VEGA-3312

Multi-Channels Professional UHD Video Acquisition Card

NEW

Features

- UHD video capture and display over built-in, 4-ch SDI-12G or 1-ch HDMI 2.0
- Up to 4Kp60 video and 16 audio channels per 12G-SDI port
- Simple-to-use API and example code f or FFmpeg and GStreamer multimedia frameworks
- FPGA based color space covert and de-interlace support
- Linux & Windows SDK including simple-to-use API and example code

Introduction

VEGA-3312 is FPGA based profession video acquisition card which support UHD, SMPTE & unspecified format video and diversify audio format through 12G-SDI, HDMI 2.0 and PCIe Gen3 x8 high speed bus. Advantech video engine at VEGA-3312 provide Realtime video format converting which save host system computing power and reduce glass to glass latency. Thanks to flexibility and creating features from Advantech software developer kit, connecting to various user program is easy and quick. Furthermore, VEGA-3312 is with Advantech customized video pipeline service which create your own Realtime processing and make your product more advance .
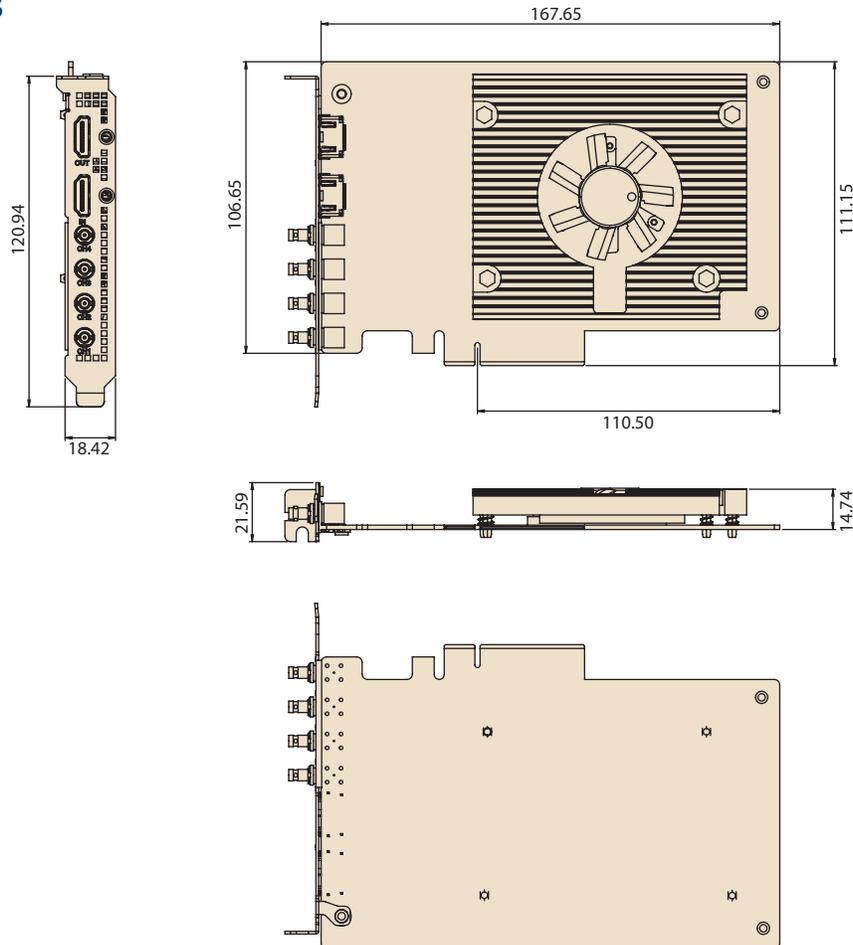
Specification

Acquisition (12G-SDI)	Feature List		SMPTE ST 259 SMPTE RP 165 SMPTE ST 292 SMPTE ST 372 SMPTE ST 424 SMPTE ST 2081-1 SMPTE ST 2082-1 SMPTE ST 352
	Video Input	Resolution	(DCI 4K) 4096 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (UHD) 3840 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (DCI 2K) 2048 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (FHD) 1920 x 1080p 23.98, 24, 25, 29.97, 30,50, 59.94, 60 (FHD) 1920 x 1080p 50, 59.94, 60 (level B) (FHD) 1920 x 1080i 50, 59.94, 60 (HD) 1280 x 720p 50, 59.94, 60 (SD) 576i 50 & 480i 59.94,60
		Pixel Format	NV16(422SP) / YUY2 / P210 / V210 / Y216 / RGBA8 / RGB8
		Sampling	422
		Bit Depth	10 bits
		HDR	Supported
	Audio Input	Sample Frequency	48 KHz
		Sample Depth	24 bits
		Channel Layouts	PCM 16 channels
	Video Output (Playback)	Resolution	(UHD) 3840 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (FHD) 1920 x 1080p 23.98, 24, 25, 29.97, 30,50, 59.94, 60 (FHD) 1920 x 1080p 50, 59.94, 60 (level B) (Option) (FHD) 1920 x 1080i 50, 59.94, 60 (HD) 1280 x 720p 50, 59.94, 60 (SD) 576i 50 & 480i 59.94, 60 (Option)
		Pixel Format	YUY2 / V210
		Sampling	422
		Bit Depth	10 bits
		HDR	Supported
	Audio Output	Sample Frequency	48 KHz
		Sample Depth	24 bits
		Channel Layouts	PCM 16 channels
	Ancillary Data		Supported

Last updated: 2-Oct-2025

Specifications (Cont.)

Acquisition (HDMI 2.0)	Video Input	Resolution	(DCI 4K) 4096 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (YUV 444 / 422, 8 / 10bits) (DCI 4K) 4096 x 2160p 50, 59.94, 60 (YUV420, 8bits) (UHD) 3840 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (YUV 444 / 422, 8 / 10bits) (UHD) 3840 x 2160p 50, 59.94, 60 (YUV420, 8bits) (DCI 2K) 2048 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (YUV 444 / 422, 8 / 10bits) (FHD) 1920 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (YUV 444 / 422, 8 / 10bits) (FHD) 1920 x 1080i 50, 59.94, 60 (YUV 444 / 422, 8 / 10bits) (HD) 1280 x 720p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (YUV 444 / 422, 8 / 10bits) (SD) 576p 50 (YUV 444 / 422, 8 / 10bits) (SD) 576i 50 (YUV 444 / 422, 8 / 10bits) (SD) 480p 59.94,60 (YUV 444 / 422, 8 / 10bits) (SD) 480i 59.94,60 (YUV 444 / 422, 8 / 10bits)
		Pixel Format	NV16(422SP) / YUY2 / P210 / V210 / Y216 / RGBA8 / RGB8 (Option)
		Sampling	444 / 422 / 420
		Bit Depth	8 / 10 bits
		HDR	Supported
	Audio Input	Sample Frequency	48 KHz
		Sample Depth	24 bits
		Channel Layouts	PCM 8 channels
	Video Output (Loopback)	Resolution	(DCI 4K) 4096 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (YUV 444 / 422, 8 / 10bits) (DCI 4K) 4096 x 2160p 50, 59.94, 60 (YUV420, 8bits) (UHD) 3840 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (YUV 444 / 422, 8 / 10bits) (UHD) 3840 x 2160p 50, 59.94, 60 (YUV420, 8bits) (DCI 2K) 2048 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (YUV 444 / 422, 8 / 10bits) (FHD) 1920 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (YUV 444 / 422, 8 / 10bits) (FHD) 1920 x 1080i 50, 59.94, 60 (YUV 444 / 422, 8 / 10bits) (HD) 1280 x 720p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (YUV 444 / 422, 8 / 10bits) (SD) 576p 50 (YUV 444 / 422, 8 / 10bits) (SD) 576i 50 (YUV 444 / 422, 8 / 10bits) (SD) 480p 59.94,60 (YUV 444 / 422, 8 / 10bits) (SD) 480i 59.94,60 (YUV 444 / 422, 8 / 10bits)
		Sampling	444 / 422 / 420
		Bit Depth	8 / 10 bits
		HDR	Supported
	Audio Output	Sample Frequency	48 KHz
		Sample Depth	24 bits
		Channel Layouts	PCM 8 channels
	Ancillary Data		Supported
Toolkit		OS	Windows / Linux driver (Linux Kernel 5.15 Above) & SDK
		Development Kits	Capture / Playback / PCIe card management
Physical Characteristic	Interface	Input	12G-SDI x 4 Shared (BNC type) 12G-SDI channel: 4ch Audio: SDI embedded audio HDMI 2.0 x 1 input PCIe Gen3 x 8 input
		Output	12G-SDI x 4 Shared (BNC type) 12G-SDI channel: 4ch Audio: SDI embedded audio HDMI 2.0 x 1 output PCIe Gen3 x 8 output
	Power Consumption		< 25W
	Dimensions		PCI Express Half Length Full Height 167.65 x 111.15 mm
Environmental	Operating Temperature		-10 to 70 °C
	Non-operating Temperature		-40 to 85 °C
	Operating Humidity		95% RH @ 50°C, non-condensing
	Non-operating Humidity		95% RH @ 50°C, non-condensing

Dimensions

Unit: mm

167.65

106.65

111.15

120.94

18.42

110.50

21.59

14.74

Order Information

Part Number	Description
VEGA-3312-S1G0	Multi-channels SDI+HDMI video acquisition and display card

Tento produkt můžete zakoupit u společnosti AutoCont IPC a.s.

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Váš dodavatel průmyslových počítačů, komponent a speciálních průmyslových IT systémů.

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