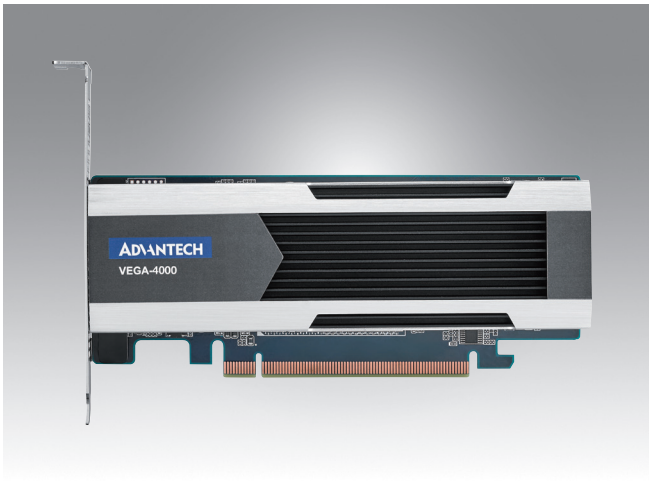
VEGA-4000

Reconfigurable Video Content Intelligence Accelerator



Features

- High performance Xilinx Ultrascale+ FPGA (XCVU9P)
- 16GB DDR4 memory in 4-Ch configuration w/ ECC support
- PCIe Gen-3 x16 host interface
- Low Profile form factor
- Up to 75W slot power consumption
- Fully Xilinx SDAccel supported

Introduction

VEGA-4000 is an FPGA-based low profile PCI Express card which is ideal for accelerating machine learning, data analytics and live video processing applications both in appliances and in scale-out data center servers.

As user-generated video content streaming becomes more and more pervasive, there is a corresponding service demand to analyze and classify this content in real time to ensure compliance to rules and to allow further innovative applications to be developed. The resulting processing workloads are both rapidly escalating and rapidly evolving, so the need of processing acceleration and flexibility is crucial. The latest generation of Field Programmable Gate Arrays (FPGAs) from Xilinx offers this acceleration while retaining future-proof reconfigurable capability; and Advantech's new VEGA-4000 can provide access to this technology in a deployable PCI Express form factor, reducing development risk and gaining a time-to-market advantage. The VEGA-4000 is fully supported by the Xilinx SDAccel development environment with FFMPEG integration, and Xilinx also offers optimized support libraries for several Deep Neural Network frameworks including Caffe and Mxnet, with support for TensorFlow coming soon.

Advantech can also offer custom development support services for VEGA-4000 including FPGA IP provision and system integration, and the board can be delivered already pre-integrated in a range of server platforms. Please contact your Advantech representative for more details.

Specifications

Feature	Operating System	Linux Drivers Support
	Development Kits	SDAccel Support FFmpeg, 3rd party Intellectual Property Blocks
Physical Characteristic	Interface	PCI Express Gen3 x16
	Power Consumption	Up to 75W
	Dimensions	PCI Express Half Length Half Height 167.65 x 56 mm
Environmental	Operating Temperature	0 to 40 degrees Celsius
	Non-operating Temperature	-40 to 75 degrees Celsius
	Operating Humidity	50 to 90% (non-condensing)
	Non-operating Humidity	50 to 95% (non-condensing)

Applications

- Video Transcoding
- Social Media Video Analytics
- Machine Learning
- Cloud-based Surveillance Analytics

Ordering Information

Part Number	Description
VEGA-4000-X0A0	Low Profile Video Intelligence PCIe Card (w/ Passive Heatsink)
VEGA-4000-X0A1	Low Profile Video Intelligence PCIe Card (w/ Active Heatsink)

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