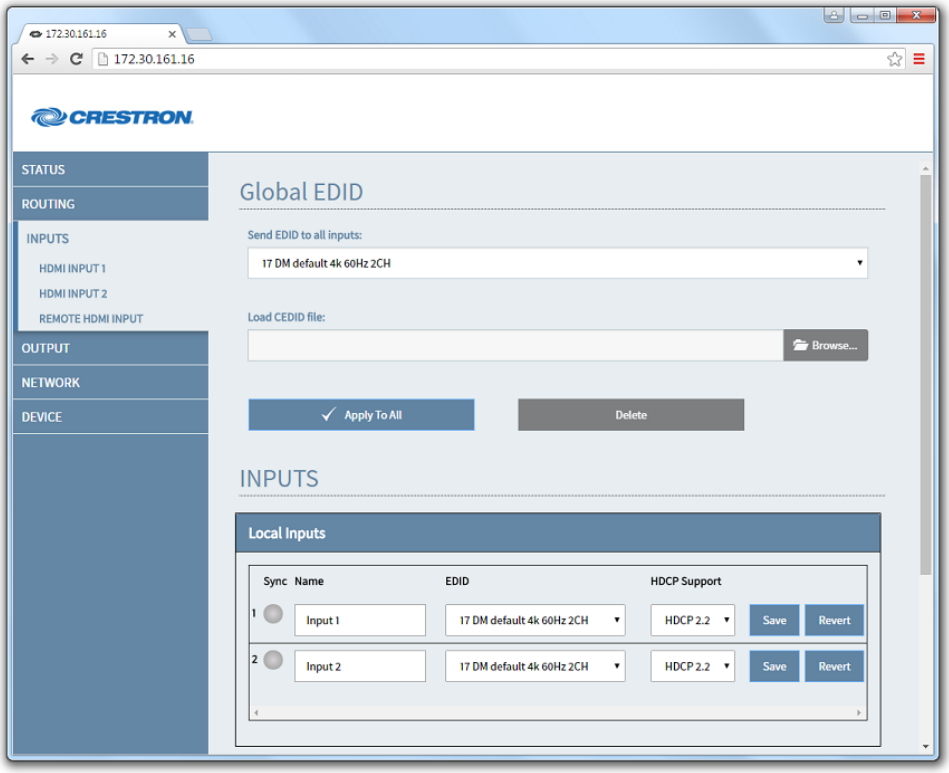
The input-specific pages allow configuration of the inputs on an individual basis only. The input-specific pages also allow detailed signal information to be viewed for each input.

Configuring Inputs on the Main Input Page

To configure inputs on the main Inputs page, do the following:

1. In the navigation bar, click **INPUTS**. The main Input page opens.

Main Input Page



2. In the Global EDID section of the page, determine whether a built-in EDID file or a custom EDID file is to be sent to all inputs, and then do the following:

    a. In the **Send EDID to all inputs** drop-down list, select a built-in EDID file or select **Custom**, which is the last item in the list. If a built-in EDID file is selected, continue with step 2b. If a custom EDID file is desired, skip step 2b and proceed to step 2c.

    b. (Built-in EDID file only) Do the following:

        i. Click the **Apply to All** button to apply the built-in EDID file to all transmitter and receiver HDMI inputs.

        The Apply EDID dialog box appears, asking for confirmation that the EDID file be applied to the device.

        ii. Click the **Yes** button. When the EDID is applied to the device, a message box appears indicating success.

        iii. Close the message box by clicking the **X** in the upper right-hand corner.

    c. (Custom EDID file only) Select the desired custom EDID file by doing the following:

        i. Click the **Browse** button located to the right of the **Load CEDID file** field. Windows Explorer opens.

        ii. Navigate to the desired EDID file (*.cedid), select the file, and then click the **Open** button.

        The selected EDID file appears in the **Load CEDID file** field.

        iii. Click the **Send to All** button to send the custom EDID file to all transmitter and receiver HDMI inputs.

        The Send EDID dialog box appears.

        iv. Click the **Start** button. When the process is complete, the EDID is sent to all transmitter and receiver HDMI inputs.

        The custom EDID file is added to the **Send EDID to All inputs** drop-down list in the **Global EDID** section of the page. The custom EDID file is also added to the **EDID** drop-down lists in the **Local Inputs** and **Remote Receiver (DMF-RMC-4K-SFP** or **DMCF-RX-4K-SFP)** sections of the page.

3. In the **Local Inputs** and **Remote Receiver (DMF-RMC-4K-SFP** or **DMCF-RX-4K-SFP)** sections of the page, configure each HDMI input as follows:

    NOTE: For each input, the Sync icon denotes whether a source is detected at the input. If a source is detected, the icon is green. If no source is detected, the icon is gray.

    - In the **Name** text box, rename the input if desired.
    - In the **EDID** drop-down list, select the desired EDID file if an EDID other than the global EDID is to be assigned.
    - In the **HDCP Support** drop-down list, select **HDCP 1.4**, **HDCP 2.2,** or **Disabled**. The default setting is **HDCP 2.2.**

- Do one of the following:
    - Click **Save** to save the **Name**, **EDID**, and **HDCP Support** entries for each corresponding input.
    - Click **Revert** to revert to the previous settings without saving the current entries.
    - Click **Save All** to save all unsaved entries.

To delete a custom EDID file, do the following in the Global EDID section of the main INPUTS page:

NOTE: Only custom EDID files can be deleted. Built-in EDID files cannot be deleted.

1. In the **Send EDID to all inputs** drop-down list, select the custom EDID file to be deleted.
2. Click the **Delete** button.

   The Delete EDID message box appears, asking for confirmation that the EDID file be removed.
3. Click the **Yes** button to delete the EDID.

   The Delete EDID message box appears indicating success.
4. Close the message box by clicking the **X** in the upper right-hand corner of the box.

The custom EDID file is deleted from the **Send EDID to All inputs** drop-down list and also from each individual **EDID** drop-down list in the **Local Inputs** and **Remote Receiver (DMF-RMC-4K-SFP** or **DMCF-RX-4K-SFP)** sections of the page.

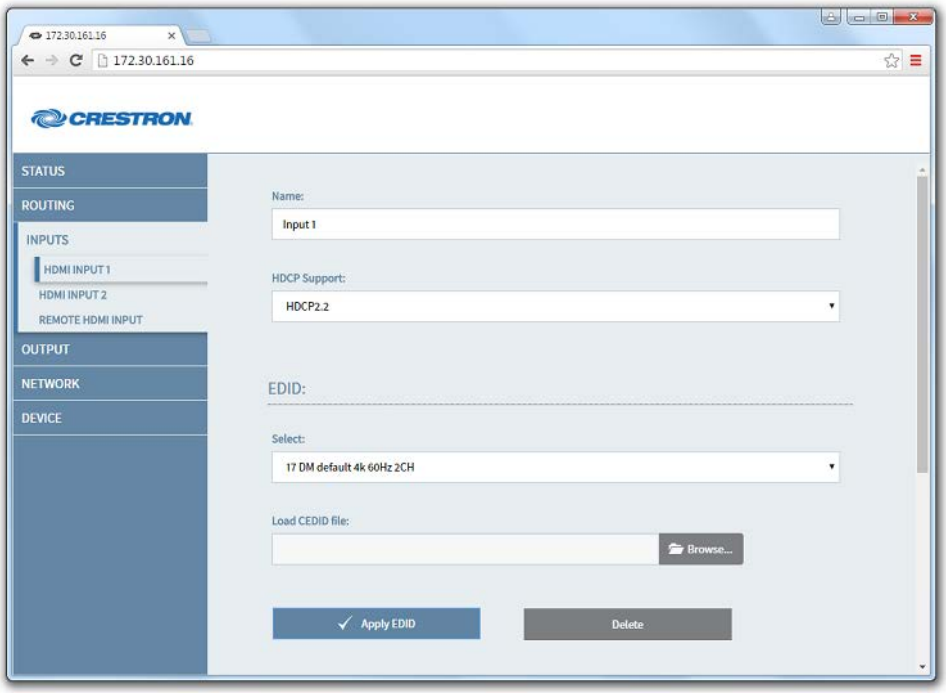
Configuring Inputs on Input-Specific Pages

To configure a specific input and to view detailed information about the input signal, do the following:

1. In the navigation bar, click **INPUTS** and then click the desired input: **HDMI INPUT 1, HDMI INPUT 2,** or **REMOTE HDMI INPUT.**

   The HDMI Input page opens for the corresponding input.

HDMI INPUT Page (Sample HDMI Input 1 Page Shown)



2. In the **Name** text box, rename the input if desired.
3. In the **HDCP Support** drop-down list, select **HDCP 1.4**, **HDCP 2.2,** or **Disabled**. The default setting is **HDCP 2.2.**
4. In the EDID section of the page, select a built-in EDID file or select **Custom**, which is the last item in the list. If a built-in EDID file is selected, continue with step 4a. If a custom EDID file is desired, skip step 4a and proceed to step 4b.
    a. (Built-in EDID file only) Do the following:
        i. Click the **Apply EDID** button to apply the built-in EDID file to the specific input.

        The Apply EDID dialog box appears, asking for confirmation that the EDID file be applied to the device.

        ii. Click the **Yes** button. When the EDID is applied to the device, a message box appears indicating success.

        iii. Close the message box by clicking the **X** in the upper right-hand corner of the box.

    b. (Custom EDID file only) Select the desired custom EDID file by doing the following:
        i. Click the **Browse** button located to the right of the **Load CEDID** file field. Windows Explorer opens.

        ii. Navigate to the desired EDID file (*.cedid), select the file, and then click the **Open** button.

        The selected EDID file appears in the **Load CEDID file** field.

        iii. Click the **Send EDID** button to send the custom EDID file to the specific input.

The Send EDID dialog box appears.

iv. Click the **Start** button. When the process is complete, the EDID is sent to the specific input.

The custom EDID file is added to the EDID **Select** list for the input.

To delete a custom EDID file, do the following:

NOTE: Only custom EDID files can be deleted. Built-in EDID files cannot be deleted.

1. In the **Select** drop-down list, select the custom EDID file to be deleted.
2. Click the **Delete** button.

   The Delete EDID message box appears, asking for confirmation that the EDID file be removed.
3. Click the **Yes** button to delete the EDID.

   The custom EDID file is deleted from the EDID **Select** drop-down list for the input.

The HDMI Input 1, HDMI Input 2, and Remote HDMI Input pages also display information about the HDMI input signal in the **Input Signal** section of the page.

HDMI Input Page—Input Signal Information

The following information is displayed in the **Input Signal** section of the HDMI Input page:

- **Sync Detected:** Specifies whether a source is detected at the HDMI input:
  - A green icon indicates that a source is detected.
  - A gray icon indicates that a source is not detected.
- **Resolution:** Specifies the current resolution of the input signal
- **HDCP:** Specifies whether HDCP is active or inactive

To view additional details about the input signal, click the **More details >>** button. To view fewer details about the input signal, click the **Fewer details<<** button.

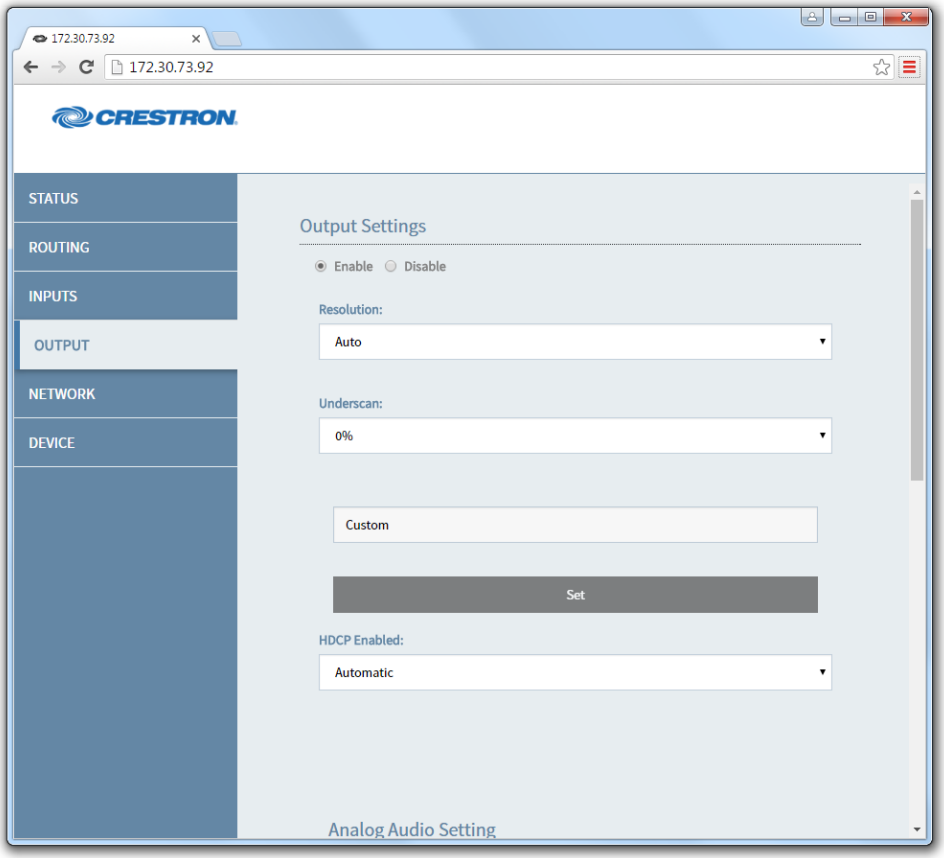
Configuring Output Settings

The HDMI output of the companion receiver can be configured. Configuration of output settings includes enabling or disabling the HDMI output, setting the output resolution and underscan percentage, and configuring HDCP. In addition, the volume of the analog audio can be adjusted. Information about the connected display and the HDMI output signal can also be viewed.

To configure output settings, do the following:

1. In the navigation bar, click **OUTPUT**. The Output page opens.

   Output Page



2. Enable or disable the HDMI output by selecting the **Enable** or **Disable** radio button, respectively. By default, the **Enable** radio button is selected, allowing the output display to turn on. If the **Disable** radio button is selected, the output display turns off.

3. In the **Resolution** drop-down list, select the desired output resolution. The available selections are listed below.

NOTE: In the following list, *RB* denotes *Reduced Blanking*.

Auto	2048x1152@60Hz RB
640x480@60Hz	2048x1080@60Hz
720x480@60Hz	1792x1344@60Hz
720x576@50Hz	1856x1392@60Hz
800x600@60Hz	1920x1440@60Hz
848x480@60Hz	2048x1536@60Hz
1024x768@60Hz	2560x1080@60Hz
1280x720@50Hz	2560x1440@60Hz
1280x720@60Hz	2560x1600@60Hz RB
1280x768@60Hz	3840x2160@24Hz
1280x768@60Hz RB	3840x2160@25Hz
1280x800@60Hz	3840x2160@30Hz
1280x800@60Hz RB	4096x2160@24Hz
1280x960@60Hz	4096x2160@25Hz
1280x1024@60Hz	4096x2160@30Hz
1360x768@60Hz	3840x2160@50Hz
1400x1050@60Hz	3840x2160@60Hz
1400x1050@60Hz RB	4096x2160@50Hz
1440x900@60Hz	4096x2160@60Hz
1440x900@60Hz RB	1680x720@24Hz
1600x900@60Hz RB	1680x720@25Hz
1600x1200@60Hz	1680x720@30Hz
1680x1050@60Hz	1680x720@50Hz
1680x1050@60Hz RB	1680x720@60Hz
1920x1080@24Hz	2560x1080@24Hz
1920x1080@50Hz	2560x1080@25Hz
1920x1080@60Hz	2560x1080@30Hz
1920x1200@60Hz RB	2560x1080@60Hz
2048x1080@24Hz	

The default setting is **Auto**, which is the recommended setting and specifies the preferred resolution of the connected display.

4. In the **Underscan** drop-down list, select one of the following options to set the underscan mode, which reduces the image size by the specified percentage so that the entire video frame is displayed:

   - **0%** (none)
   - **2.5%**
   - **5%**
   - **7.5%**
   - **Custom**

   If **Custom** is selected, enter a valid value in the **Underscan** text box. Valid values range from 0-10% in increments of 0.1%. To save the custom underscan setting, click the **Set** button.

5. In the **HDCP Enabled** drop-down list, select one of the following:
    - **Automatic**: (Default setting) Allows HDCP to be enabled for the output only when the input requires HDCP. If the input does not require HDCP, HDCP is disabled for the output.
    - **Always Enabled**: Allows HDCP to always be enabled for the output regardless of the input requirements.
6. In the **Analog Audio Setting** section of the page, mute or unmute the audio output by clicking the **Volume** button. By default, audio is unmuted and is set to **0 dB.** Adjust the volume level as desired by dragging the **Volume** slider to the left or to the right. The volume decreases when the slider is dragged to the left and increases when the slider is dragged to the right. Available values range from **-80 dB** to **24 dB** in increments of 0.1%.

The **Connected Display** section of the **Output** page displays information about the display that is connected to the HDMI output of the receiver.

Output Page—Connected Display Information

The following information is displayed in the **Connected Display** section:

- **Sink Detected:** Specifies whether the HDMI output signal is detected by the connected display:
    - A green icon indicates that the signal is detected.
    - A gray icon indicates that the signal is not detected.
- **Manufacturer:** Specifies the name of the manufacturer of the connected display
- **Name:** Specifies the model name of the connected display
- **Serial Number:** Specifies the serial number of the connected display

The **Output signal** section of the **Output** page displays information about the HDMI ouput signal.

Output Page—HDMI Output Signal Information

The following information is displayed in the **Output signal** section:

- **Transmitting:** Specifies whether the HDMI output is transmitting an HDMI signal to the connected display:
  - A green icon indicates that the HDMI output is transmitting an HDMI signal.
  - A gray icon indicates that the HDMI output is not transmitting an HDMI signal.
- **Resolution:** Specifies the current resolution of the output

To view additional details about the output signal, click the **More details >>** button. To view fewer details about the output signal, click the **Fewer details<<** button.

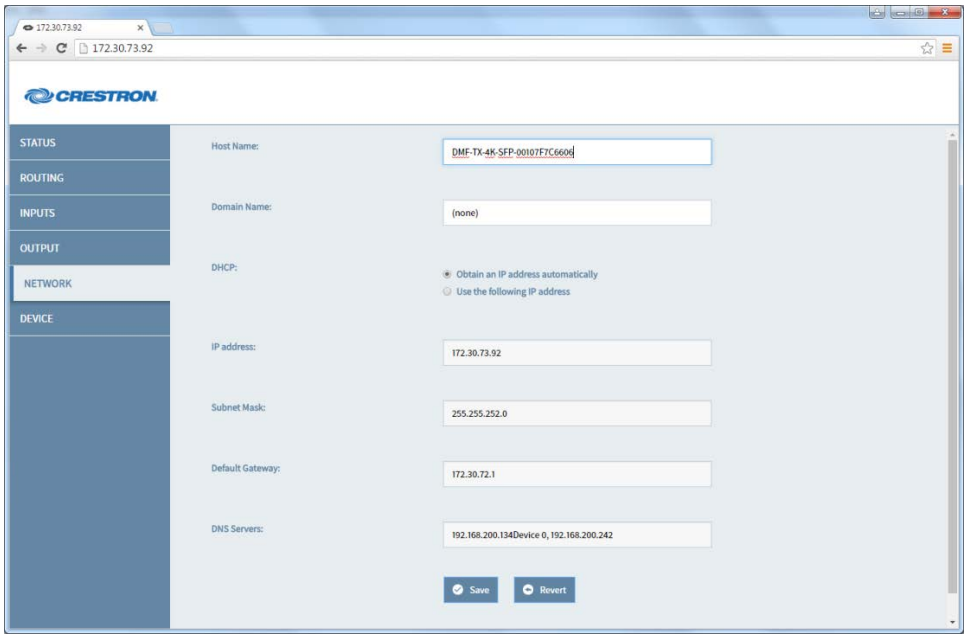
Configuring Network Settings

Network settings such as host name, domain name, and DHCP (Dynamic Host Configuration Protocol) can be configured for the transmitter.

To configure network settings, do the following:

1. In the navigation bar, click **Network**. The Network page opens.

Network Page



2. Configure network settings as desired:

   - In the **Host Name** text box, overwrite the existing host name with a name that identifies the transmitter on the network. The host name is restricted to the letters *a* to *z* (not case sensitive), the digits *0* to *9*, and the hyphen.
   - In the **Domain Name** text box, enter up to two domain names separated by a comma and a space.
   - Specify whether the IP address of the transmitter is to be assigned by a DHCP (Dynamic Host Configuration Protocol) server. To set the IP address, click either of the following radio buttons:
     - **Obtain an IP address automatically**: (Default setting) Allows the IP address of the transmitter to be automatically assigned by a DHCP server on the local area network (LAN) for a predetermined period of time.
     - **Use the following IP address**: Allows a static IP address and associated network settings to be configured for the transmitter:
       - **IP address**: Enter a unique IP address for the transmitter.
       - **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.
       - **DNS Servers**: Enter the IP addresses of the primary and secondary DNS servers separated by a comma.

3. Do either of the following:
    - To save the current entries, click the **Save** button. The transmitter automatically reboots.
    - To revert to the previous settings without saving the current entries, click the **Revert** button.

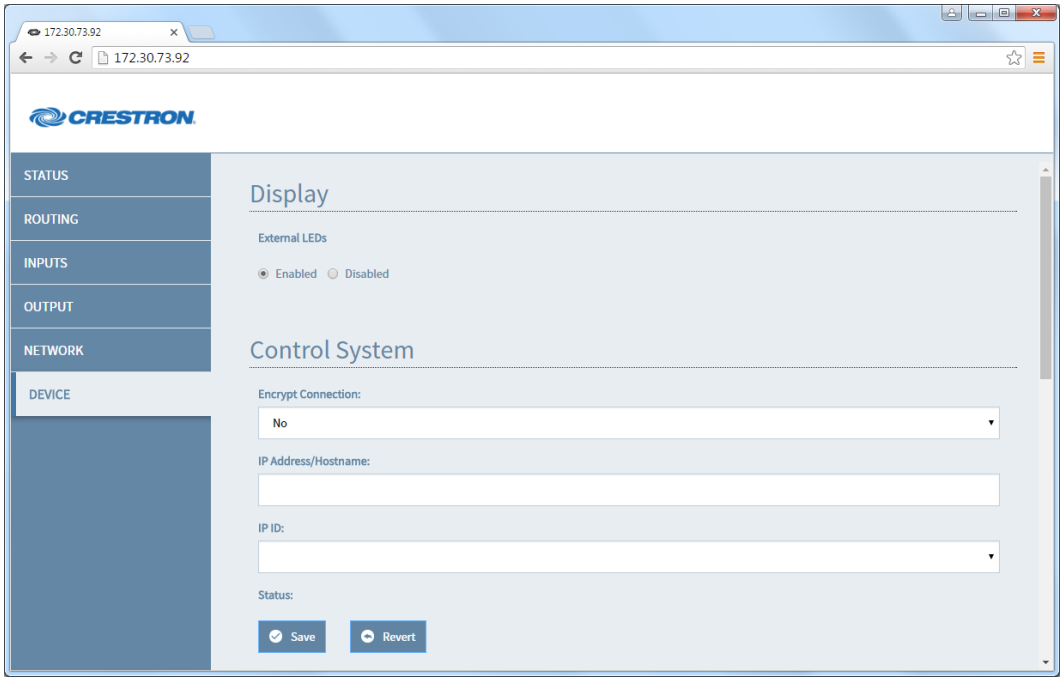
Configuring Device Settings

Configuration and management of device settings consist of the following:

- Controlling the LED states
- Connecting the transmitter to a control system
- Upgrading firmware
- Restoring factory default settings
- Rebooting the transmitter
- Downloading device logs

To configure device settings, do the following: In the navigation bar, click **DEVICE**. The Device page opens.

Device Page

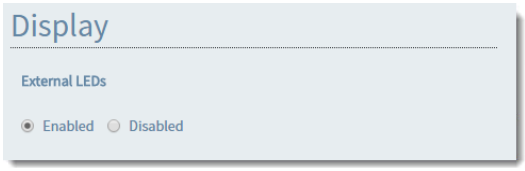


Controlling the LED States

In the **Display** section of the **Device** page, the external LEDs on the transmitter can be enabled or disabled.

NOTE: When the LEDs are disabled, all LEDs—including the power and Ethernet LEDs—turn off. The transmitter appears as though it is not powered on; however, the transmitter remains powered on and continues to function.

Device Page— Display



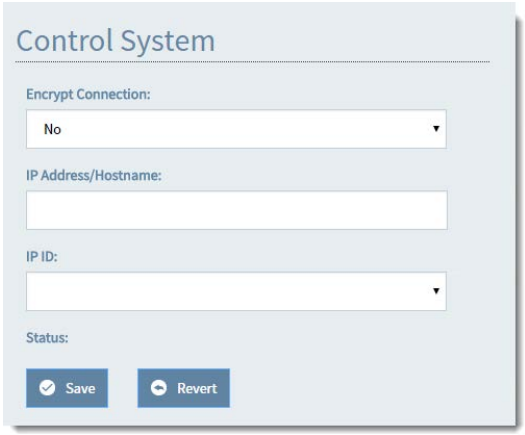
In the **Display** section, do either of the following:

- To enable the LEDs, click the **Enabled** radio button if it is not already selected. By default, the LEDs are enabled.
- To disable the LEDs, click the **Disabled** radio button. Although the LEDs become disabled, the transmitter continues to function.

Control System Connection

In the **Control System** section of the **Device** page, the transmitter can be connected to a control system.

Device Page— Control System



To connect the transmitter to a control system, do the following:

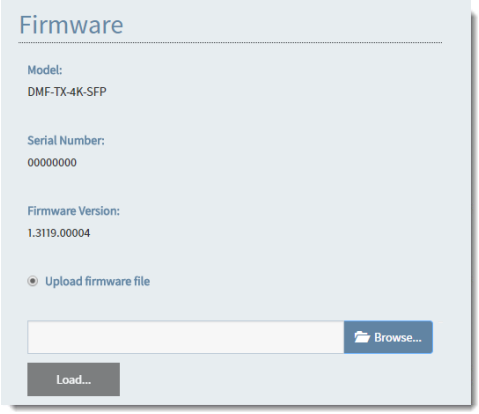
1. In the **Encrypt Connection** drop-down list, select **No** or **Yes** to specify whether encryption is to be used. The default setting is **No**.
2. In the **IP Address/Hostname** text box, enter the IP address or host name of the control system.
3. In the **IP ID** drop-down list, select the IP ID of the transmitter. Valid values range from **03** to **FE** in hexadecimal notation.
4. Do either of the following:
    - To save the current entries, click the **Save** button. The Control System Save message box appears, indicating that the control system settings were saved successfully.
    - To revert to the previous settings without saving the current entries, click the **Revert** button

The **Status** field (read only) displays the connection status of the transmitter to the control system as **OFFLINE** or **ONLINE**.

Upgrading Firmware

In the **Firmware** section of the **Device** page, the firmware of the transmitter can be upgraded.

Device Page— Firmware



The **Firmware** section displays the following information about the transmitter:

- Model (**DMF-TX-4K-SFP** or **DMCF-TX-4K-SFP**)
- Serial Number
- Firmware Version

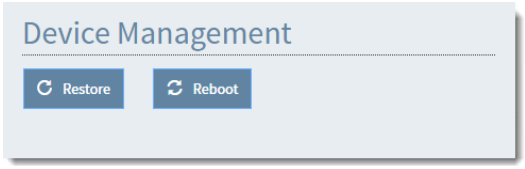
To upgrade the firmware of the transmitter, do the following:

1. Click the **Upload firmware file** radio button.
2. Click the **Browse** button.
3. Locate and select the desired firmware file, and then click the **Open** button. The **Upload firmware file** field displays the selected firmware filename.
4. Click the **Load** button. A prompt appears asking for confirmation that the firmware be upgraded.
5. Press the **Start** button, and then wait for completion of the upgrade process as indicated by the progress bar.
6. Click the **OK** button.

Device Management

In the **Device Management** section of the **Device** page, the transmitter can be restored to factory default settings or can be rebooted.

Device Page— Device Management



Restoring Factory Default Settings

In the Device Management section of the Device page, restore the transmitter to factory default settings by doing the following:

1. Click the **Restore** button. The Restore dialog box appears, asking for confirmation that the transmitter be restored to factory default settings.

   NOTE: When settings are restored, all settings—including the network settings—revert to the factory default settings. If a static IP address was set, restoring the transmitter to factory default settings reverts the IP address to DHCP mode, which is the factory default IP address setting (refer to “Configuring Network Settings” on page 17.

2. Click **Yes** to restore factory default settings. The Restore message box appears, indicating that the Restore process was successful and that the transmitter rebooted.
3. Close the message box by clicking the **X** in the upper right-hand corner of the box.

Rebooting the Transmitter

In the Device Management section of the Device page, reboot the transmitter by doing the following:

1. Click the **Reboot** button. The Reboot dialog box appears, asking for confirmation that the device be rebooted.
2. Click **Yes** to reboot the device. The Reboot message box appears, indicating that the device is rebooting.

Downloading Device Logs

In the Device Logs section of the Device page, device logs can be downloaded for troubleshooting purposes.

Device Page— Device Logs

To download device logs, click the **Download Logs** button. A logs file (*.tgz) is downloaded to the PC or mobile device.

Receiver Web Interface

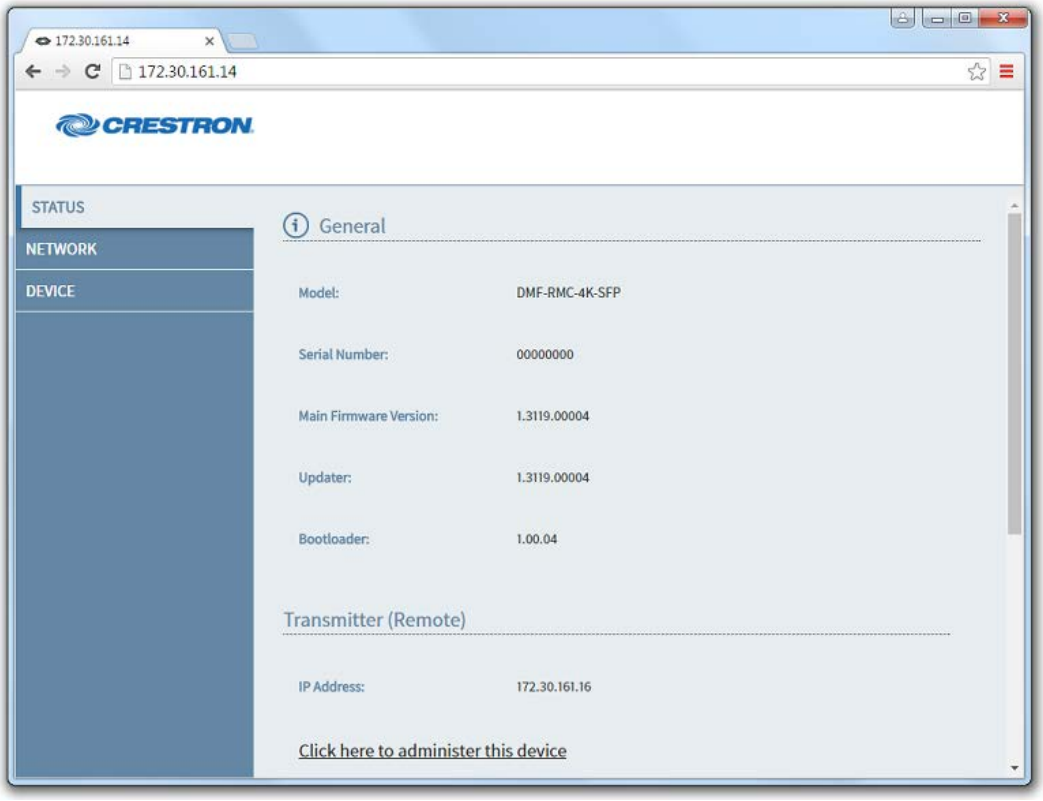
The web interface of the DMF-RMC-4K-SFP receiver is the same as the web interface of the DMCF-TX-4K-SFP receiver. The web interface allows the status of the receiver to be viewed as well as the configuration of network and device settings.

NOTE: The web interface of the transmitter (DMF-TX-4K-SFP or DMCF-TX-4K-SFP) hosts the routing, HDMI input, and HDMI output settings of the receiver.

Navigating the Web Interface of the Receiver

The web interface of the receiver provides a navigation bar that accesses the built-in web pages of the receiver.

Receiver Web Interface



The navigation bar provides access to the web pages as follows:

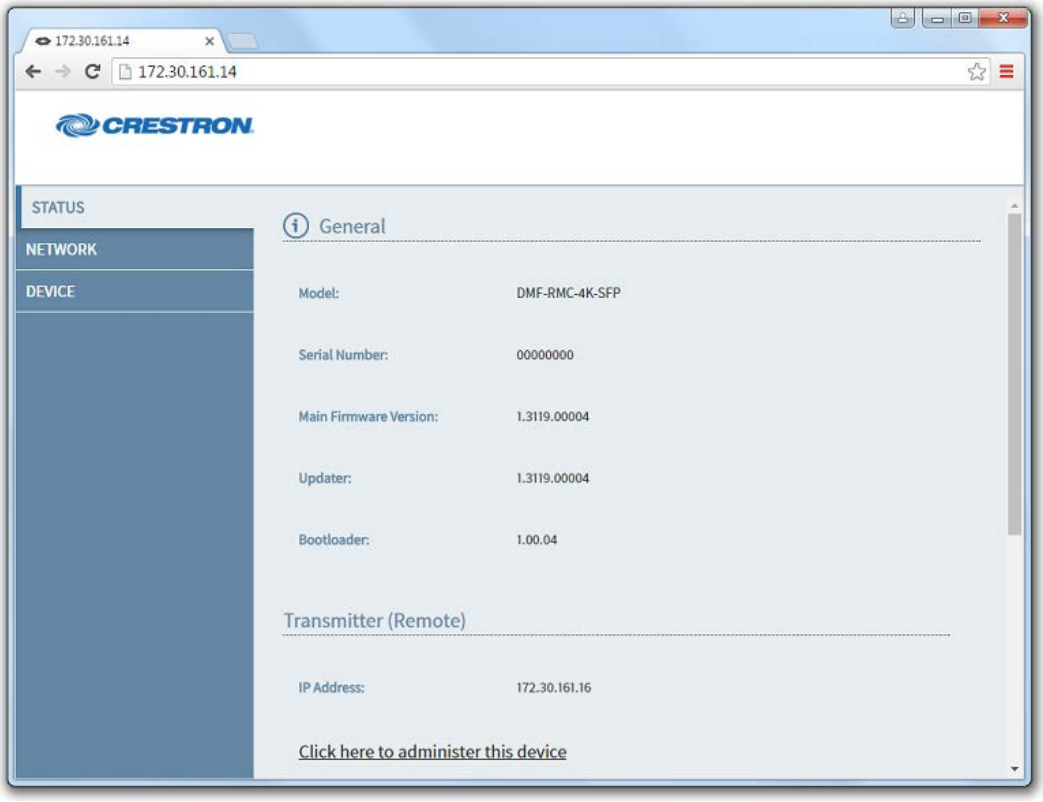
- Clicking STATUS accesses the Status page, which provides general information about the receiver as well as network-related information. Information about the companion transmitter is also provided. For additional information, refer to “Viewing Status Information” on page 24.
- Clicking NETWORK accesses the Network page, which allows network settings such as host name, domain name, and DHCP (Dynamic Host Configuration Protocol) mode of the receiver to be set. For additional information, refer to “Configuring Network Settings” on page 25.

- Clicking DEVICE accesses the Device page, which controls various device functions of the receiver. For additional information, refer to “Configuring Device Settings” on page 26.

Viewing Status Information

The Status page is the first page that is displayed in the web interface of the receiver. Clicking STATUS in the navigation bar accesses the Status page at any time.

Receiver Status Page



The Status page of the receiver displays the following information:

- General information, which consists of the following:
  - Model (DMF-RMC-4K-SFP or DMCF-RX-4K-SFP)
  - Serial Number
  - Main Firmware Version
  - Updater Version
  - Bootloader Version
- Transmitter (remote) information, which displays the IP address of the companion transmitter (DMF-TX-4K-SFP or DMCF-TX-4K-SFP). In addition, the “Click here to administer this device” link is provided, allowing access to the web interface of the companion transmitter.

- Network-related information about the receiver, which consists of the following:
  - Host Name

    NOTE: The default host name of the receiver consists of the model name (DMF-RMC-4K-SFP or DMCF-RX-4K-SFP) followed by a hyphen (-) and the MAC address of the receiver (for example, DMF-RMC-4K-SFP-00107F7C656F).

  - IP Address
  - Subnet Mask
  - Default Gateway
  - MAC Address

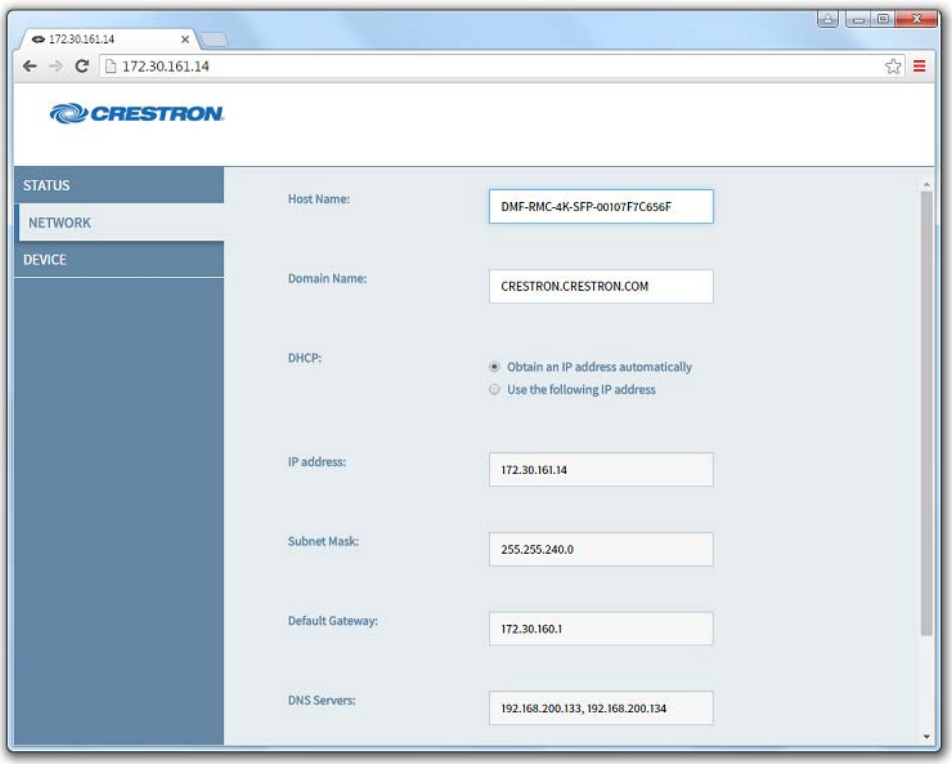
Configuring Network Settings

Network settings such as host name, domain name, and DHCP (Dynamic Host Configuration Protocol) can be configured for the receiver.

To configure network settings, do the following:

1. In the navigation bar, click NETWORK. The Network page opens.

   Network Page



2. Configure network settings as desired:

- In the **Host Name** text box, overwrite the existing host name with a name that identifies the receiver on the network. The host name is restricted to the letters *a* to *z* (not case sensitive), the digits *0* to *9*, and the hyphen.
- In the **Domain Name** text box, enter up to two domain names separated by a comma and a space.
- Specify whether the IP address of the receiver is to be assigned by a DHCP (Dynamic Host Configuration Protocol) server. To set the IP address, click either of the following radio buttons:
    - **Obtain an IP address automatically**: (Default setting) Allows the IP address of the receiver to be automatically assigned by a DHCP server on the local area network (LAN) for a predetermined period of time.
    - **Use the following IP address**: Allows a static IP address and associated network settings to be configured for the receiver:
        - **IP address**: Enter a unique IP address for the receiver.
        - **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.
        - **DNS Servers**: Enter the IP address of the primary and secondary DNS servers separated by a comma.

3. Do either of the following:
    - To save the current entries, click the **Save** button. The receiver automatically reboots.
    - To revert to the previous settings without saving the current entries, click the **Revert** button.

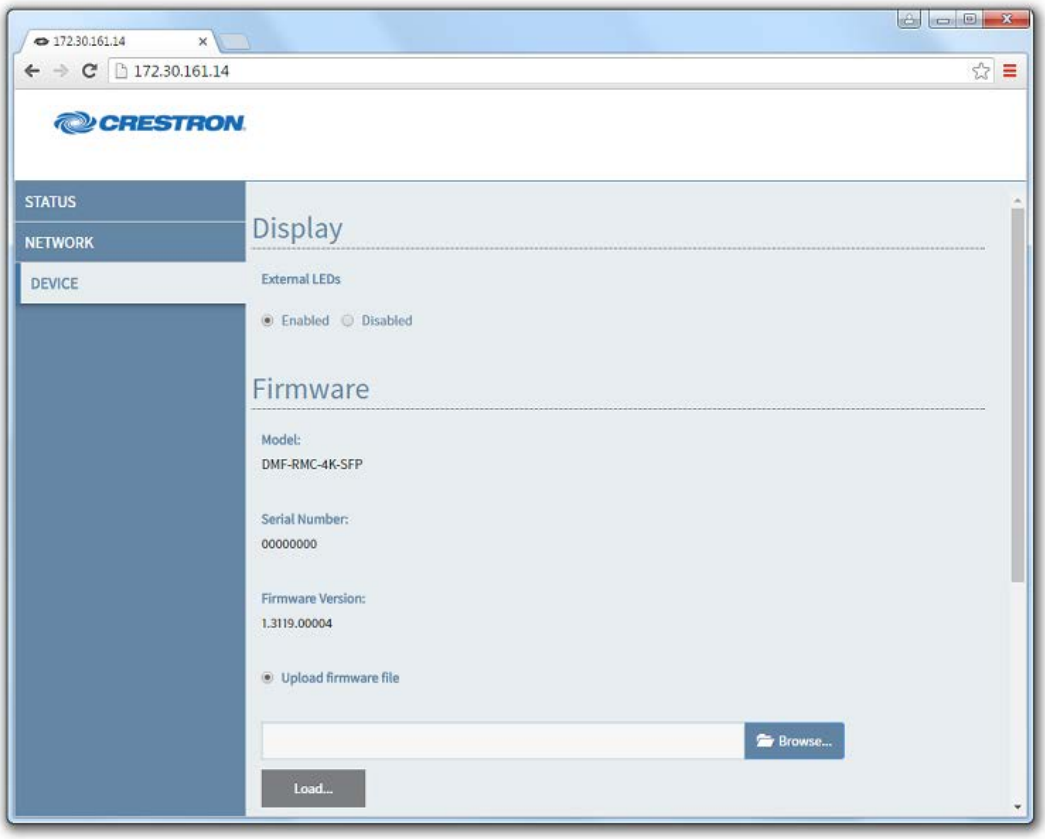
Configuring Device Settings

Configuration and management of device settings consist of the following:

- Controlling the LED states
- Upgrading firmware
- Restoring factory default settings
- Rebooting the receiver
- Downloading device logs

To configure device settings, do the following: In the navigation bar, click **DEVICE**. The Device page opens.

Device Page

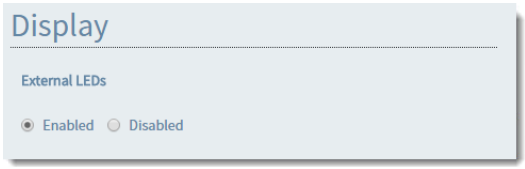


Controlling the LED States

In the **Display** section of the **Device** page, the LEDs on the receiver can be enabled or disabled.

NOTE: When the LEDs are disabled, all LEDs—including the power and Ethernet LEDs—turn off. The receiver appears as though it is not powered on; however, the receiver remains powered on and continues to function.

Device Page— Display



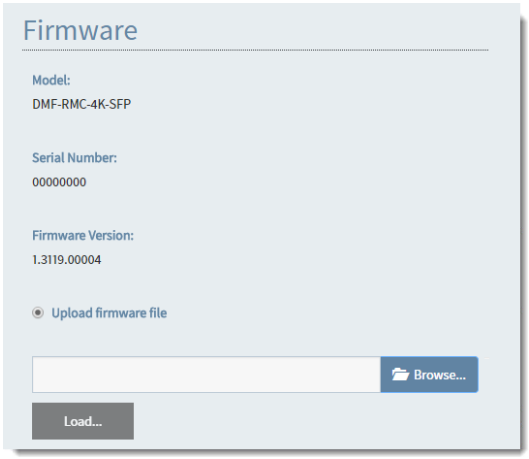
In the **Display** section, do either of the following:

- To enable the LEDs, click the **Enabled** radio button if it is not already selected. By default, the LEDs are enabled.
- To disable the LEDs, click the **Disabled** radio button. Although the LEDs are disabled, the receiver continues to function.

Upgrading Firmware

In the **Firmware** section of the **Device** page, the firmware of the receiver can be upgraded.

Device Page— Firmware



The **Firmware** section displays the following information about the receiver:

- Model (**DMF-RMC-4K-SFP** or **DMCF-RX-4K-SFP**)
- Serial Number
- Firmware Version

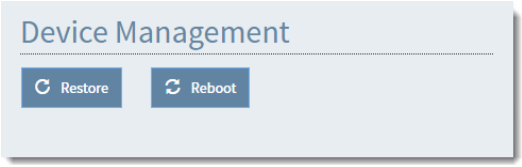
To upgrade the firmware of the receiver, do the following:

1. Click the **Upload firmware file** radio button.
2. Click the **Browse** button.
3. Locate and select the desired firmware file, and then click the **Open** button. The **Upload firmware file** field displays the selected firmware filename.
4. Click the **Load** button. A prompt appears asking for confirmation that the firmware be upgraded.
5. Press the **Start** button, and then wait for completion of the upgrade process as indicated by the progress bar.
6. Click the **OK** button.

Device Management

In the **Device Management** section of the **Device** page, the receiver can be restored to factory default settings or can be rebooted.

Device Page— Device Management



Restoring Factory Default Settings

In the Device Management section of the Device page, restore the receiver to factory default settings by doing the following:

1. Click the **Restore** button. The Restore dialog box appears, asking for confirmation that the receiver be restored to factory default settings.

   NOTE: When settings are restored, all settings—including the network settings—revert to the factory default settings. If a static IP address was set, restoring the receiver to factory default settings reverts the IP address to DHCP mode, which is the factory default IP address setting (refer to "Configuring Network Settings" on page 25.

2. Click **Yes** to restore factory default settings. The Restore message box appears, indicating that the Restore process was successful and that the receiver rebooted.
3. Close the message box by clicking the **X** in the upper right-hand corner of the box.

Rebooting the Receiver

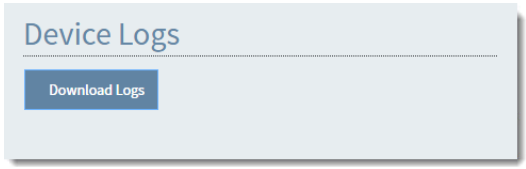
In the Device Management section of the Device page, reboot the receiver by doing the following:

1. Click the **Reboot** button. The Reboot dialog box appears, asking for confirmation that the receiver be rebooted.
2. Click **Yes** to reboot the receiver. The Reboot message box appears, indicating that the receiver is rebooting.

Downloading Device Logs

In the Device Logs section of the Device page, device logs can be downloaded for troubleshooting purposes.

Device Page— Device Logs



To download device logs, click the **Download Logs** button. A logs file (*.tgz) is downloaded to the PC or mobile device.

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Supplemental Guide – DOC. 7940A
(2047487)
09.16