

ADP-4K High Resolution 4K adapter

- **Reliable conversion between DisplayPort / HDMI / V-by-One display video formats**
- **Specific configurations for specific conversions**
- **Resolutions up to 4096x2400, including UHD (3840x2160)**
- **Pixel rates to 600 MPixels/sec (3840x2160@60Hz)**
- **Factory configured EDID on DisplayPort and HDMI inputs supports most standard timings**
- **Available as an embeddable board or in a mini-enclosure with power supply.**

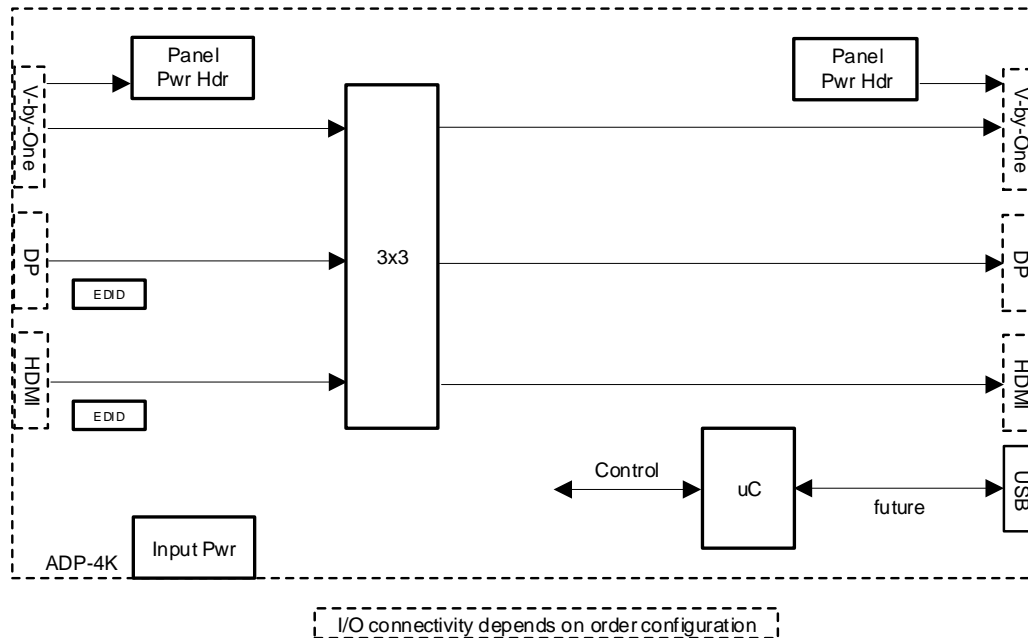


Figure 1: ADP-4K block diagram

ADP-4K Features

The ADP-4K is general purpose video processor used primarily to:

- provide a reliable conversion of high resolution video with known timing
- drive up to two different video format devices with a single video source
- drive V-By-One video panels with DisplayPort or HDMI.

Reliable Conversion with Known Timing

Many devices rely on an EDID to get critical data on the display's capability. The ADP-4K is delivered with separate EDID's configured for the DisplayPort input and the HDMI input, to support most standard high-resolution formats. This gives you reliable converted video at a known timing.

Video Inputs/Outputs

The ADP-4K can be configured with one input and up to two outputs. See the chart below for the available configurations. Video formats supported are V-By-One, DisplayPort/eDP, and HDMI. The maximum resolution outputted is 4Kx2K with a clock frequency up to 600 Mpixels/sec.

V-By-One Panel Power

The Panel Power header on the ADP-4K provides a means of driving a voltage out to power your V-By-One panel.

ADP-4K Example Applications

App #	Title	Applicable Configuration	Description
1	V-By-One panel driver	100	Use DP to drive a V-By-One panel
2	Reliable Converter	300	Convert DP to HDMI, with a known timing based on the embedded EDID.
3	1 Input >2 Output	500	Receive a DisplayPort stream and output to both a DisplayPort AND a V-By-One device

ADP-4K Specifications

Video Input/Output (Subject to change without notice)	
V-By-One	10 bits per color, 8 lanes, up to 3.4 Gbps per lane, 3 selectable output formats (sequential, left half/right half, 4 stripes)
DisplayPort 1.2/eDP 1.3	10 bits per color, up to 4 lanes, up to 5.4 Gbps per lane, RGB 4:4:4
HDMI 2.0	8 bits per color, RGB 4:4:4
Pixel Rate	Up to 600 MPixels/sec
Standard resolutions	Up to 2560x1600 at 120 Hz, 4096x2400 at 60 Hz
Electro Mechanical	
Input Power	12 VDC (400mA)
Control	USB 2.0 (future growth. Not needed to operate)
Size	120mm x 128mm x 22mm (approximation in inches (4.72" x 5.04" x 0.87"))
Functional	
	Convert various input formats to 1 or more output formats
	Pre-programmed EDID included for DisplayPort and HDMI input channels
Latency	~50 usec
Warranty	One year
Supporting Material	ADP-4K Installation Guide

Figure 2 ADP-4K Specifications

Ordering Info / Notes:

Part Number	Description
ADP-4K	Standard format
ADP-4K/ENC	Standard format with optional enclosure

Add /Cxxx to end of part number to define the I/O configuration per definitions below

Config #	Input Port(s)	Output Port(s)	Availability
100	DisplayPort	V-By-One	Now
200	HDMI	V-By-One	Call factory
300	DisplayPort	HDMI	Call factory
400	HDMI	DisplayPort	Call factory
500	DisplayPort	DisplayPort, V-By-One	Now
600	HDMI	HDMI, V-By-One	Call factory
700	V-By-One	DisplayPort	Now
800	V-By-One	HDMI	Call Factory