

SP8 DisplayPort to Dual DVI Adaptor

- Pixel rates to 330 MPixels/sec (2560x1600@60Hz)
- Inputs are DP 1.1a compliant, Embedded DisplayPort (eDP) compliant
- 1, 2, or 4 lanes up to 2.7 Gbps per lane in, single link or dual link DVI out
- Order configuration is from 1 to 8 channels in rackmount unit, 1 to 2 channels in mini enclosure
- EDID is managed on each input, with pre-programmed timings or downstream EDID replication
- In absence of input, selectable built-in test pattern per EDID timing.
- 1U rack-mount unit, pre-stored settings applied at power up
- Micro B USB port for communication to each I/O channel.
- Type A USB Power Output per each I/O channel, for DVI extender power

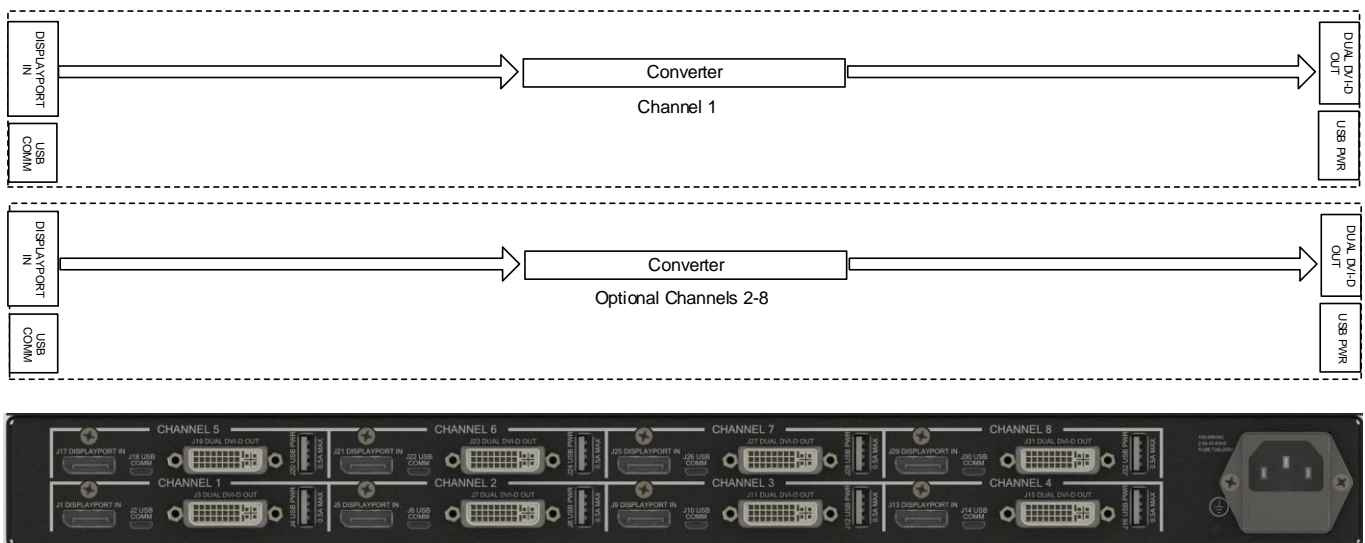
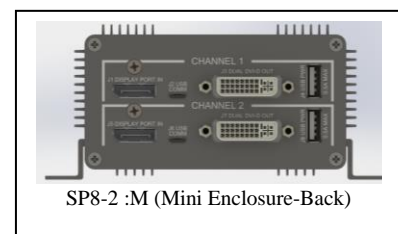
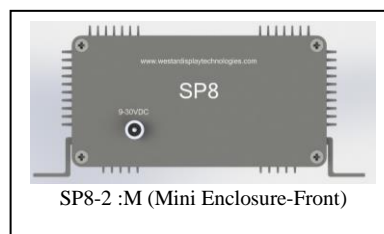


Figure 1: SP8 block diagram (rackmount unit)

The SP8 converts DisplayPort video into DVI. From 1 to 8 video channels are supported. Each SP8 I/O channel automatically detects the # of DisplayPort lanes used. Four (4) lane DisplayPort is converted to Dual DVI, Two (2) or (1) lane DisplayPort is converted to Single DVI.

Assuming 8 bit per color video, the crossover between Dual DVI outputs and Single DVI outputs occurs at ~165 MPixels per second. Below are some typical resolutions, and the expected output (Dual or Single DVI) based on DisplayPort training at 2.7Gbit per lane:

1080P / 60 Hz	SL-DVI
UXGA / 60 Hz	SL-DVI
2560x1600 / 60 Hz	DL-DVI



SP8 I/O channel Operation:

An SP8 I/O channel receives DisplayPort video and automatically detects the number of lanes used. Four (4) lanes will result in dual DVI outputs, Two (2) or One (1) lanes will result in single DVI operation.

Loss of Video: The SP8 has a “Test Pattern on Loss of Video” Mode that can be enabled or disabled. If enabled, one of many available test patterns is driven per EDID timing whenever DisplayPort input video is lost. If disabled, then no DVI output is driven when DisplayPort video is lost.

EDID: Many image generators rely on display EDIDs to get critical data on the display’s capability. Each SP8 DisplayPort input is pre-programmed with a 1080P EDID. If the channel is configured as “Forced EDID”, a pull down list presents multiple timings. These timings can be further customized by the user. If the channel is configured as “Down-Stream EDID”, the EDID source is the downstream device. This EDID is maintained until the next downstream device is connected.

The Loss of Video Mode and EDID type is defined using the SP8 Configuration Application, as shown in Figure 2 to the right.

Type A USB Output Connector: 5VDC at up to 500mA is available on each port’s Type A USB connector (USB PWR, 1 per I/O channel). This connector is available to power commercially available DVI extenders.

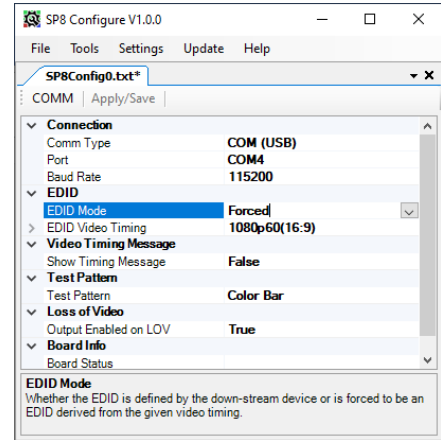


Figure 2 SP8 Configuration Application

SP8 Specifications:

Input / Output Specifications (Subject to change without notice)	
Video Input Type	DisplayPort 1.1a
Video Output Type	DVI (single link or dual link)
Pixel Rate	Up to 330 MPixels/sec
Standard resolutions	Up to 2560x1600 at 60 Hz, 4096x2400 at 30 Hz
Electro Mechanical (Rackmount)	
Input Power	IEC Connector, 100-240 VAC, 47-63 Hz, 150 Watts Maximum Input Power (Power cable included)
Communication	USB 2.0
Size	19”W x 13.75”D x 1.75”H (1U rackmount)
Weight	Less than 10 lbs.
Electro Mechanical (Mini enclosure)	
Input Power	Wall-Wart power supply included
Communication	USB 2.0
Size	5.28”W x 2.4”H x 6.3”D (includes mounting bracketry)
Weight	Less than 2 lbs
Functional	
Color Depth	8 bits per color I/O.
Specialty Features	Test Pattern on Loss of Video supports test patterns when input video is lost Programmable EDID included for each input channel. EDID can be forced to known value, or constructed from downstream device. Auto-detect of single link and dual link rates 5VDC / 500mA on each USB Type A connector
Warranty	One year
Delivery includes:	SP8 unit configured with I/O channels as ordered, USB cable, and a CD containing: SP8 Utility Software SP8 Documentation (Users Guide)

Figure 3 SP8 Specifications

Ordering Info:

The SP8 is ordered as follows:

SP8-x, where x is the number of I/O channels (1 to 8)

Add :M for optional mini enclosure. For example: SP8-2 :M or SP8-1 :M