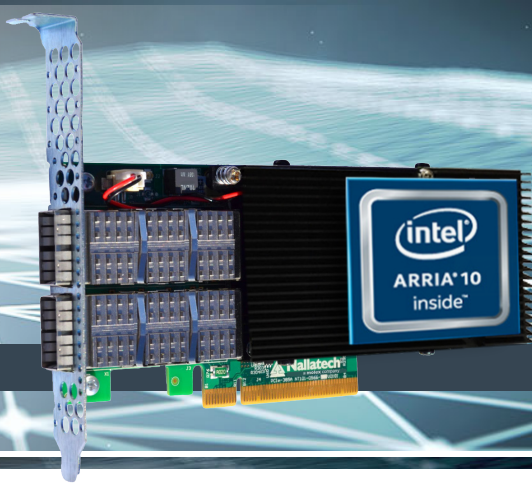


# Nallatech 385A

## FPGA Accelerator Card



Nallatech's 385A low profile accelerator card provides a powerful PCI-Express computing and I/O platform for FPGA development and deployment across a range of application areas including High Performance Computing, Image Processing and Network Analytics.

- **Featuring Arria 10 FPGA**  
**Up to 1.5 TFLOPS of processing power**
- **Two high bandwidth banks of DDR3 SDRAM memory**
- **8-lane PCIe Gen 3.0 card**
- **Two 10 & 40GbE Network Ports**

Designed to address a range of compute-intensive and latency-critical applications

- **Compute, Network & Storage**
- **Finance and Risk Analysis**
- **Datacenter**
- **High Performance Computing**
- **Communications**  
**(Wireless and Wireline)**
- **Industrial, Broadcast, Embedded**
- **Medical**
- **Automotive**



## The Industry's first floating point-enabled FPGA card with OpenCL tool flow



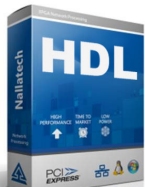
OpenCL

### » Intel FPGA OpenCL Software Development Kit (SDK)

- Abstraction enables faster and higher-level software development flow
- Emulate OpenCL application code on x86 platforms in seconds
- Push button flow generates FPGA executable, driver and API
- Add optimized HDL IP cores to OpenCL designs as libraries

### » Hardware Description Language (HDL)

- Traditional VHDL/Verilog tool flow support
- Aimed at hardware-orientated customers
- Hand-code HDL for ultimate performance
- FPGA card designed to support standard Intel IP cores for Arria 10



# Nallatech 385A

## FPGA Accelerator Card

### Form Factor

- » Half-height, half-length, single width PCI Express card
- » 167.6mm x 68.9 mm x 17mm

### Host Interface

- » 8-lane PCI-Express Gen 3.0
- » Actual performance is host computer chipset and operating system dependent

### Processing

- » Intel Arria-10 F1517 NF40 package
- » Default configuration: GX 1150
- » Core speed grade -2, I/O speed grade -3
- » Contact Sky Blue and Zerif for other FPGA options

### DDR4 SDRAM Memory

- » Two banks of DDR3 SDRAM x 72 bits
- » 4GB per bank (8GB total / 16GB & 32GB version also available)
- » 2133MT/s per bank

### Application Development

- » Supports multiple design flows including Intel FPGA OpenCL SDK and HDL

### Electrical

- » On-card power derived from the host motherboard PCIe slot
- » Power dissipation is application dependent
- » Typical power consumption ~30W
- » Card designed to deliver up to 75W power consumption

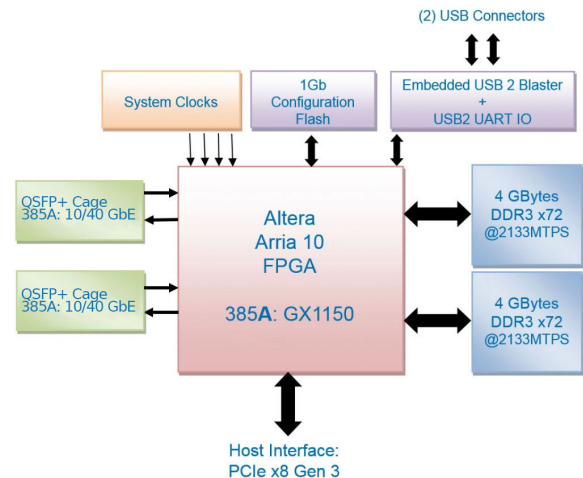
### Quality

- » Manufactured to ISO9001:2008 IPC-A-610-Class III
- » RoHS compliant

### Power Supply Monitoring & Reporting

- » On-board Intel USB-Blaster II
- » Power and temperature monitoring\*

**Customization:** Technical specifications (e.g. FPGA type, size, external memory capacity etc.) can be modified to meet the exact needs of commercial customer applications as off-the-shelf product available to the general market.



### Two 10/40G QSFP Network Ports

- » Flexible low jitter clocking supports multiple telecom standards - 10/40GbE, Fiber Channel
- » Each QSFP can be independently clocked
- » Network recovered with jitter attenuation (optional)
- » QSFP clocking: user programmable, or CPRI, 1GbE (optional)
- » Others: external clock input, 1PPS input (optional)

### Cooling

- » Standard: single-width active heatsink (embedded fan)
- » Optional: single-width passive heatsink

### Environmental

- » Cooling: Air convection
- » Operating temperature: 0°C to 35°C

### Deliverables

- » 385A FPGA card
- » USB cable (back panel access)
- » Built-In-Self-Test (BIST)
- » OpenCL "HPC" Board Support Package (BSP)\*
- » 1-year access to online support lounge
- » 1-year hardware warranty

**Application optimization:** Nallatech provides consultancy services assisting customers in the porting, optimization and benchmarking of applications executed on Nallatech FPGA accelerators.

\* Please check with Sky Blue or Zerif for availability  
V2-5a: 2017/10/02

### Contact

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