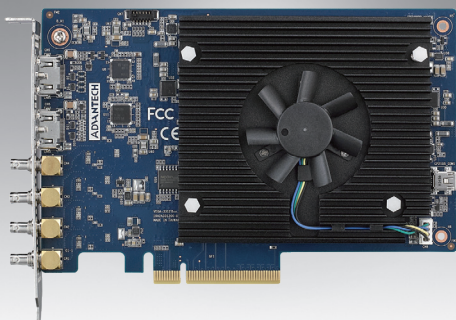


VEGA-3312

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 for FFmpeg and GStreamer multimedia frameworks
- FPGA based color space convert and de-interlace support
- Linux & Windows SDK including simple-to-use API and example code

Introduction

VEGA-3312 is FPGA based professional video acquisition card which supports UHD, SMPTE & unspecified format video and diversifies audio format through 12G-SDI, HDMI 2.0 and PCIe Gen3 x8 high speed bus. Advantech video engine at VEGA-3312 provides Realtime video format converting which saves host system computing power and reduces glass-to-glass latency. Thanks to flexibility and creating features from Advantech software developer kit, connecting to various user programs is easy and quick. Furthermore, VEGA-3312 is with Advantech customized video pipeline service which creates your own Realtime processing and makes your product more advanced.

Specification

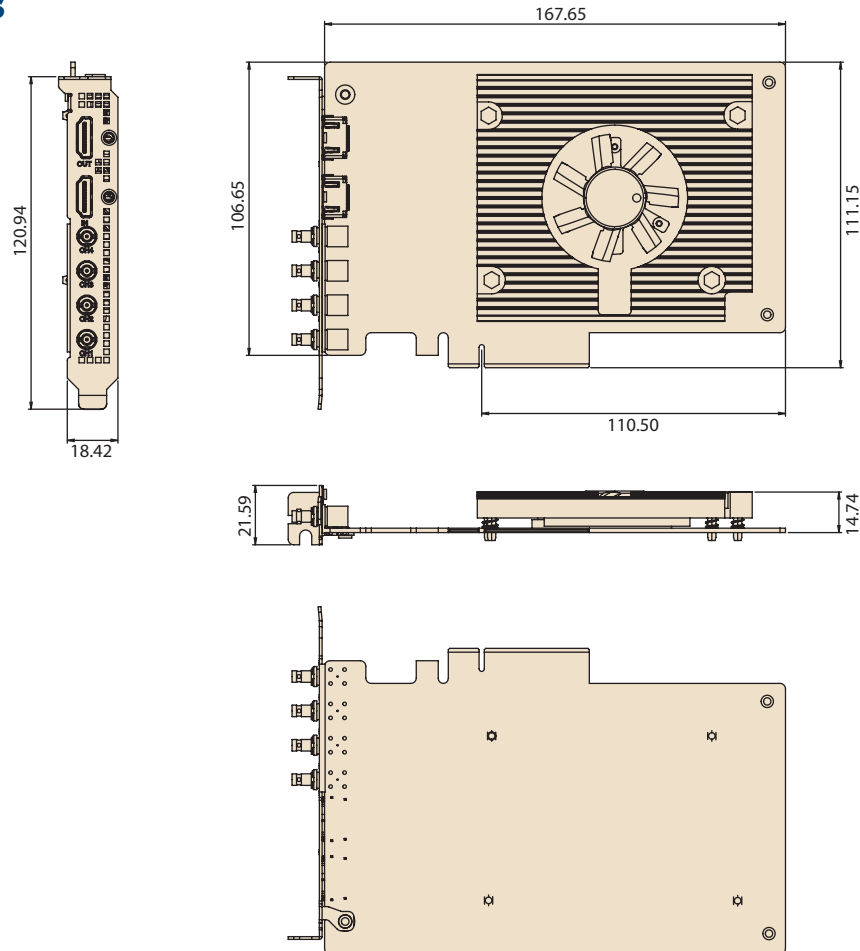
Acquisition (12G-SDI)	Feature List	SMPTE ST 259 SMPTE RP 165 SMPTE ST 292 SMPTE ST 372 SMPTE ST 424 SMPTE ST 2081-1 SMPTE ST 2082-1 SMPTE ST 352	
	Video Input	Resolution	(DCI 4K) 4096 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (UHD) 3840 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 (DCI 2K) 2048 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	

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



Order Information

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

* Please ensure you confirm specifications prior to making a purchase. This document serves as a reference and informational resource only. Please be aware that all product specifications are subject to change without prior notice.