

EZsplitter4K-HD4

Features that are not yet integrated but will be in field upgradable future revisions are depicted in **YELLOW**.

<p>Tbd</p> <p>Front View (above) Rear View (below)</p> <p>Tbd</p>	<ul style="list-style-type: none"> • DisplayPort input resolution up to 3840x2160 forms the Input Plane (IP) • (4) DVI Display Outputs (DDO) up to 1920x1200 (Single link, including 1080P) • DDO's have a common resolution and timing • Image content of each DDO is an alpha combination of 1 or more Output Windows (OW). • Up to 4 OW's. Each OW resolution <= DDO resolution • The image content of an OW is <ul style="list-style-type: none"> √ A scaled Area-of-Interest from the IP. (up-scaled or 1:1) √ Balance is a programmable fill color • DisplayPort Repeater Output duplicates DisplayPort Input • Scaled DisplayPort Output for specialty applications. √ If DP output used, then DVI outputs are not available <p>1U or 1UHW (1U half width)</p>
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The EZsplitter4K is the ideal solution for creating multiple DVI-D Display Output (DDO) video streams of 1080P or less from a high resolution (up to 4K) DisplayPort source.

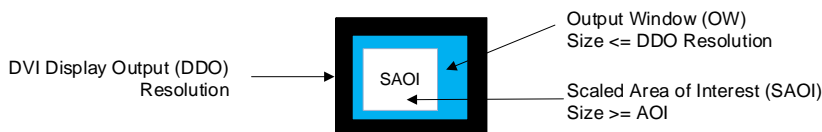
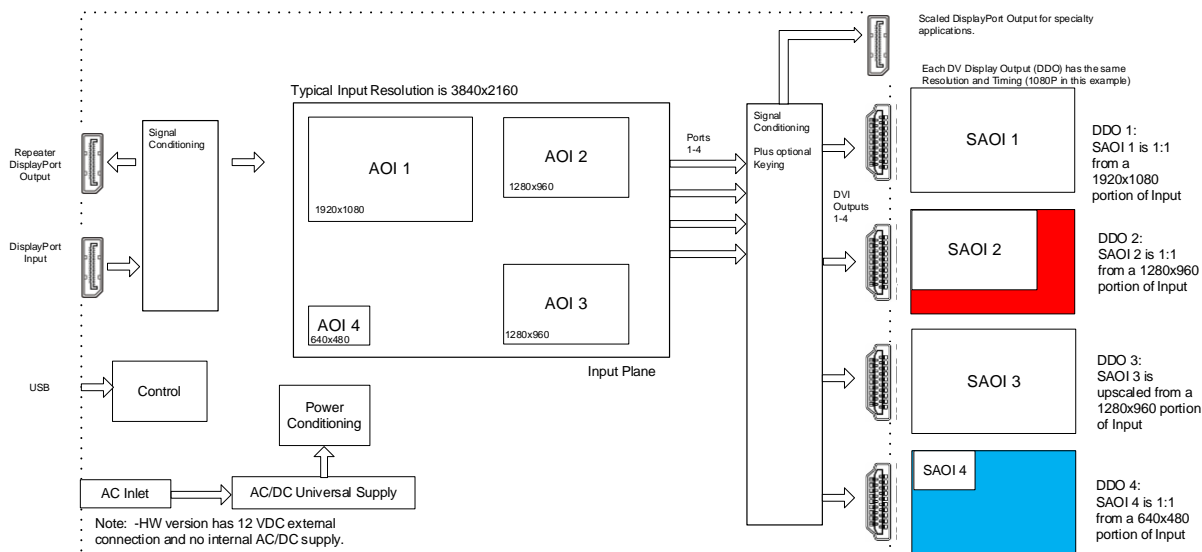
This approach reduces the number of image generators required in a solution; thereby saving money, space, and heat while increasing system reliability.

Up to 4 output windows (OW) can be defined. Each OW is mapped to any area-of-interest within the Input Plane (IP) via upscaling or 1:1 pixel mapping. The balance of the window is filled with a programmable color. Each DDO is

an alpha blend combination of 1 or more OW's. Optional keying provides even more output possibilities.

The EZsplitter4K-HD4's DVI outputs are compatible with Westar's VPx LCD controllers that can extract a programmable AOI from a DVI source up to 1920x1200.

The diagram below shows a typical situation where (4) DDO video streams (all 1080P) are created from a 4K DisplayPort input. Each output has content from a different portion of the input area.



EZsplitter4K-HD4 Block Diagram with typical application

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Specialty Features:

- The DisplayPort input is available on a DisplayPort repeater output, for further processing by downstream components
- The DisplayPort Output Mode supports frame rate conversion, re-sizing, and/or rotation of DisplayPort input video. DDO's are disabled in this mode
- Optional keying (:Key) allows any Keyed Content x over Content y, where x and y may be any output window or alpha combination of output windows. (Requires option :Key)

Ordering Information:

EZsplitter4K-HD4 ;standard 1U unit
 EZsplitter4K-HD4-HW ;standard 1U unit half width
 EZsplitter4K-HD4 :Key ;standard 1U unit with keying

EZsplitter4K specifications

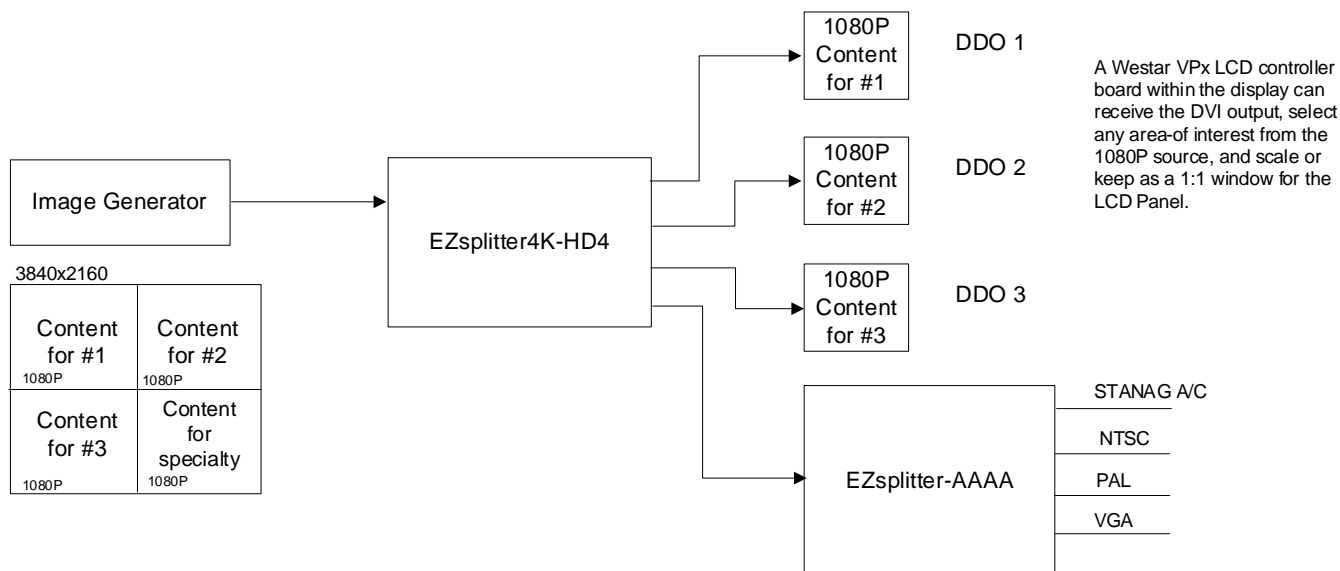
Physical Dimensions	Standard 1U unit: 1U (8" depth) -HW for 1/2 Rack or benchtop applications 1.72H" x 8"D x 8.3"W
Temperature Range	Operating: 0°C to +70°C ((additional data available) Storage: -40°C to +100°C
Video Inputs	DisplayPort (up to 4K @ 60Hz)
Video Outputs	(4) DVI (up to WUXGA resolutions @ 60Hz). <i>Customer may use readily-available HDMI>DVI cables.</i> (1) DisplayPort repeater output (same timing and resolution as DisplayPort input) Scaled DisplayPort mode supports (1) Scaled DisplayPort Output (up to 4K @60Hz) [If this mode is used, DVI outputs are not available]
Features	Up to 4 output windows (OW). A scaled AOI (SAOI) can be assigned to a OW. The SAOI is mapped to any area-of-interest (AOI) in input resolution as a 1:1 mapping or an upscaled image (No downscaling). Balance of OW (non SAOI area) is a programmable fill color. Each DVI Display Output (DDO) is an alpha combination of 1 or more OW's. <i>Note: If output window < DDO resolution, unused pixels are black.</i> <i>Optional: Keying between a foreground layer and background layer for each DVI output, where each layer can be any output window or an alpha combination of output windows.</i>
Input Power	Standard 1U unit: IEC Connector, 100-240 VAC, 47-63 Hz, less than 40 Watts 1U-HW unit: DC Power Connector, 12 VDC +/- 10%, less than 40 Watts
Control Interface	USB
Support Documentation, Applications	EZsplitter4K Configuration Utility and Manual , EZsplitter4K Command Line Description

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Application #1: Multiple displays driven by one Image Generator

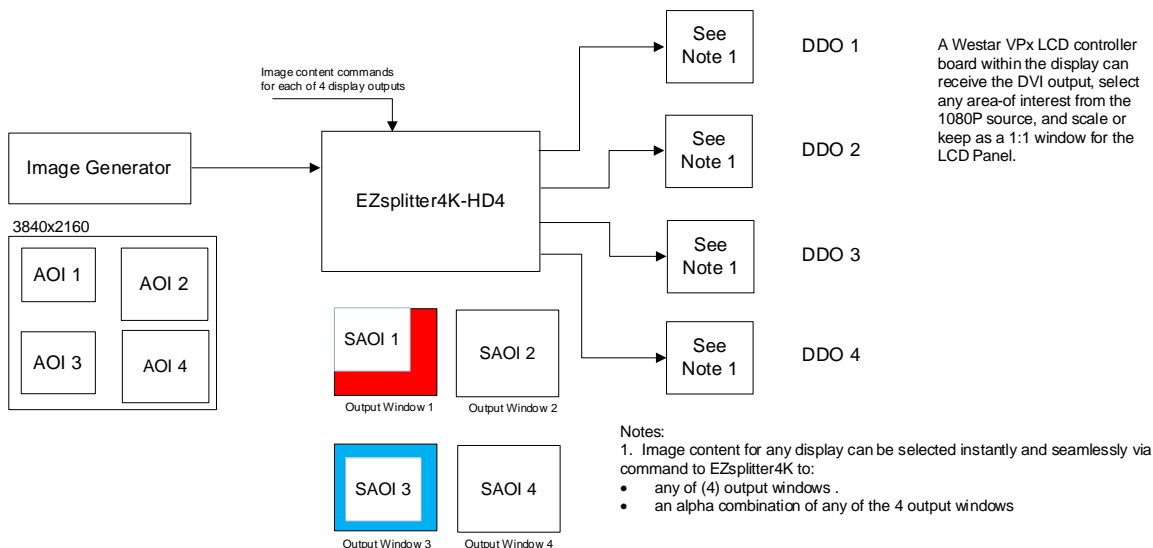
In the figure below, a single IG channel is used to create content for (3) DVI-compliant displays up to 1080P, plus additional content for specialty conversion, such as NTSC or PAL (for a recorder) or a Stanag format for a specialty display. Content for each display is a fixed location in the IG image.

The specialty video formats are created with the standard EZsplitter (input up to 1080P)



Application #2: Seamless content switching for a multiple displays driven by one Image Generator

In the figure below, a single IG channel is used to create content for (4) DVI-compliant Multi-Function Displays (MFD) up to 1080P. Content does not need to be a fixed location in the IG image, Instead, each of the 4 output windows are available to any of the 4 displays. A display may be mapped to an output window instantly via an alpha command for each EZsplitter4K DVI output. An alpha command selects 1 output window or an alpha blend combination of any of the output windows.



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Application #3: Seamless content switching for a multiple displays driven by one Image Generator, with optional keying

In the figure below, a single IG channel is used to create content for (4) DVI-compliant Multi-Function Displays (MFD) up to 1080P. Content does not need to be a fixed IG image, Instead, each of the 4 output windows are available to any of the 4 displays. A display may be mapped to an output window instantly via an alpha command for each EZsplitter4K DVI output. An alpha command selects 1 output window or an alpha blend combination of any of the output windows.

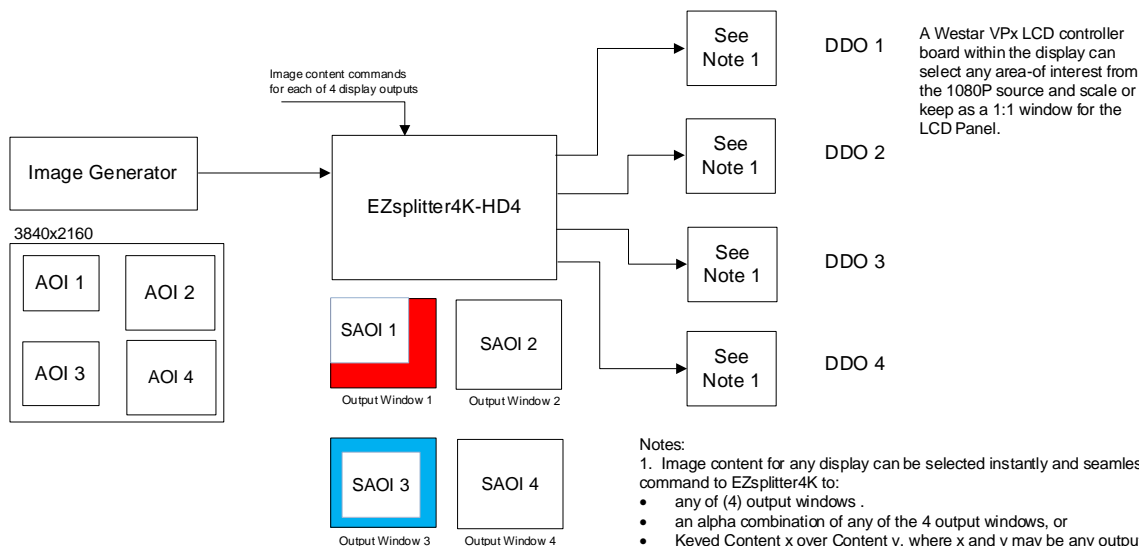
With optional keying, the display content is formed from a foreground layer and a background layer for each DVI output, as follows:

The foreground layer can be 1 output window, or an alpha blend combination of any of the output windows.

The background layer can be 1 output window, or an alpha blend combination of any of the output windows.

The display content is then formed by RGB keying or luma keying on the foreground layer.

A key calculation is performed on each foreground pixel. The programmable key area has programmable foreground and background alpha values for key = true and key = false. Outside the key area also has a programmable foreground alpha value and background alpha value.



Application #4: Re-sizing or Rotating High Resolution DisplayPort

The EZsplitter4K supports upscaling, downscaling and rotation of DisplayPort video at resolutions up to 4K 60 Hz. When using the DisplayPort output, DDO1-4 outputs are inactive. Please contact the factory to discuss your specific application.