

VEGA-3500

Intel® 11th Gen CPU-based UHD Video Accelerator Card



Features

- Multi-channel UHD VP9, HEVC, AVC & AV1 transcoding
- HDR, up to 4:4:4 sampling, 12-bit color w/ preprocessing
- Dual 11th Generation Intel® Core™ processor U-series
- Supports Intel® AI/DL VNNI and CV/AI applications
- Linux and Windows SDK including simple-to-use API and example code for FFmpeg
- Double width, 3/4 length PCI Express Gen4 x16, compatible with server GPU slots
- Double width dimension with cooler and single width dimension with heat sink



Introduction

Advantech's VEGA-3500 with Intel 11th Gen CPU is a UHD video accelerator able to perform real-time, professional grade UHD Video HEVC encoding in an ultra-low-power PCI Express format. The new VEGA-3500 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 UHD video solutions. Its impressive quality, density and cost benefits can bring a competitive advantage to a wide range of media processing applications for the mobile, gaming and medical markets.

Supporting 12-bit colour depth HDR and 4:4:4 chroma sub sampling, the VEGA-3500 is a commercial-off-the-shelf add-in accelerator compatible with standard GPU slot that can be easily integrated into IT-based server applications. Developers can leverage Advantech's video processing SDK or Intel SDK for Linux and Windows that includes an FFmpeg plug-in to reduce in-house development effort and time to market.

Specifications

File Based Video Input (PCI Express / 2.5GbE Ethernet)	Video Transcoding	HEVC to HEVC	Supported
			Supported
		HEVC to VP9	Supported
		HEVC to H264	Supported
		VP9 to HEVC	Supported
		VP9 to VP9	Supported
		VP9 to H264	Supported
		AV1 to HEVC	Supported
		AV1 to VP9	Supported
		AV1 to H264	Supported
		H264 to HEVC	Supported
	Video Transcoding Format	H265/HEVC	Channel 2 (up to 8Kp30) 4 (up to 4Kp60) 16 (up to 1080p60)
		Profile	Main Main10 Main 4:2:2 10 Main 4:4:4 Main 4:4:4 10
		Level	L5.1
		VP9	Channel 2 (up to 8Kp30) 4 (up to 4Kp60) 16 (up to 1080p60)
		Profile	0 (4:2:0 Chroma 8 bit) 1 (partial: 4:4:4 8 bit) 2 (partial: 4:2:0 10 bit) 3 (partial: 4:4:4 10 bit)
		Level	N/A
		AVC/H264	Channel 2 (up to 8Kp30) 4 (up to 4Kp60) 16 (up to 1080p60)
		Profile	High Main
		Level	L5.1

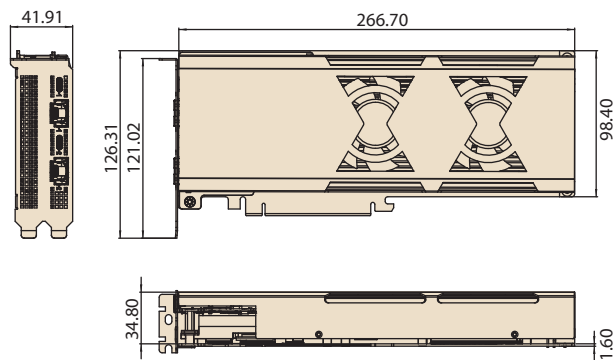
Specifications (Cont.)

Features	Processor	Intel Core™ i7-1185G7E, Intel Celeron C6305E
	Memory	LPDDR4 32GB/16GB
	Security	TPM 2.0
	Operating System	Ubuntu 20.04 (Kernel 5.9)
Physical Characteristics	Power Consumption	<100W
	Dimensions	PCI Express 3/4 length full height 234 x 111.15 x 41.19 mm

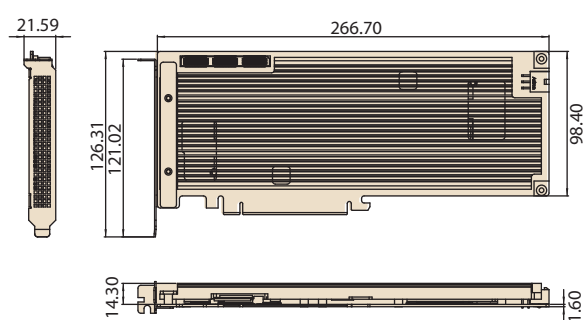
Dimensions

Unit: mm

Dual Slot



Single Slot



Ordering Information

Part Number	Description
VEGA-3500-D7H	VEGA-3500 with Dual i7-1185G7E CPU /32GB DDR4 /Heat Sink /Single Slot
VEGA-3500-D7C	VEGA-3500 with Dual i7-1185G7E CPU /32GB DDR4 /Cooler /Dual Slot
VEGA-3500-D6H	VEGA-3500 with Dual C6305E CPU /16GB DDR4 /Heat Sink /Single Slot