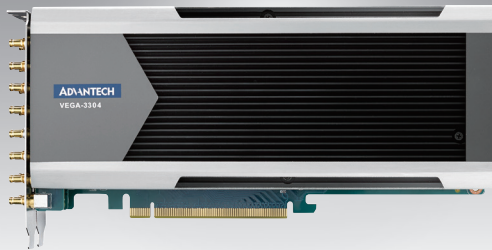


VEGA-3304

8Kp60 Real-time HEVC Encoder Card

NEW



Features

- 1-ch 8Kp60, 4-ch 4Kp60 or 16-ch 1080p60 real-time HEVC encoding
- Main or Main 10 HEVC profiles with 8 or 10 bit depth and 4:2:0 or 4:2:2 chroma subsampling
- Video acquisition over built-in 16-ch 3G-SDI inputs
- Support for High Dynamic Range (HDR) Video
- Linux and Windows SDK including simple-to-use API and example code for FFmpeg and GStreamer multimedia frameworks
- Double width, 3/4 length PCI Express Gen3 x16, compatible with server GPU slots

Introduction

Advantech's VEGA-3304 is the first 8K video accelerator able to perform real time, professional grade 8Kp60 HEVC encoding in an ultra-low-power PCI Express format. The new VEGA-3304 helps video equipment manufacturers efficiently cope with the processing complexity of UHD and HEVC enabling them with a powerful tool to accelerate their next-generation 4K, 8K, Virtual Reality and 360 degree video solutions. Its impressive quality, density and cost benefits can bring a competitive advantaged to a wide range of media processing applications for the broadcasting, mobile, gaming and medical markets.

Supporting 10 bit colour depth HDR and 4:2:2 chroma subsampling, the VEGA-3304 is a commercial-off-the-shelf add-in accelerator compatible with standard GPU slots that can be easily integrated into IT-based server applications. It features sixteen 3G-SDI inputs to maximize the PCI Express slot usage and can be configured for multi-channel operation. Developers can leverage Advantech's video processing SDK for Linux and Windows that includes an FFmpeg plug-in to reduce in-house development efforts and time to market.

Specification

	VEGA-3304-8K (8K SDK by request)	VEGA-3304-4K	
Video Input	Channels	1 (up to 8Kp60, 8bit/10bit, YUV)	4 (up to 4Kp60, 8bit/10bit, YUV) / 16 (up to 1080p60, 8bit/10bit, YUV)
	Video Formats	8K	4K, HD
	Frame Rate	BNC (3G-SDI) Interface	BNC (3G-SDI) Interface
		PCI Express Interface	PCI Express Interface
	Chroma Sampling Format	8K / 7680 x 4320: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p	4K / 3840 x 2160: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p
Video Compression	Compression	H.265	1920 x 1080: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p
	HEVC Profile	Main / Main 10	1280 x 720: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p
	HEVC Tier	Main / High	PCI Express Interface
	HEVC Level	1.0 / 2.0 / 2.1 / 3.0 / 3.1 / 4.0 / 4.1 / 5.0 / 5.1	4K / 4096 x 2160: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p
	Bitrate 4K format	3 Mbps ~ 300 Mbps	4K / 3840 x 2160: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p
	Bit Depth	8 / 10	1920 x 1080: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p
	Bit Rate Control	CBR / VBR	1280 x 720: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p
	Elementary Stream	Yes	720 x 480: 60p / 59.94p
	Interfaces	4:2:2 / 4:2:0	PCI express Gen3 x16 / SDI-3G

Specifications (Cont.)

Feature	Frame rate and resolution control	Yes
	Encoding control and manipulation	Yes
	Full-feature API available	Yes
	Dual encoding (4 file from a unique video source)	Yes
	GOP definition	I, IP, IPB, IBBB
	Ancillary data and VBI	Yes
	Operating System	Linux Kernel 3.13.0 (32-bit, 64-bit)
Development Kits	FFmpeg, Microsoft DirectShow	
Physical Characteristic	Power Consumption	< 70W
	Dimensions	PCI Express 3/4 length Full Height 234 x 111.15 x 41.19 mm

*Output: Auto scale to 4K/3840 x 2160p60

Ordering Information

Part Number	Description
VEGA-3304	8Kp60/4-ch 4Kp60 HEVC Encoder Accelerator