Nallatech
385A-SFP
FPGA Accelerator Card

Nallatech's 385A-SFP network accelerator card provides a powerful PCI-Express compute and high-density I/O platform for processing high-speed network traffic, FPGA development and deployment across a range of application areas including inline error correction, network traffic storage and high frequency trading.

- **8-lane PCIe Gen 3**
- **Single-width PCIe card**
- **Passively cooled**
- **Intel Arria 10 FPGA**
- **Six SFP+ network ports**
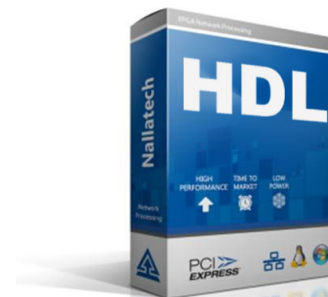- **Supports CPRI rates up to 10Gbps**

Intel-based FPGA network accelerator featuring six SFP+ network ports for high density, low latency

Designed to address a range of latency-critical applications:

- **Macrocell monitoring**
- **Macrocell inline digital RF filtering**
- **RF interference monitoring across CPRI**
- **CRAN monitoring using multiple cards across the PCIe bus**
- **Backhaul monitoring of Ethernet traffic**
- **High Frequency Trading**
- **Video Transcoding**
- **Medical Imaging**

Hardware Description Language (HDL)
- Traditional VHDL/Verilog tool flow support
- Aimed at hardware-orientated customers
- Hand-code HDL for ultimate performance
- Supports standard Intel IP cores for Arria 10

Nallatech
a **molex** company

Form Factor
» Full-height, half-length, single width PCI Express card
» 167.6mm x 110.9 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 10AX115 F40 package
» Default configuration: GX 1150
» Core speed grade -2, I/O speed grade -3
» Contact Sky Blue or Zerif for other FPGA options

DDR4 SDRAM Memory
» Two banks of DDR3 SDRAM x 72 bits
» 4GB per bank
  (8GB total or 16GB versions available)
» 2133MT/s per bank

Application Development
» Supports HDL design flow

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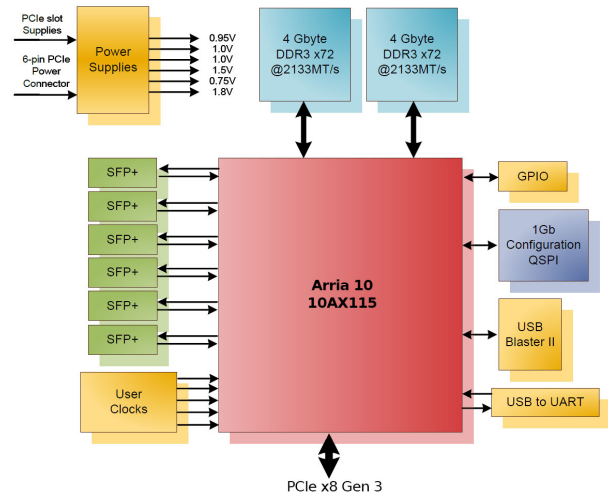» Card designed to deliver up to 75W power consumption

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*

Six SFP+ Network Ports
» Supports 1/10Gb Ethernet, Fiber Channel & CPRI rates up to 10 Gbps
» SFP+ ports clocked by up to four independent sources
» SFP+ optional clocking: user programmable via I2C
» Optional flexible low jitter clocking supports multiple telecom standards
» Others options: external clock input, 1PPS

GPIO
» single ended and differential GPIO connector

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-SFP FPGA card
» USB cable (back panel access)
» Built-In-Self-Test (BIST)
» 1-year access to online support lounge
» 1-year hardware warranty

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.

Application optimization: Sky Blue and Zerif 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 / V0.1: 2018/01/11