

Quick Take

HPC User GPU/Accelerator/Coprocessor Preferences for Next Technical Server Acquisitions

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Hyperion Research recently conducted in-depth interviews with one or more representatives of 103 HPC sites representing nearly 1,000 HPC systems around the world and asked them what their preference would be for GPU/Accelerator/Coprocessors in their next technical server acquisition. The following table is one of the results of that survey.

TABLE 1

GPU/Accelerator/Coprocessor Preference for their Next Technical Server

	Government Sites	Academic Sites	Industrial Sites	Overall
Plan to buy in our next server	77.7%	87.5%	70.6%	76.7%
Purchase Preferences:				
NVIDIA GPU	16.7%	52.5%	29.4%	36.9%
Intel Phi	25.0%	17.5%	17.6%	18.4%
FPGA	8.3%	5.0%	13.7%	9.7%
ATI (ATI/AMD Fusion Processors)	0.0%	7.5%	3.9%	4.9%
TI/DSP	8.3%	2.5%	2.0%	2.9%
Other	8.3%	2.5%	3.9%	3.9%
Don't plan to buy them in next server	33.3%	12.5%	29.4%	23.3%
N=103 HPC Buyers				

Source: Hyperion Research, 2017

ANALYST OPINION

In the GPU/accelerator/co-processor space, NVIDIA takes the lead, with 36.9% of participants identifying the NVIDIA GPU as their likely preference for a next technical server purchase. Intel's MIC/Xeon Phi follows, winning a positive vote from 18.4% of respondents, and FPGAs garnered almost 10% of the choice for next technical server acquisition.

- However, almost one-quarter (23.3%) of all sites surveyed indicated that they would not be using any kind of GPU/accelerator/coprocessor in their next technical server.

Additional analysis of this data reveals some interesting variations in GPU/accelerator/co-processor preference by sector: Within the government sector, Intel's MIC/Xeon Phi is the preferred choice, with 25.0% of respondents. Only 16.7% respondents picked the NVIDIA GPU. Also, of all segments surveyed, the government sites were most likely (33.3%) to have no plans to any GPU/accelerator/coprocessors in their next technical server.

- However, Government buyers were the most open-minded to alternative devices citing equal preference (8.3%) for FPGAs, TI/DSPs, and other custom devices for their next technical server acquisition.

Among academic sites, NVIDIA's GPU was the overwhelming preference for next technical server procurements (52.5%), with Intel's MIC/Xeon Phi a distant second at 17.5%

- Academic sites were the most interested in the ATI/AMD Fusion chip (7.5%), compared with only 3.9% interest in the industrial sector, and zero interest in the government sector.
- Of all segments surveyed, the academic segment was the most likely (87.5%) to use some form of GPU/accelerator/ coprocessor hardware in their next system.

The industry sector equally favors the NVIDIA GPU and the Intel MIC/Xeon Phi at 29.4%. Industry also expressed the most interest (13.7%) in using FPGAs in their next generation servers.

Note: This data was taken from the recently published larger Hyperion Research study entitled, 2017 End-user MCS: *Technical Computing: Servers, Processors, and Coprocessors, Current Usage Levels, Drivers, and Forecasts*.

For more information on how to obtain the complete study, contact bsorensen@hyperionres.com

About Hyperion Research, LLC

Hyperion Research, consisting of the former IDC high performance computing (HPC) analyst team, provides HPC information, analysis, and recommendations based on technology and market trends. Research includes market sizing and forecasting, share tracking, segmentation, technology and related trend analysis, and both user & vendor analysis for multi-user technical server technology used for HPC and HPDA (high performance data analysis). We provide thought leadership and practical guidance for users, vendors and other members of the HPC community by focusing on key market and technology trends across government, industry, commerce, and academia.

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