

Intel FPGA Arria10 Heterogeneous computing Acceleration Card

## QD-F910A and QD-F910B Heterogeneous Computing Acceleration Card



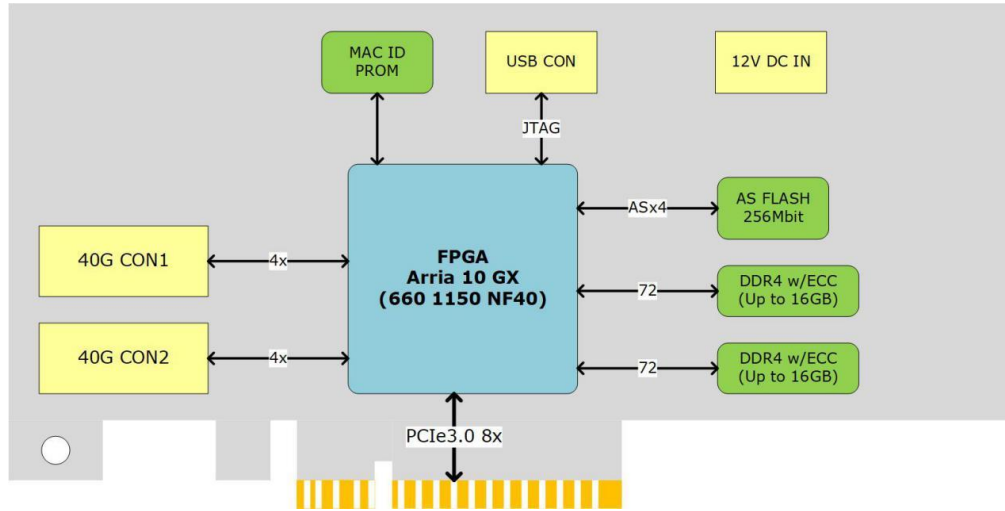
### Function

QD-F910 is a low-profile PCIe x8 card based on the Intel Arria 10 GXFPGA. The Arria 10 boasts high densities and a power-efficient FPGA fabric married with a rich feature set including high-speed transceivers, hard floatingpoint DSP blocks, and embedded Gen3 PCIe x8. The board offers over 32 GB of memory, sophisticated clocking and timing options, and two front panel QSFP cages, each supporting 40 Gbps.

- High bandwidth
- High density
- High efficiency heat dissipation
- Based on Altera Arria 10 FPGA, Provides system-level integration and flexible design
- Based on Altera Arria 10 FPGA, Up to 1.5TFlops,
- Support PCIe3.0x8, 2xSFP+10GbE, 2xDDR4 SODIMM Slots, Up to 32GB
- High thermal design, for a variety of work scenes, board requirements in the absence of external auxiliary heat conditions, long-term operating temperature stabilized at 67 °C or less
- OpenVINO™ toolkit
  - Intel® Deep Learning Deployment Toolkit
    - Model Optimizer
    - Inference Engine
  - Optimized computer vision libraries
  - Intel® Media SDK
  - OpenCL™ graphics drivers and runtimes.
  - Current Supported Topologies: AlexNet, GoogleNet, Tiny Yolo, LeNet, SqueezeNet, VGG16, ResNet (more variants are coming soon)
- Intel® FPGA Deep Learning Acceleration Suit High applicability, more applications, data parallelism can be achieved using DNRange mode, or task parallel with Pipeline mode
- Full support for all low-latency, high-intensity applications such as high-performance computing, deep learning, data acquisition, high-frequency trading, network processing and signal processing.
- Operating Systems
  - Ubuntu 16.04.3 LTS 64bit, CentOS 7.4 64bit (Support Windows 10 & more OS are coming soon)

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### Specifications

Product	QD-F910A	QD-F910B
chip	Intel Arria® 10 GX1150	Intel Arria® 10 GX660
Single-chip computing performance	1.519 TFlops (Peak)	1.366 TFlops (Peak)
LEs (K)	1,150	660
System logic elements (K)	1,506	865
Adaptive logic modules (ALMs)	427,200	250,540
Registers	1,708,800	1,002,160
Type	Half high and length	
Operating Systems	Ubuntu 16.04.3 LTS 64-bit, CentOS 7.4 64-bit (Support Windows® 10 & more OS are coming soon)	
Memory	Support 2xDDR4 SODIMM,72bit,ECC,up to 32GB	
High speed interface	2x SFP+10GE/40GE,PCIex8 Gen3, support OpenCL	
Flash	32bit; Up to 2Gbit Flash	
Consumption	45W(Peak), 35W(Average)	
Power supply	PCIe3.0 interface supply 12V,Preserved PCIe 6-pin 12V external power	
Operating Temperature	5°C~60°C (ambient temperature)	
Operating Humidity	5% ~ 90%	