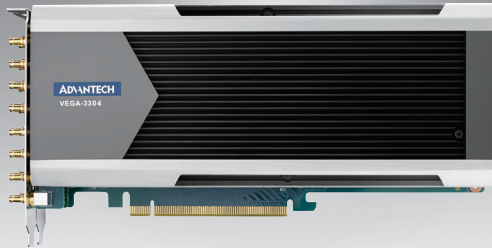


# VEGA-3304

## 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-S0E0 (Not including 8K SDK, which is by request)		
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	
	Video Input	BNC (3G-SDI) Interface	8K / 7680 x 4320: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p	BNC (3G-SDI) Interface 4K / 3840 x 2160: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p
		PCI Express Interface	8K / 7680 x 4320: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p	1920 x 1080: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p 1280 x 720: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p
	Frame Rate		PCI Express Interface 4K / 4096 x 2160: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p 4K / 3840 x 2160: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p 1920 x 1080: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p 1280 x 720: 60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p 720 x 480: 60p / 59.94p	
	Chroma Sampling Format		4:2:2	
Interfaces		PCI express Gen3 x16 / SDI-3G		
Video Compression	Compression		H.265	
	HEVC Profile		Main / Main 10	
	HEVC Tier		Main / High	
	HEVC Level		1.0 / 2.0 / 2.1 / 3.0 / 3.1 / 4.0 / 4.1 / 5.0 / 5.1	
	Bitrate 4K format		3 Mbps ~ 300 Mbps	
	Bitrate 8K format		12 Mbps ~ 1.2 Gbps	
	Bit Depth		8 / 10	
	Bit Rate Control		CBR / VBR	
Elementary Stream		Yes		

## 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, IBPP
	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-S0E0	8Kp60/4-ch 4Kp60 HEVC Encoder Accelerator