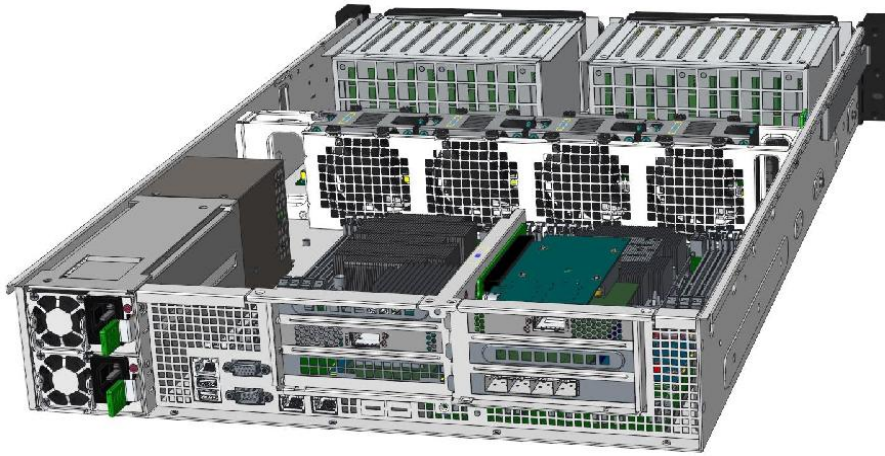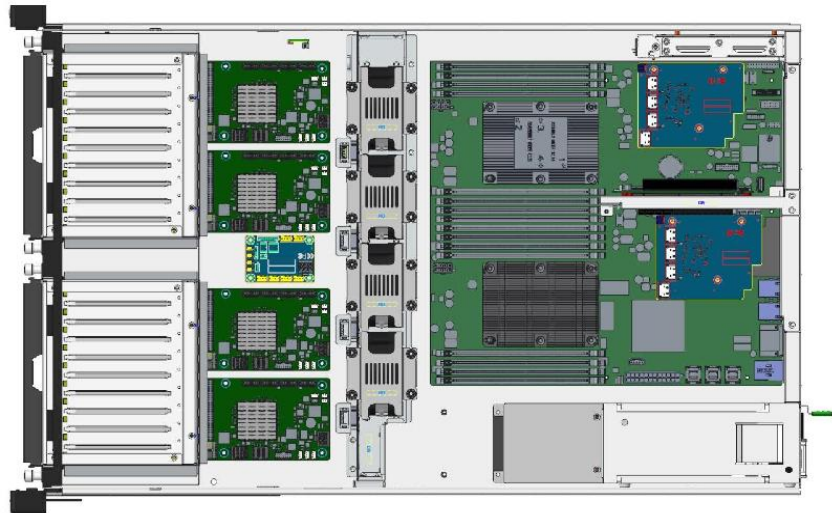# First to **Market 2 remoavble Canisters with** NVMe **U.2** drives

2U High-Performance NVMe Flash Server Hardware Specifications Document

Model: Rugged-NVMeSAN2N-20C

System Layout

Key Features

- Designed to support standard Grantley/Broadwell, Purley/Skylake and AMD Naples platforms
- Purpose-built for NVMeoF usage model with optimized IO bandwidth and latency
- Perfectly balanced IO design:
  - Each CPU manages one PEX9781 or PEX9797 PCIe switch
  - Each PCIe switch manages 48x lanes downstream for 12* U.2 or 6* PCIe X8 AIC modules plus one or two PCIe X16 network adapter slots
  - Maximum throughput with each CPU capable of sustaining over 200Gbps and 4M IOPs

- RDMA/RoCE/iWARP NIC adapters are linked to NVMe SSDs via PCIe switch
- System is designed to minimize crossing over the QPI/UPI links to avoid additional interrupts
- Unmatched IO bandwidth with in a compact 2U platform
- Over 500Gbps sustained IO performance for the entire system
- Based on COTS components to avoid vendor lock-ins
- Modular design and future-proof, can migrate to new generation platforms with minimum efforts
- Maximized exhaust vents plus high-pressure cooling fans result in high-efficiency cooling
- Supports 256 AES Encryption
- Customizations are available

- 2U form factor with 27" depth, designed to fit 900-mm racks
- 2 swappable canisters for COTS PCIe3 X4 NVMe U.2 SSD drives.
- 2 or 4x PCIe X16 expansion slots for up to 448 Gbps (4*112Gb EDR IB) of network IO bandwidth
- Symmetrically-balanced IO between two CPUs for optimal performance with each CPU managing one PCIe switch and half the expansion slots and NVMe devices downstream
- NVMe devices and network adapters are linked directly over PCIe switch for minimized latency
- Optional support for GPGPU cards for VDI applications
- 2x Avago/PLX PEX9781 or 97 PCIe fan-out switches supporting DPC and hot-swap
- Additional PCIe Gen3 X16 rear OCP 2.0 IO module for 40/100Gb options for secondary network storage connectivity
- Supports up to two E5-2699v4 Xeon or Purley/Skylake processors
- 2x hot-swap 2.5"-7mm system disks
- 1200~1600W(230VAC) CRPS redundant power supply options
- 4x 80x38mm high-pressure cooling fans
- Optional lockable front bezel to protect from unauthorized removal of sensitive data
- Optional MCU module for PCIe switch boards for additional OEM-manageable functions

Cheetah RAID Storage