



Relion Phi X1030e



Accelerated Intel® Performance for Parallel Data Processing

Built 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, the Relion Phi X1030e 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 slots 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's Tundra ES 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.

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.

OPEN SOLUTIONS

COMPUTE

STORAGE

NETWORK

CLOUD



For information, please contact: sales@penguincomputing.com

Relion Phi X1030e

Key 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)

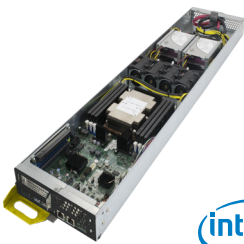
Integrated I/O and External Ports

- 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

Other Tundra ES Products:



Relion Phi X1030

OCP OpenRack form factor, 1 OU, 3 Servers per Shelf

Intel® Xeon® Phi "Knights Landing"

Massive parallelism – up to 72 cores with 4-way hyperthreading

Multi Channel DRAM (MCDRAM) – up to 400GB/s

Up to 384GB DDR4-2133MHz (6x DIMMs) per node

1x Dedicated Management Port

Optional Omni Path interconnects

1x PCIe 3.0 x16 Low Profile Expansion Slot

1x 2.5" SATA SSD/HDD

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.



Relion 1930g

OCP OpenRack form factor, 1 OU, 3 Servers per Shelf

Dual Socket Intel® Xeon® E5-2600 v3 and v4 series

Up to 1TB DDR4-2400MHz (16x DIMMs) per node

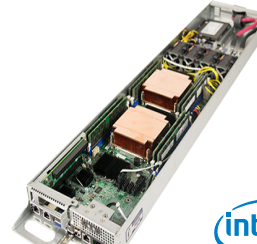
Intel® C610 Chipset

1x Dedicated Management Port

2x 10Gb Ethernet ports

1x PCIe 3.0 x16 Low Profile Expansion Slot

1x 2.5" SATA SSD/HDD



Relion 1930e

OCP OpenRack form factor, 1 OU, 3 Servers per Shelf

Dual Socket Intel® Xeon® E5-2600 v3 and v4 series

Up to 512GB DDR4-2400MHz (8x DIMMs) per node

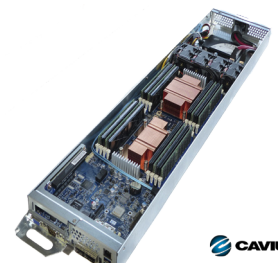
Intel® C610 Chipset

1x Dedicated Management Port

Optional Infiniband, Omni Path and 10/25/40/50 Ethernet interconnects

1x PCIe 3.0 x16 Low Profile Expansion Slot

1x 2.5" SATA SSD/HDD



Valkre 1030c

OCP OpenRack form factor, 1 OU, 3 Servers per Shelf

Dual Cavium ThunderX Processors based on ARM64 architecture

Up to 1TB DDR4-2133MHz (16x DIMMs)

1x Dedicated Management Port

Built-in 2x 40Gb Ethernet interfaces

1x PCIe 3.0 x16 Low Profile Expansion Slot

1x 2.5" SATA SSD/HDD