



HiprAcc™ NCS280-I Intel Agilex I-Series PCIe Card

Key Features

- PCIe (half-length, full-height) form factor (6.6" x 4.37")
- Single-slot design with auxiliary power input
- Agilex 023/019 device support
- CXL (Compute Express Link) and 16x PCIe Gen5 (512Gbps) host interface
- Up to 2x 200/100Gbps or 8x 25/50Gbps network support via two QSFP interfaces
- Support for up to two Gen4 M.2 NVMe SSDs
- Up to 48GB on-card memory. 3 banks of 72-bit DDR4 memory (16GB/8GB)
- Agilex ARM HPS support with 16GByte eMMC
- Direct GigE network interface to HPS for debug
- Up to 75W card load with edge power and >100W card load with 6-pin auxiliary 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)
- Supports oneAPI for high level abstracted development flow

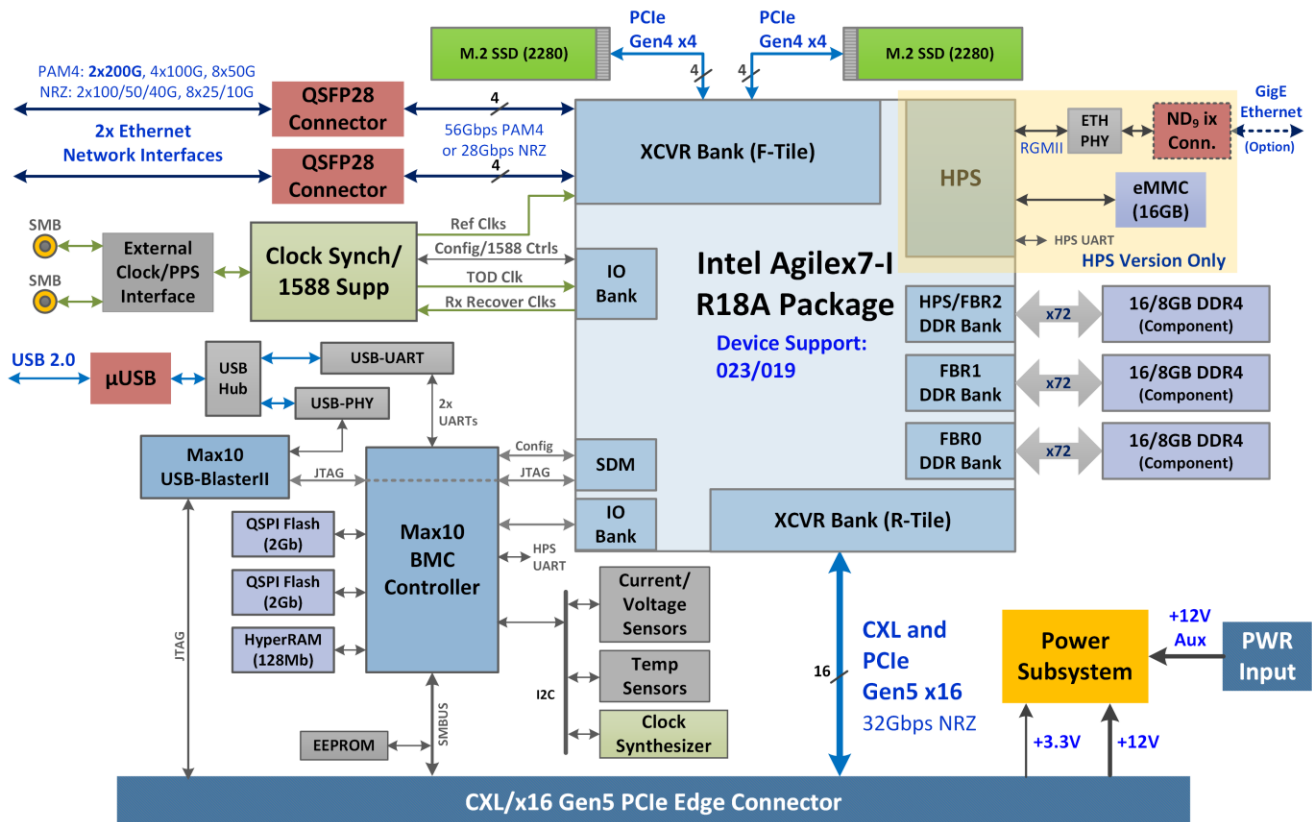


High performance CxL/PCIe Gen5 accelerator with on-card nVME SSD Storage

F-Tile FPGA with up to 400Gbps (8x56Gbps PAM-4) Ethernet interfaces

Target Applications

- Designed for Data Center workloads and scale out architectures
- Machine learning, network, compute and storage acceleration



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
- Dual QSFP network interface ports:
 - PAM4: 2x 200G
 - PAM4: 4x 100G
 - PAM4: 8x 50G
 - NRZ: 2x 100G/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
- SMB coaxial connector for external clock and PPS reference input

Product Ordering Codes

Stocked SKU: AGI-NCS280-B61-00; 023 FPGA with -1 core and -2 XVRs, with HPS support, 8GB x 2 DDR4, 32GB eMMC, passive heat sink

For other densities and customized module configuration, contact Hitek

For sales or more information:



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 Email: sales@hiteksys.com

Memory, Storage and Configuration Interfaces

- Two banks of 72-Bit DDR4 interfaces, 8GB or 16GB each component memory
- One DDR4 port routed to HPS accessible banks
- 32GByte eMMC storage device for HPS
- Dual 2-Gbit QSPI flash for FPGA configuration connected to the module control CPLD
- x8 AVST configuration interface from module control CPLD
- 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

- PCIe edge powered with support for 6-Pin micro-FIT connector power input
- Single-slot passive heat
- 75W with PCIe edge power
- 100W with 6-pin micro-FIT connector power input