

How To: Configure FX4 Custom EDID

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The EDID configuration (Extended Display Identification Data) defines the exact video timings that a video source should output once connected. It also advertises support for a number of other implementation specific features, such as 4K60 4:2:0 support on HDMI 1.4.

This tutorial describes how to set custom EDID on any of the Fx4 inputs. EDID data can affect how a connected video source responds when the FX4 is connected to it.

To access the EDID configuration feature you will need your Fx4 to be running firmware version 2.3.2 or later (Fx4-SDI firmware version 1.3.2).

Note: Your FX4 device may require a firmware upgrade before running this tutorial. To do so please make sure your device is connected to the network and follow the firmware upgrade prompt when instructed.



Steps for Programming EDID

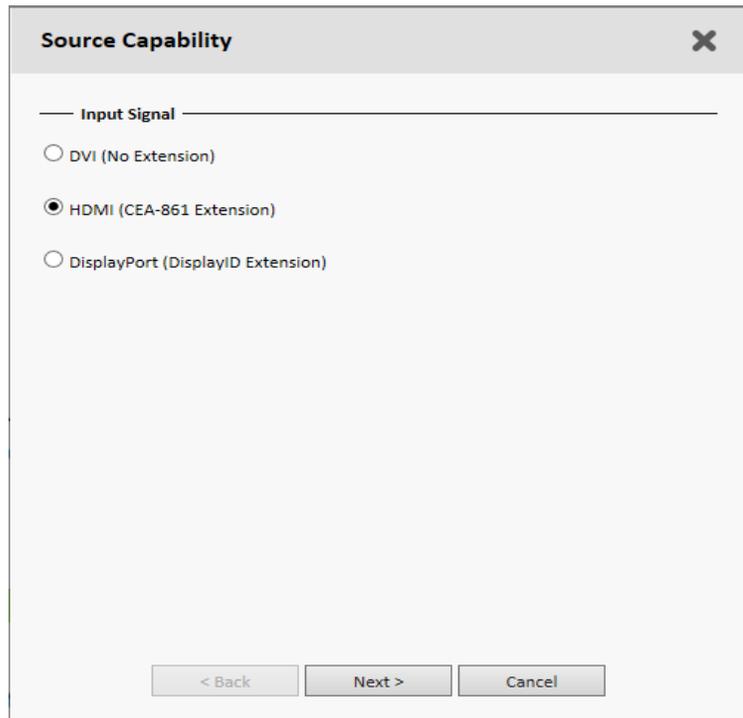
1. Setup your Fx4, using Wall Designer Software in the usual way.
2. After using the 'Auto-config Fx4' option on the Devices page **right click on an input port.** 'EDID > Create Custom appears'.
3. Click on **Create Custom**

***Note:** Within the EDID menu, **Import** and **Export** of EDID binary files is also supported. This can be useful for example to import a known EDID from a monitor, or to configure multiple devices with an identical custom EDID*

4. The 'Source Capability' window is now displayed. Select the appropriate CEA extension block for your input signal type.

For HDMI 4k60 fps select 'HDMI (CEA-861 Extension)'

5. Click **Next**



Source Capability X

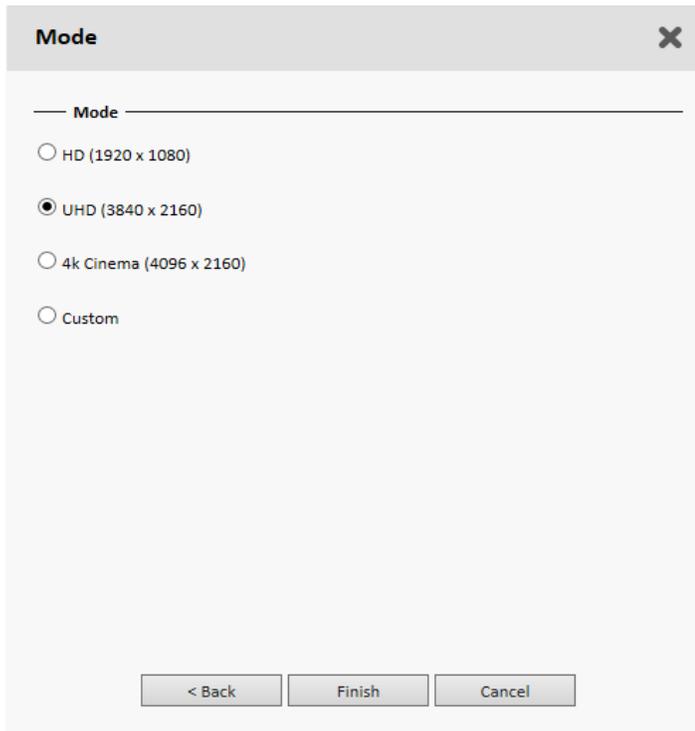
Input Signal

DVI (No Extension)

HDMI (CEA-861 Extension)

DisplayPort (DisplayID Extension)

< Back Next > Cancel



6. You are then presented with the 'Mode' window. Here you can either select a predefined EDID, or create your own.

7. Click **Finish**.

8. A warning may pop up if the defined input canvas does not match the new EDID settings. Click **yes** to accept or **no** to revert.

9. The input EDID has now been programmed with your selected pre-defined EDID. Video sources will now automatically output this mode where they are capable.

Note: Programming an EDID using this method will **override settings in the INPUT tab** of Wall Designer software i.e. a custom defined EDID will always take priority. Once custom EDID is created, you will notice the resolution and frame rate settings in the INPUT tab are updated to reflect the preferred mode that has now been defined.

Note: It is not necessary to configure the EDID in order to achieve 4K60 operation on HDMI. The simplest way to do this is to use the INPUT tab in Wall Designer. Select a resolution of 3840x2160 @ 60 refresh rate on the HDMI input. This will **automatically program an EDID** that advertises support for 4:2:0 subsampling as defined in the HDMI1.4 specification.

Steps for Creating a Custom EDID

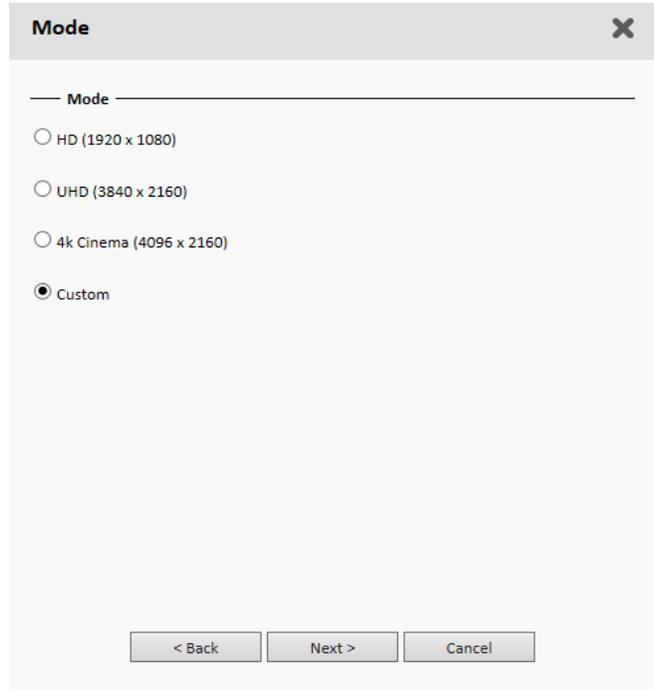
1. Follow steps 1-5 above

Note: If an EDID has already been defined for this input, you will need to select 'Clear Custom' before proceeding.

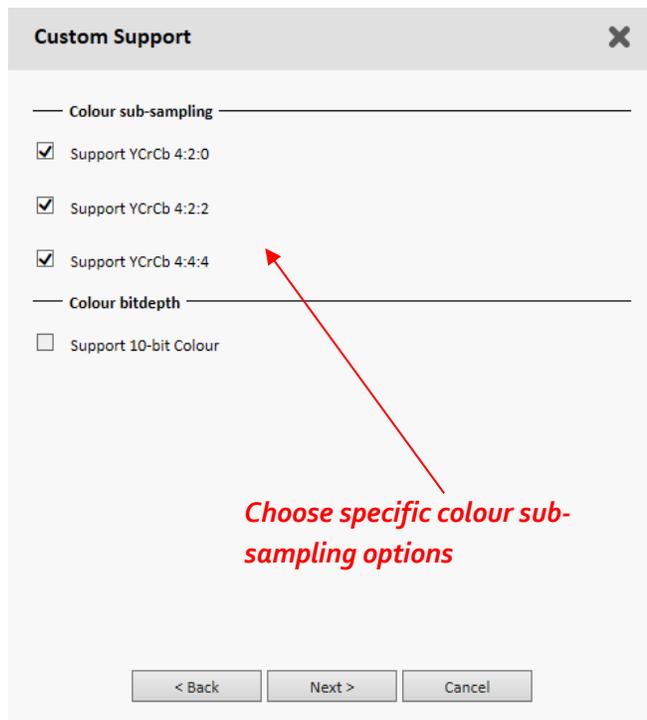
2. You are then presented with the 'Mode' window

3. Select **Custom**

4. Click **Next**



The 'Mode' window displays three radio button options: HD (1920 x 1080), UHD (3840 x 2160), and 4k Cinema (4096 x 2160). The 'Custom' option is selected. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.



The 'Custom Support' window shows two sections: 'Colour sub-sampling' and 'Colour bitdepth'. Under 'Colour sub-sampling', three checkboxes are checked: 'Support YCrCb 4:2:0', 'Support YCrCb 4:2:2', and 'Support YCrCb 4:4:4'. Under 'Colour bitdepth', the checkbox for 'Support 10-bit Colour' is unchecked. A red arrow points from the text 'Choose specific colour sub-sampling options' to the checked checkboxes. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

5. You are then presented with the 'Custom Support' window.

Here you can select the 'Colour sub-sampling' and 'Colour bit-depth' (10-bit option is available only on FX4-SDI).

*Note: These tick boxes are not selectable on the Displayport inputs. Colour sub-sampling options are **available only on HDMI** inputs.*

Also 10-bit support is only available on the DisplayPort input of the FX4-SDI variant.

6. Click **Next**

7. You are then presented with the 'Preferred Timings' window, here you can set your custom EDID.

8. Click **Finish**

9. The selected input on the Fx4 has now been programmed with your custom timings. Video source will automatically respond to the changes.

The screenshot shows a 'Preferred Timing' window with a close button (X) in the top right corner. The window contains the following fields:

	Horizontal	Vertical
Timing	Custom	
Active Pixels	3840	2160
Frequency	65.687 kHz	29.98 Hz
Pixel Clock	262.75 MHz	
Sync Width	32	5
Back Porch	80	23
Front Porch	48	3
Polarity	Positive	Negative
Total Pixels	4000	2191

At the bottom of the window are three buttons: '< Back', 'Finish', and 'Cancel'.

Note: Some video sources require the video cable to be unplugged and reconnected after updating the EDID memory in order to read the EDID again.

Note: For 4K60 fps support, some video sources (such as the Playstation4), also require the option enabled in their display menu in order to output the mode.

Datapath FX4 Custom EDID Support

Custom EDID functionality adds even more flexibility to the Datapath FX4, giving the user more control and easing integration with a wider range of video sources.

For further information on EDID definitions and CEA extensions please refer to the HDMI1.4 specification <https://www.hdmi.org/>