

Data Sheet

FUJITSU PRIMERGY NVIDIA® Tesla® K20 and K20X GPGPU

PRIMERGY server meet requirements for HPC GPGPU clusters

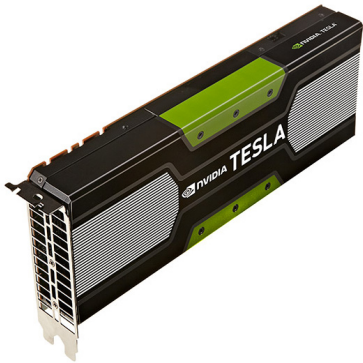
With the ever-increasing demand for more computing performance, systems based on CPUs alone, can no longer keep up. The CPU-only systems can only get faster by adding thousands of individual computers – this method consumes too much power and makes supercomputers very expensive. A different strategy is parallel computing, and the HPC industry is moving toward a hybrid computing model, where Co-Processors and CPUs work together to perform general purpose computing tasks. As parallel processors, GPUs excel at tackling large amounts of similar data because the problem can be split into hundreds or thousands of pieces and calculated simultaneously.

PRIMERGY NVIDIA® Tesla® K20 and K20X GPGPU

Through the application-acceleration cores per board, Tesla processors offload parallel computations from the CPU to dramatically accelerate the floating point calculation performance. By adding a Tesla processor, engineers, designers, and content creation professionals accelerate some of the most complex tools exponentially faster than by adding a second CPU. With more than one teraflop peak double precision performance, the Tesla K20/K20X is ideal for a wide range of high performance computing workloads.

It's an unbeatable solution for getting more done in less time. Tesla K20 and K20X companion

processors deliver parallel processing power right at the desk, capable of streamlining the way users work every day. This means you can now explore, discover and deliver higher-quality projects faster than you ever thought possible.



Main Features	Benefits
■ K20 = 2496 Cores; K20X=2688 Cores	■ Tesla K20 delivers up to 3.52 / 1.17 teraflops, the Tesla K20X delivers up to 3.95 / 1.31 teraflops of single / double-precision peak performance
■ ECC Memory	■ Meets a critical requirement for computing accuracy and reliability in datacenters and supercomputing centers. Offers protection of data in memory to enhance data integrity and reliability for applications. Register files, L1/L2 caches, shared memory, and external DRAM all are ECC protected.
■ up to 5 GB / 6 GB of GDDR5 MEMORY per GPU	■ Maximizes performance and reduces data transfers by keeping larger data sets in local memory that is attached directly to the GPU.
■ NVIDIA Gigathread Engine	■ Maximizes the throughput by faster context switching that is 10X faster than previous architecture, concurrent kernel execution and improved thread block scheduling.

Technical details

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Card category	Coprocessor
Single Precision	up to: 3.52 teraflops / 3.95 teraflops
Double Precision	up to: 1.17 teraflops / 1.32 teraflops
Graphics memory speed	2.6 GHz
Graphics memory interface	320-bit 384-bit
Graphics memory bandwidth	208 GB/sec 250 GB/sec
Slot	PCIe Gen2 x16
Formfactor	Full height (double slot density)
Max. number per system unit	2x in PRIMERGY RX350 S7 / S8 2x in PRIMERGY TX300 S7 / S8 1x in PRIMERGY CX270 S2
Operating system	RHEL 5.8 RHEL 6.1 RHEL 6.2 RHEL 6.3 RHEL 6.4 SLES 11 SP2 Windows® Server 2008 R2 Windows® Server 2012
Graphics card notes	To be used for CPU acceleration in HPC environments, no graphic output

Order code	Brand name	Graphics cores	Graphics memory size
S26361-F2222-E22	NVIDIA® Tesla™ K20	2496 cores	5 GB GDDR5 with ECC
S26361-F2222-E23	NVIDIA® Tesla™ K20	2496 cores	5 GB GDDR5 with ECC
S26361-F2222-E24	NVIDIA® Tesla™ K20X	2688 cores	6 GB GDDR5 with ECC
S26361-F2222-E25	NVIDIA® Tesla™ K20X	2688 cores	6 GB GDDR5 with ECC

Environmental

Power consumption	225 W / 235 W
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Compliance

Compliance notes	According to the corresponding system
Compliance link	http://globalsp.ts.fujitsu.com/sites/certificates

More information

Fujitsu OPTIMIZATION Services

In addition to Fujitsu with PRIMERGY NVIDIA® Tesla® K20 and K20X GPGPU, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio

Build on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offering. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Computing Products

www.fujitsu.com/global/services/computing/

Software

www.fujitsu.com/software/

More information

Learn more about Fujitsu PRIMERGY NVIDIA® Tesla® K20 and K20X GPGPU, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website. www.fujitsu.com/fts

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.

Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT. Please find further information at <http://www.fujitsu.com/global/about/environment>



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