WARP II

COLORADO ENGINEERING, Inc.

eXtreme High Performance Compute Node - Dual Stratix 10 (XhpcN-DS10)

PRODUCT DESCRIPTION

From data ingestion to model & simulation to radar processing to computational finance to cyber security to edge analytics, the dual Stratix 10 eXtreme High Performance Compute Node (XhpcN-DS10), a.k.a WARP II, is the most versatile and highest performing FPGA accelerator card to hit the market!
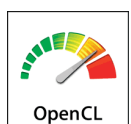
Warp II is designed to take on today's data-intensive computing problems by incorporating two of Intel's revolutionary Stratix 10 FPGAs, massive amounts of DDR4 and plenty of high speed I/O. With the OpenCL support included in the Board Support Package (BSP), Warp II can now be easily programmed without the need to dive down into complicated Verilog or VHDL code.

FEATURES

- Dual Intel Stratix 10 FPGAs
- Up to 528 GB DDR4 (264 GB per FPGA)
- 20 TFLOPs (10 TFLOPs/ FPGA)
- PCIe x16 Gen 3
- 2x QSFP+ 40/100GbE
- L tile: 40 GbE operating at 10 Gbps backplane performance
- H tile: 100 GbE operating at 28 Gbps backplane performance
- Intel Max10 FPGA
- Freescale K61 Microcontroller
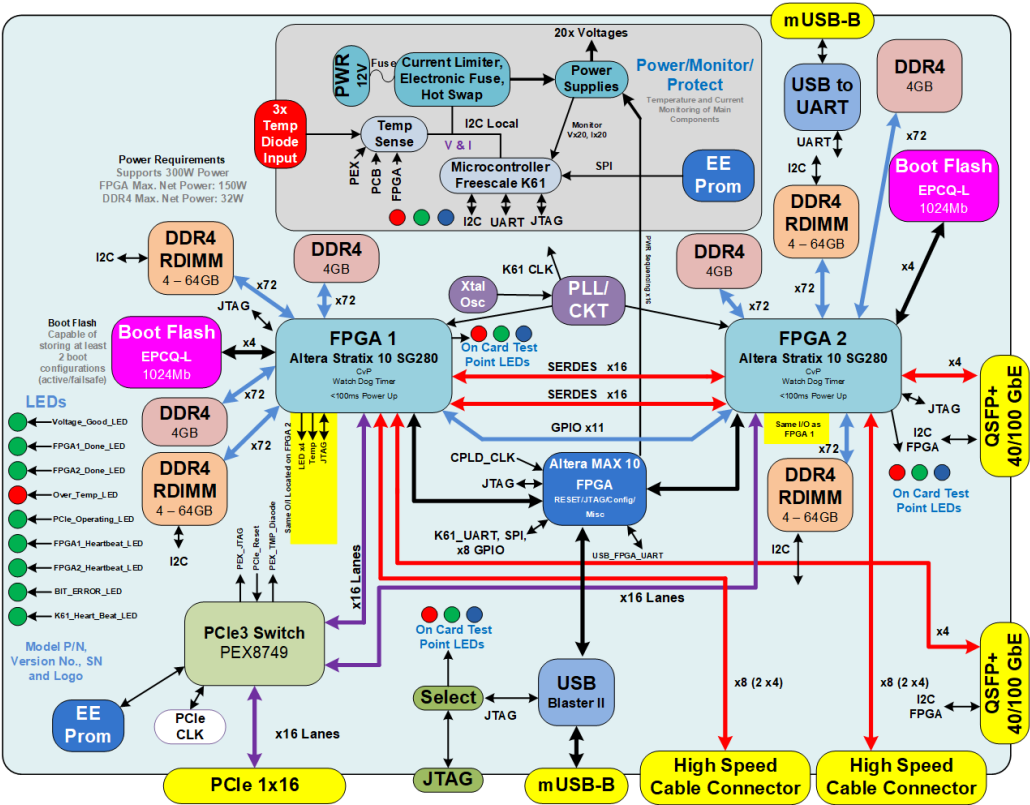- GPU sized PCIe Form Factor

APPLICATIONS

- Communications
- Computing
- Military
- Broadcast
- Medical
- Test & measurement

intel FPGA

OpenCL

PRODUCT SPECIFICATIONS

FPGA	Stratix 10 GX FPGA: GX280UF50
	96 XCVR
	1160 User I/O
	2.8M logic elements
	11,520 18x19 multipliers
	128 GB/s FPGA-to-FPGA
	Memory bandwidth: 19.2 x 8 = 153.6 GB/s
DDR4 RAM	8 GB Discrete per FPGA
	4x RDIMM — 256 GB Max (128 GB/FPGA*) *May violate PCI Express full-height card
	2400 MT/s
	19.2 GB/s
I/O	40/100 GbE QSFP+ (25 Gbps x4)
	mUSB—B
	High speed cable connector (Optional) - 2 x4 SerDes (16 Gbps x4)
Power/Monitor/Protect/Config	Freescale K61 mController
	Intel Max10 FPGA
	1024 Mb Boot Flash per FPGA

BLOCK DIAGRAM

COTS & Custom Heat Sinks Available! Custom Solutions Available!

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