

VEGA-8300

8Kp60 HEVC Broadcast Video Encoder

Preliminary



Features

- 8Kp60 HEVC real-time encode compact encoder platform
- I, P & B-frame, 4:2:2 sampling & 10-bit color
- 2SI & slice-mode encoding support
- 4-ch SDI-12G inputs with 22.2-ch audio support
- RTP / HLS / TSolP streaming outputs, compatible with Amazon Cloudfront streaming services
- Local/remote web-based configuration and management
- Intel i7-7700 CPU with DDR4-2400 16GB memory
- 2 x hot swappable SATA3 HDD storage bays
- Portable size with flexibility for rack-mount

Introduction

The VEGA-8300 is a fully integrated 8Kp60 live HEVC contribution encoder and streaming appliance in a compact low power form factor with a user-friendly web-based control and management interface. The unit is ready to use out of the box, featuring a 4 x SDI-12G 8K live audio/video input, a hardware-accelerated 8Kp60 10 bit 4:2:2 capable HEVC encoder, and a streaming engine output that can be configured to transmit video point to point to local receivers / players or broadcast across the world via Amazon Cloudfront services. The unit also features local storage that can be used to record encoded video for later if live transmission is not possible. By using hardware encoding linked closely to the capture interface, the size and power consumption of the VEGA-8300 is significantly lower than software-only equivalents.

Specifications

System Configuration		
Processor System	CPU	i7-7700
	Base Frequency	3.6 GHz
	L3 Cache	8 MB
	SKU/Chipset	Intel C236
	BIOS	AMI 128 Mbit SPI Flash
BUS	PCI-Express	1 (x16, PCIe Gen 3.0)
Memory	Technology	Dual channel DDR4 ECC 1866/2133 MHz (ECC function enable depends on processor support)
	Installed	1 (16GB DDR4 SO-Dimm)
Graphics	Controller	Chipset integrated Intel HD Graphics
	VRAM	Shared system memory is subject to OS
	CRT	Supports resolution up to 1920 x 1200 pixel at 60MHz
Ethernet	Interface	10/100/1000 Mbps
	Controller	LAN 1: Intel I219LM LAN 2: Intel I210AT
	Connector with LED	RJ45 x 2
Rear I/O	USB 3.2	1
	Ethernet	2
	VGA	1
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)
	Video Input	4(BNC Connector, 12G-SDI)
Front I/O	USB 3.2	1
Storage	Internal	1 (MLC SSD 256GB 2.5" SATA3)
	Hot swappable SATA3 HDD storage bays	2 (HDD 2.5" 1TB 7KRPM SATA3) (Option for RAID 0 & 1)
	Watchdog Timer	Output: System reset Interval: Programmable 1-255 sec
Front Control	LCD	1 (16 x 2 dot matrix)
	Button	6
Power	Power Consumption	270W
	Power Input	AC input 100-240V
Physical	Dimension	370 x 350 x 70 mm
Compliance	Certification	CCC, CE, FCC Class A

Video Encode Capability		
Video Input	Channels/Interface	4x 12G-SDI, up to 8K60p, 8bit/10bit, YUV
	SDI Video formats	8K 2SI / 7680 x 4320:60p / 59.94p / 50p / 30p / 29.97p / 25p / 24p
Video Compression	Standard	HEVC (H.265)
	HEVC profile	Main / Main 10
	HEVC Tier	Main / High
	HEVC Level	HEVC Level 6.1
	Bitrate 8K format	60 Mbps- 300 Mbps
	Bit Depth	8 / 10 bit
Audio	Chroma Sampling Format	4:2:2 / 4:2:0
	Bit rate Control	CBR / VBR
	Channels	22.2
	Format	Input: PCM Output: AAC-LC
	Sampling Frequency	48KHz
	Connector	SDI Audio
Features	Streaming Protocol	FFmpeg supported protocol (RTMP/HLS/RTP/TS over TCP/UDP)
	Operating System	Linux Kernel 4.4.0 (64-bit) - Ubuntu 18.04LTS
	Management & Control Interface	Remote Web GUI interface
	Local recording	2x 1TB HDD 2 (Hot swappable SATA3 HDD storage bays)
	Development Assistance	FFmpeg plugins
	GOP Structure	Hierarchical IBBB

Ordering Information

Part Number	Description
VEGA-8300-S0E0	8Kp60 HEVC Video Encoder System