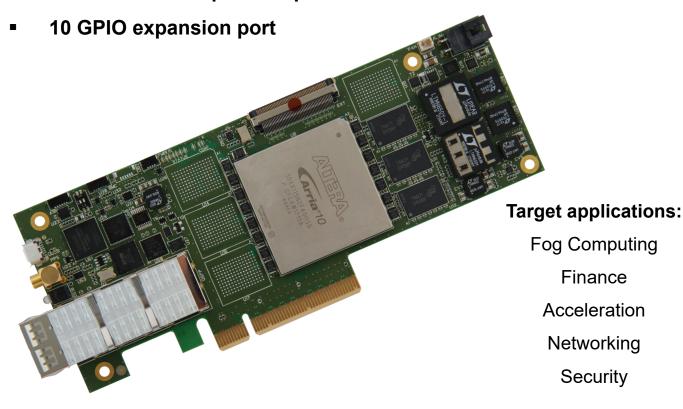


## XpressGXA10-LP1151

# Low-profile PCIe Network Processing FPGA Board Featuring 40G Ethernet

- Low-profile PCIe board using Intel Arria 10 GX 1150 KLE
- Single slot passive cooling for servers
- Designed for fog computing and ultra low latency applications
- PCIe Gen3 x8 interface
- 8 GB on board DDR4 (x 72bit)
- QSFP+ cage 10/40 GbE ports
- Board Management Controller (BMC) with IPMI features
- 10 transceiver expansion port



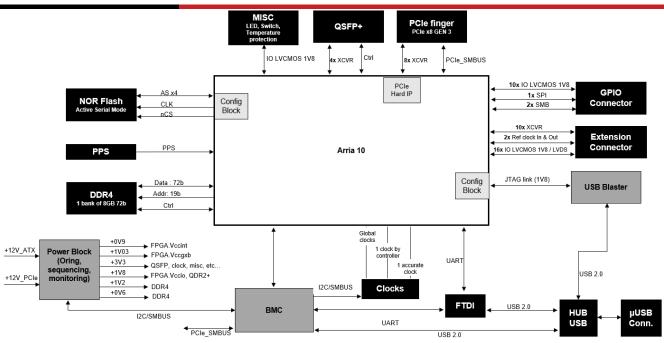








### XpressGXA10-LP1151



#### **Full Specifications**

#### **FPGA** and Configuration Modules

- Intel Arria 10 GX 20nm FPGA: 10AX115N2F40I1SG
- NOR Flash for Active Serial (AS) configuration mode (2 sector for fail safe feature)

#### **Communication Interfaces**

- PCI Express x8 (Gen 1, 2 or 3)
- QSFP+ quad optical cage (4 XCVR:10.3125 Gb/s per link)
  - 10GbE/40GbE networking interface
  - · Other protocols supported by the QSFP module

#### Memory

1 bank on board 8GB DDR4, 72bit (ECC), up to 2400 MT/s

#### Power

- External auxiliary connector (12V)
- Max 80W
- Single slot passive heat-sink

Operating Range : 0°C to 40°C Storage Temp Range : 0°C to 70°C

#### Other resources

- 10 transceivers (Rx/Tx) LVCMOS/LVDS expansion port with board-to-board connection over SAMTEC LSHM connector (LSHM-150-01-F-DH-A-S-K-TR)
- 10 LVCMOS GPIO connector, SPI
- Programmable PLL oscillator (Si5341) controlled via the FPGA through an I<sup>2</sup>C serial interface, or via the BMC
- USB Blaster on board
- High precision oscillator clock accuracy 20MHz-0.05ppm for Precision Time Protocol (PTP) IEEE 1588
- One coax connector for PPS (pulse per second) for synchroni sation of multiple electronics parts
- Board Management Controller (BMC) = monitoring, NOR Flash and clock programmation, updates and IPMI features

#### **Board Dimensions**

Length: 167.7mm (6.59inches)

Height: 68.9mm (2.71 inches) / Low Profile PCIe

Thickness: 1.57 mm (0.062 inches) / Standard Thickness PCIe

#### Standards and compliance

RoHS/REACH compliant
UL certified
ISO9001 Facility

#### **Deliverables**

- Low-profile (half-height) form factor PCIe Board
- Board Support Package (Manual, Test Designs)
- PCle Power Supply adapter cable (same as GPU)
- PCIe Low profile or Standard bracket

- Mechanical files 3D DWF/STEP models and 2D drawings (upon request)
- SDK for Windows 10 64Bits
- SDK for Linux Debian Stretch 64Bits (on request for other Linux distribution)
- WinDriver™ PCIe device driver from Jungo

#### Ordering informations

#### Part number

Basic = XpressGXA10-LP1151B

#### Description

Intel Arria 10 GX 10AX115N2F40I1SG, 8GB DDR4