



HiprAcc™ NC220

Intel Agilex Low Profile PCIe Card

Key Features

- PCIe low profile (half-length, half-height) form factor (6.6" x 2.46")
- Available with single-slot and double-slot passive and active cooling configurations
- Agilex device support from lowest density 006 through 0027 high density FPGAs (027/022, 023/019, 014/012, 008/002)
- 16x PCIe Gen4 (256Gbps) host interface
- Up to 400Gbps network interface via a single QSFP-DD network interface
- 3 banks of 72-bit DDR4 memory (12GB/24GB)
- Agilex ARM HPS support with 16/32GByte eMMC
- Option for direct GigE network interface to HPS (requires full-height bracket with RJ-45 adapter)
- Up to 75W card load with edge power and up to 100W card load with 6-pin PCIe power connector
- Integrated USB Blaster II, Agilex debug and module monitor interfaces through a single micro-USB connector on PCIe bracket
- Flexible clocking architecture with support for external synchronization/clock interface
- Extensive power, voltage and temperature telemetry with SMBus based access for host server board management controller (BMC)

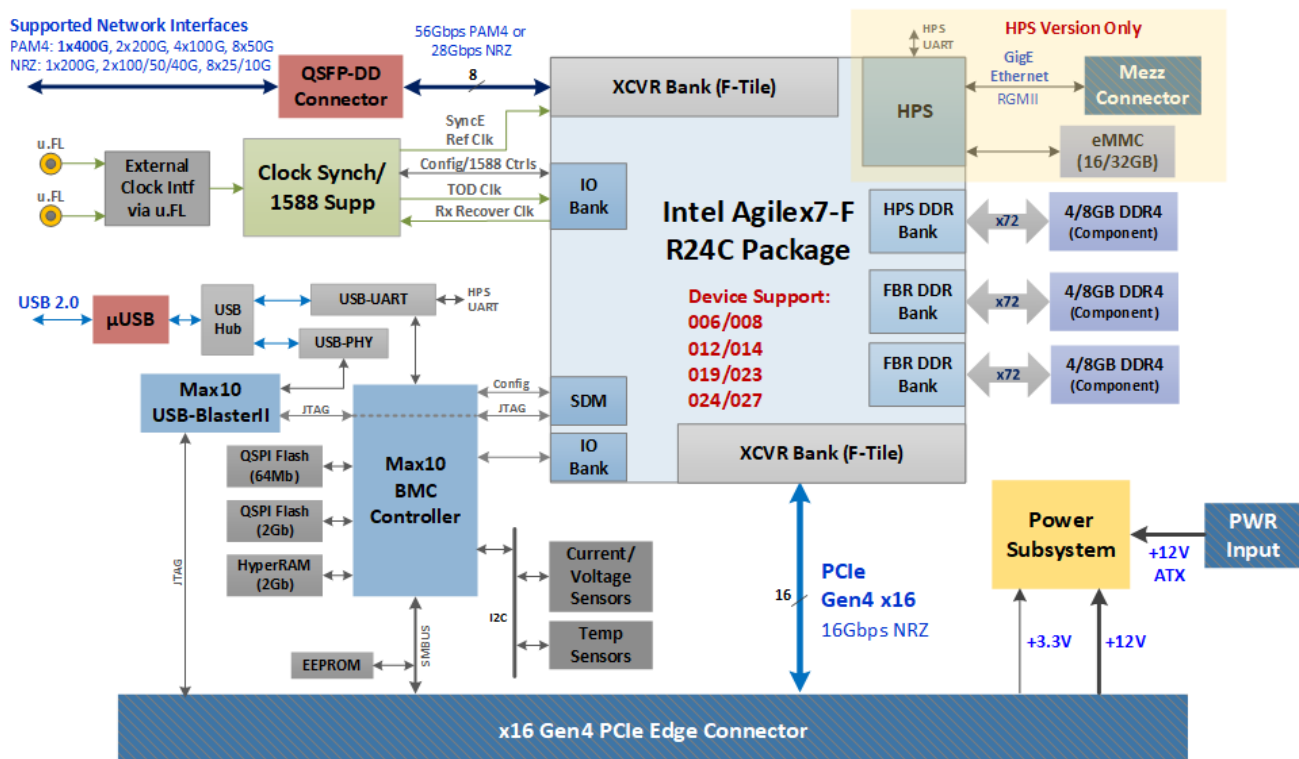


High performance low profile PCIe Data Center accelerator and 5G DU/CU card with Intel's 10nm Agilex FPGA.

2x F-Tile FPGA with up to 400Gbps (8x56Gbps PAM-4) Ethernet interface and 16x PCIe Gen4 support.

Target Applications

- Designed for Data Center workloads and scale out architectures
- Machine learning, network, compute and storage acceleration
- Bump-in-Wire networking and high-performance computing
- Intelligent network controller for GPU farms
- 5G infrastructure DU and CU



Interfaces

- x16 Gen4 PCIe card edge Interface
 - Backwards compatible with Gen3
 - Supports bifurcation as two x8 Gen4/Gen3
 - Gen2 and Gen1 supported via link down-training
- QSFP-DD network interface port with hard IP support for:
 - PAM4: 1x 400G
 - PAM4: 2x 200G
 - PAM4: 4x 50G
 - NRZ: 1x 200G
 - NRZ: 2x 100
 - NRZ: 2x 50G/40G
 - NRZ: 8x 25G/10G
- Unified micro-USB 2.0 interface with on-board USB hub for:
 - Integrated USB Blaster II
 - UART interface to HPS or FPGA fabric (DIP switch selectable)
 - UART interface to module control CPLD for card monitor and remote board control
- 20-pin header for HPS GigE network interface (requires full-height bracket with RJ-45 adapter)
- SMB coaxial connector for external clock and PPS reference input

Product Ordering Codes

Stocked SKU: AGF-NC220-B74-00; 027 FPGA with -2 core and -2 XVRs, with HPS support, 4GB x 3 DDR4, 16GB eMMC, passive heat sink

For other densities and customized module configuration, contact Hitek

For sales or more information:



Hitek Systems LLC
 Phone: +1-301-528-8074
 Email: sales@hiteksys.com

Memory, Storage and Configuration Interfaces

- Three 72-Bit DDR4 interfaces, 4GB or 8GB each component memory
- One DDR4 port routed to HPS accessible banks
- 16/32GByte eMMC storage device for HPS
- 2Gbit QSPI flash for FPGA configuration connected to the module control CPLD
- x8 AVST configuration interface from module control CPLD
- 64Mbit QSPI flash and 128Mbyte HyperRAM for module control CPLD and BMC controller

On-board Development and Debug Support

- Integrated USB Blaster II
- UART access to the FPGA and module control CPLD
- Temperature, voltage and current monitoring sensors to module control CPLD
- Module input power measurement for profiling and verification in target servers/environment
- Automatic over-temp FPGA de-configuration
- Support for server Board management controller (BMC) with MTCP protocol support via SMBus through integrated module control CPLD processor
- Tri-color module status LED at PCIe bracket edge
- Multiple on-board diagnostic and status LEDs

Power and Heatsink Options

- PCIe edge power with support for 6-Pin PCIe/ATX connector power input
- Options for single-slot and double-slot passive and active heat sinks
- 75W with PCIe edge power
- 100W with 6-pin PCIe/ATX connector power