



HPE NEC VECTOR ENGINE ACCELERATOR MODULE (Q7G75A)

Server Accelerators



WHAT'S NEW

- Vector processor system in a PCIe form factor hosted by a standard x86 server running a Linux® operating system as the user front end.
- Developed using 16nm FinFET process technology for extreme high performance and low power consumption.
- Exceptional integration of six HBM2 memory modules and vector processor

OVERVIEW

Are you looking for a mean to unleash your memory bandwidth bounded applications?

The NEC Vector Engine Accelerator with its unmatched memory bandwidth per core offers a balanced architecture for your Fortran and C/C++ codes to shine. Extremely large amount of data can be processed per cycle thanks to the native vector architecture. Moreover, users can easily exploit these capabilities via a standard development environment leveraged from the past decades of the vector supercomputers

using Chip-on-Wafer-on-Substrate technology, leading to an outstanding memory bandwidth of 1.2 TB/s.

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FEATURES

High Memory Bandwidth

The NEC Vector Engine Accelerator has six integrated HBM2 modules providing 48 GB capacity and 1.2 TB/s bandwidth.

Shared last level cache between the eight cores, facilitating shared memory parallelization.

Standard Programming Environment

The NEC Vector Engine Accelerator does not require users to migrate their applications to a new programming environment. Existing Fortran and C/C++ codes will not have to be ported but simply recompiled for the NEC Vector Engine processor.

Full software environment is available with compilers, libraries and tools, leveraged from decades of experience with vector machines. Compilers are able to vectorize and auto-parallelize loops. Parallelization with OpenMP and MPI is supported.

Technical specifications

HPE NEC Vector Engine Accelerator Module

Product Number (SKU)	Q7G75A
Peak Double Precision Performance	2.15 TFLOPS DP
Peak Single Precision Performance	4.3 TFLOPS SP
Number of accelerators per card	One vector processor
Cores	8 cores per processor
Memory size per board	48GB HBM2
Memory bandwidth for board	1.2 TB/s
Accelerator applications	HPC and AI
Architecture features	8 core processor, 1.4GHz, 16MB cache. 64 registers per core, each with 256 8-bytes-width entries.
System	Vector processor system available as a double-width PCIe standup card to be hosted by a Linux® x86 server
Minimum dimensions (H x W x D)	3.78 x 26.67 x 11.13 cm
Weight	1.18 kg
Warranty	For details on HPE Qualified Options Limited Warranty visit: 1-year parts, 0-year labor, and 0-year on-site support coverage. For more warranty information refer to http://h20564.www2.hp.com/hpsc/wc/public/home



For additional technical information, [available models and options](#), please [reference the QuickSpecs](#)

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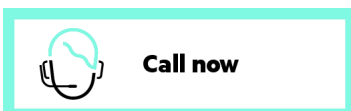
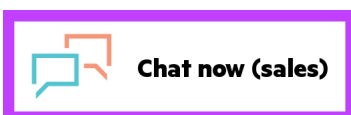
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