

ASUS Announces ESC4000 G2S Series HPC GPU Servers

GPU server with optimized thermal design for extreme computing power, 8+1 expansion slots and support for diverse range of graphics cards and accelerators

Cernusco sul Naviglio, 3 aprile 2014. ASUS today announced ESC4000 G2S, a new 2U-sized server series based on the dual Intel Xeon E5-2600 v2 processor platform and designed for use in environments that demand high-density GPU/coprocessor servers.

The new ESC4000 G2S series servers feature a highly optimized thermal design, six hot-swappable 2.5-inch SATA drive bays and nine PCI Express 3.0 (PCIe 3.0) x16 expansion slots. The innovative and thoughtful design delivers high-density computing power, easy scalability and exceptional energy efficiency, making ESC4000 G2S series servers the ideal choice for applications in the high-performance computing (HPC) fields of life and medical sciences, engineering science, financial modeling and virtualization.

Streamlined design for improved airflow and lower running costs

To provide the perfect solution for HPC scenarios, ESC4000 G2S series servers feature vertically-oriented hard disk drive (HDD) bays. This smart arrangement frees up space on either side of the drive bays, allowing stronger and more direct airflow from the front panel to the GPUs and other components, delivering better energy efficiency and power savings — and that means reduced running costs.

Additionally, this streamlined airflow to the heat-generating components allows both the power consumption and temperature to be reduced: compared to previous-generation ESC4000 G2 servers, with the fans at full speed the GPUs in G2S servers up to 10% (9°C) cooler; they also require up to 39W less energy and run up to 6.6% (5°C) cooler than previous models. As well as providing improved efficiency, ESC4000 G2S servers' optimized airflow allows better performance for mission-critical calculations and applications.

ESC4000 G2S series servers are also fitted 80 PLUS® Platinum-certified 1+1 redundant power supplies that are up to 94% energy efficient, further reducing power consumption and lowering energy bills.

Superb GPU support and extensive expansion capabilities

The new ASUS ESC4000 G2S servers are compatible with a wide variety of expansion cards, including the latest Intel® Xeon Phi™ 7120P, 5110P and 3100 series, the NVIDIA® Tesla (K10, K20 and K40) and GRID™ GPU accelerator families, and also AMD FirePro™ graphic cards.

ESC4000 G2S servers also carry extensive expansion capabilities, with up to 8+1 PCIe 3.0 x16 slots. An additional expansion slot is reserved for the ASUS PIKE (Proprietary I/O Kit Expansion) card, providing a simple and cost-effective path for SAS/SATA storage upgrades for multiple RAID configurations.

SPECIFICATIONS¹

Processor	Dual Intel® Xeon processor E5-2600 v2 product family
Core Logic	Intel C602 PCH
Memory	16 x DDR3 DIMM Slots (Up to 512GB R-DIMM)
Expansion slots	Total: 8+1 (Low-Profile or PIKE card) - 8 x PCIe 3.0 x16 slots (x8 link) or 4 x PCIe 3.0 x16 slots (x16 link) - 1 x PCIe 3.0 x 16 Slot (x8 link) (Low-profile) or 1 x PIKE Slot (w/riser cards, x4 link)
RAID support	SATA: Intel C602 Chipset Intel RSTe :RAID 0,1,10,5 (Windows) LSI MegaRAID; RAID 0,1 (Windows/Linux) SAS: (Optional ASUS PIKE) PIKE 2308: F/W RAID 0,1,10,1E PIKE 2208: H/W RAID 0,1,10,5
HDD bays	6 x hot-swappable 2.5in bays
Networking	2 x Intel GbE LAN (82574L) + 1 x Management LAN
InfiniBand	Mellanox Connect-X3 FDR InfiniBand 56Gbit/s (ESC4000/FDR G2S only)
Graphics	AST2300 / 16MB
Remote-Management Software	ASMB6-iKVM
Regulatory	FCC (Class A), CE ,BSMI
Dimensions	2U (750 x 444 x 88mm)
PSU	1+1 80 PLUS Platinum RPSU (1620W redundant power supply)

¹ Specifications, content and product availability are all subject to change without notice and may differ from country to country. Actual performance may vary depending on applications, usage, environment and other factors.

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About ASUS

ASUS is a worldwide top-three consumer notebook vendor and maker of the world's best-selling, most award-winning, motherboards. A leading enterprise in the new digital era, ASUS designs and manufactures products that perfectly meet the needs of today's digital home and office, with a broad portfolio that includes motherboards, graphics cards, optical drives, displays, desktop and all-in-one PCs, notebooks, netbooks, servers, multimedia devices, wireless solutions, networking devices, tablets and smartphones. Driven by innovation and committed to quality, ASUS won 4,256 awards in 2013 and is widely credited with revolutionizing the PC industry with its Eee PC™. ASUS has more than 12,500 employees around the globe with a world-class R&D team of 3,800 engineers. Company revenue for 2013 was approximately US\$14 billion.

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