Relion Phi X1030e

Accelerated Intel® Performance for Parallel Data Processing

Constructed for Penguin Computing customers from the ground up, the Relion Phi X1030e taps into the innovation of Intel's® second generation Xeon Phi™ product family to deliver extraordinary results. Featuring up to 72 cores, the Relion Phi X1030e is a fully integrated x86 server that uses Intel's® latest Xeon Phi™ Processor and provides improved parallel performance over the previous generation to meet today's time-sensitive enterprise and research needs.

Designed to help solve the biggest challenges facing existing and emerging industries, the Relion Phi X1030e introduces an on-board memory package called Multi-Channel DRAM (16GB MCDRAM and 384GB DDR4) that uses up to 500GB/sec of memory bandwidth and can be scaled up to 16GB at launch. The integrated on-package Intel® Omni-Path Fabric provides fast interconnects and removes PCI-e bottlenecks for various HPC workloads.

Keeping to the vanity-free principles of Open Computing, the Relion Phi X1030e is the newest member of our Tundra ES product family and comes with 2x 2.5" SATA SSD, up to 8x M.2 NVMe storage, 1x mSATA and 2x PCIe 3.0 x16 low-profile (LP) expansion slot in a 1OU form factor (3 nodes in 1 OU).

Based on Open Compute (OCP) Open Rack specification, Tundra OpenHPC reduces infrastructure costs over multiple technology generations. Due to the OCP Open Rack infrastructure's efficient use of available space Penguin Tundra solutions can pack 3 Tundra nodes per each horizontal rack unit. This allows up to 96 nodes per rack with the associated shared power infrastructure and fabric / networking switches.

OPEN™ PLATINUM

Penguin Computing specializes in delivering turn-key High Performance Computing clusters and Data Center systems that include software solutions for cluster and workload management, high performance interconnects, storage systems and a power delivery infrastructure. All components are integrated in rack enclosures, configured for optimal performance by Penguin's HPC experts and ready to use.

Penguin systems are tested for compatibility with all major commercial and freely available Linux distributions and are available with Red Hat Enterprise Linux, SuSE Linux Enterprise Server or CentOS pre-installed.

Prototype Model Displayed

Features

- OCP OpenRack Form Factor
- 1 OU, 3 Servers per Shelf
- Single Socket Intel® Xeon Phi ™ 7200 Series, including –F (Omnipath)
- Up to 384GB DDR4-2400MHz (6x DIMMs)
- Intel® C610 Chipset
- Shared BMC
- 2x PCIe Gen 3 x16 Low Profile
- Up to 2x 2.5" SSD/U.2 NVMe
- Up to 8x M.2 NVMe Storage
- 1x mSATA (Onboard)
- 2x 1GbE ports
- Supports Intel ® Omni-Path via KNL-F Processor or PCIe card
- USA – UL listed, FCC (pending)
- Canada – CUL listed (pending)

Integrated I/O and External Ports

- 1x VGA via pin header
- 2x USB 3.0
- Dual GbE Integrated LAN, Intel I210 RJ45 ports
- Shared BMC

Tundra ES Rack

- 40OU Open Bridge Rack
- UL Listed Rack
- Single Power Shelf (277/480Vac)
  - 26.4kW N+1 Redundancy
- Dual Power Shelf (208/240Vac)
  - 33kW N+1 or 34.6kW N+3 Redundancy

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