

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 |
| | | | 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 |
| File Based Video Input (PCI Express / 2.5GbE Ethernet) | 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.)

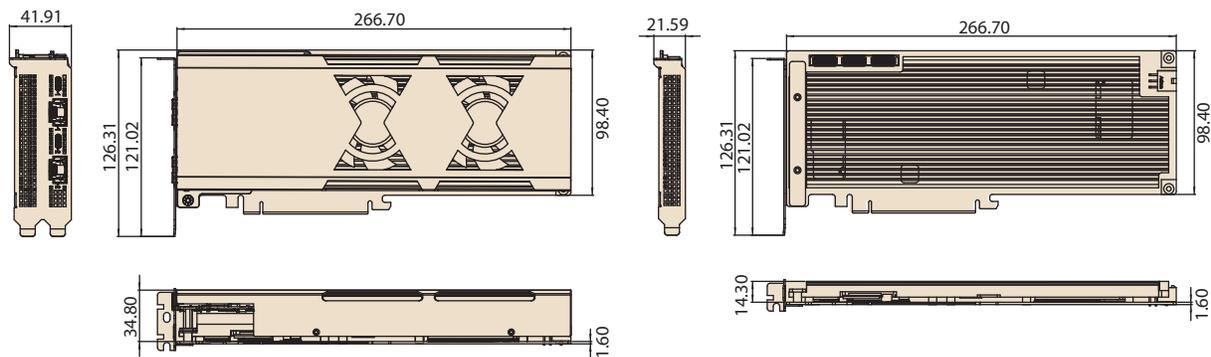
| | | |
|--------------------------|-------------------|---|
| Features | Processor | Intel Core™ i7-1185G7E, Intel Celeron C6305E |
| | Memory | LPDDR4 32GB/16GB |
| | Security | TPM 2.0 |
| | Operating System | Ubuntu 20.04 (Kernel 5.9) |
| Physical Characteristics | Power Consumption | <100W |
| | 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 |