

Intel® Programmable Acceleration Card (Intel® PAC) with Intel® Arria® 10 GX FPGAs

Introduction

This PCIe-based FPGA acceleration card for data centers offers both inline and lookaside acceleration. It provides the performance and versatility of FPGA acceleration and is one of several platforms supported by the Acceleration Stack for Intel® Xeon® CPUs with FPGAs. This acceleration stack provides a common developer interface for both application and accelerator function developers, and includes drivers, application programming interfaces (APIs), and an FPGA interface manager. Together with acceleration libraries and development tools, the acceleration stack saves developer's time and enables code re-use across multiple Intel FPGA platforms. The card can be deployed in a variety of servers with its low-profile form factor, low-power dissipation, and passive heat sink.

Targeted Workloads

- Big data analytics
- Artificial intelligence
- Video transcoding
- Cyber security
- High-performance computing (HPC), such as genomics and oil and gas
- Financial technology, or FinTech

Key Components and Interfaces

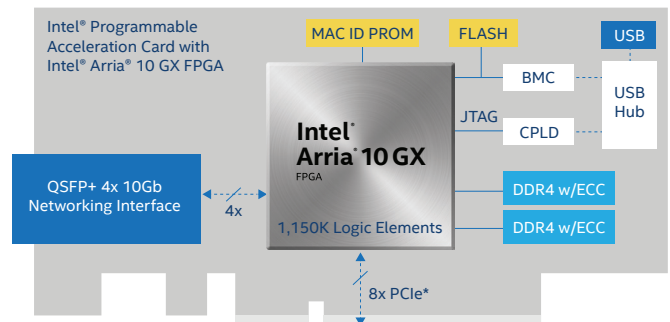
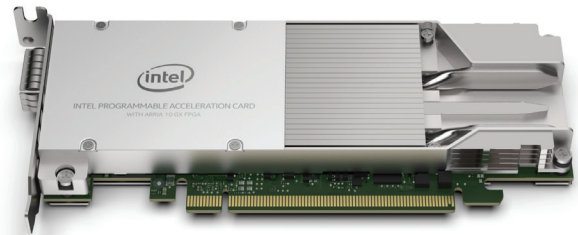
- Intel® Arria® 10 GX FPGA - 10AX115N2F40E2LG
- 8 GB DDR4 memory banks with error correction code (ECC) (2 banks)
- 128 MB flash
- Quad small form factor pluggable (QSFP) interface speeds up to 40G
- PCI Express* (PCIe*) x8 Gen3 interface form factor
- Half-length card with standard (full height) and low profile (1/2 height) bracket options
- PCIe x16 mechanicals

Board Management

- Platform Level Data Model (PLDM)

Power and Thermals

- 60W TDP and 70W peak power
- 55°C TLA; 650 LFM
- Passive heat sink targeted for 45W power FPGA operations



FPGA Interface Manager

- Common Developer Interface for Intel® FPGAs
- Dynamically reconfigure the FPGA to suit the application workload acceleration demands

Developer Tools and Libraries for Acceleration Function Developers

- Intel® Quartus® Prime software and the Intel® FPGA SDK for OpenCL™ Application Developers
- Open Programmable Acceleration Engine (OPAE)
- Intel® provided libraries
- Ability to co-simulate acceleration function with application

Availability

- Engineering Samples available now
- Production PACs available through select OEMs
- Contact Intel Sales Representative for inquiries

For More Information

- www.altera.com/pac

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