



NVIDIA® TESLA® P100 GPU ACCELERATOR

World's most advanced data center accelerator for PCIe-based servers

HPC data centers need to support the ever-growing demands of scientists and researchers while staying within a tight budget. The old approach of deploying lots of commodity compute nodes requires huge interconnect overhead that substantially increases costs without proportionally increasing performance.

NVIDIA Tesla P100 GPU accelerators are the most advanced ever built, powered by the breakthrough NVIDIA Pascal™ architecture and designed to boost throughput and save money for HPC and hyperscale data centers. The newest addition to this family, Tesla P100 for PCIe enables a single node to replace half a rack of commodity CPU nodes by delivering lightning-fast performance in a broad range of HPC applications.

MASSIVE LEAP IN PERFORMANCE

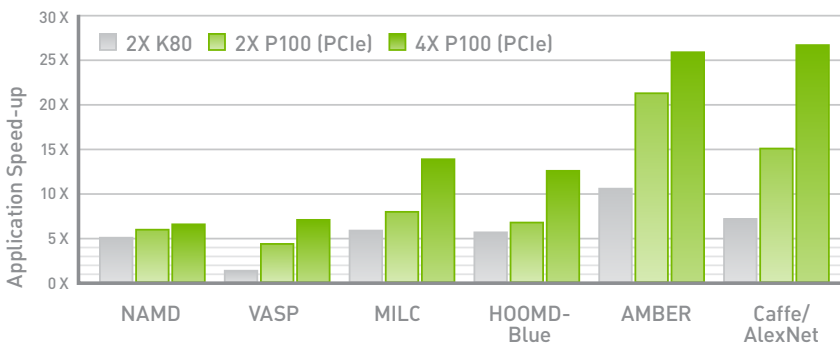


SPECIFICATIONS

| | |
|------------------------------|---|
| GPU Architecture | NVIDIA Pascal |
| NVIDIA CUDA® Cores | 3584 |
| Double-Precision Performance | 4.7 TeraFLOPS |
| Single-Precision Performance | 9.3 TeraFLOPS |
| Half-Precision Performance | 18.7 TeraFLOPS |
| GPU Memory | 16GB CoWoS HBM2 at 732 GB/s or 12GB CoWoS HBM2 at 549 GB/s |
| System Interface | PCIe Gen3 |
| Max Power Consumption | 250 W |
| ECC | Yes |
| Thermal Solution | Passive |
| Form Factor | PCIe Full Height/Length |
| Compute APIs | CUDA, DirectCompute, OpenCL™, OpenACC |

TeraFLOPS measurements with NVIDIA GPU Boost™ technology

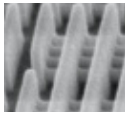
NVIDIA Tesla P100 for PCIe Performance



Dual CPU server, Intel E5-2698 v3 @ 2.3 GHz, 256 GB System Memory, Pre-Production Tesla P100

A GIANT LEAP IN PERFORMANCE

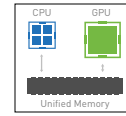
Tesla P100 for PCIe is reimaged from silicon to software, crafted with innovation at every level. Each groundbreaking technology delivers a dramatic jump in performance to substantially boost the data center throughput.



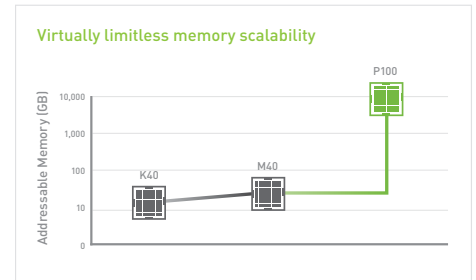
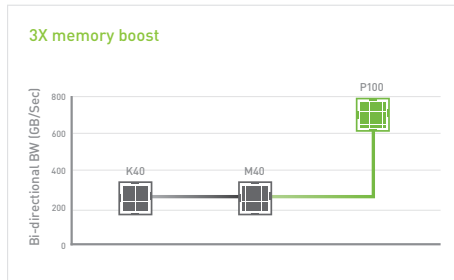
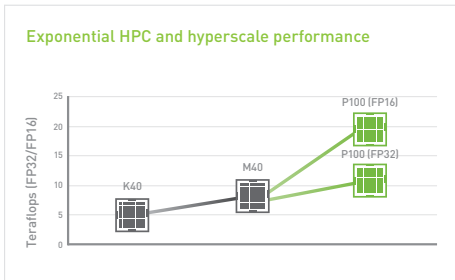
PASCAL ARCHITECTURE
More than 18.7 TeraFLOPS of FP16, 4.7 TeraFLOPS of double-precision, and 9.3 TeraFLOPS of single-precision performance powers new possibilities in deep learning and HPC workloads.



COWOS HBM2
Compute and data are integrated on the same package using Chip-on-Wafer-on-Substrate with HBM2 technology for 3X memory performance over the previous-generation architecture.



PAGE MIGRATION ENGINE
Simpler programming and computing performance tuning means that applications can now scale beyond the GPU's physical memory size to virtually limitless levels.



To learn more about the Tesla P100 for PCIe visit www.nvidia.com/tesla

