

CoreModule™ FX300

Compact FPGA expansion module for Dell EMC PowerEdge FX2



Benefits & Features

Key Features

- Unique PCIe module that enables FPGA accelerators to be installed in the Dell PowerEdge FX2s
- Increase agility, flexibility and efficiency while supporting tough new workloads
- Designed to fit inside the FX2s chassis to maintain FX2 architecture and density advantages
- Up to 8x modules in a single 2U FX2s chassis
- Up to 4x modules assigned to a single compute sled

Powerful FPGA Accelerators

- Each CoreModule FX300 supports a single Intel® Programmable Acceleration Card with Intel® Arria® 10 GX FPGA
- Supported by the Acceleration Stack for Intel XEON CPUs
- 1150K logic elements for powerful processing
- Energy efficient using only 70W

Easy Installation and Management

- Designed to fit into the FX2s enclosure PCIe expansion slots
- Fully integrated with FX2 management tools for simple and rapid deployment
- Supports the standard FX2s PCIe slot mapping and configuration options
- Easily mix with other FX2s compatible expansion modules

FPGA accelerator to upgrade Dell EMC PowerEdge FX2 infrastructure

The Amulet Hotkey® CoreModule™ FX300 is a unique, single slot PCIe expansion module incorporating an Intel® Programmable Acceleration Card (PAC) with the Intel® Arria® 10 GX FPGA. It is designed to be installed in an Dell EMC PowerEdge FX2s enclosure.

It provides data centers with both in-line and look-aside acceleration, high-performance and outstanding versatility. It is fully compatible with the Acceleration Stack for Intel Xeon CPUs with FPGAs. This stack provides a common developer interface for both application and accelerator function developers.

Perfect for new deployments or when modernizing existing FX2 infrastructure, the CoreModule FX300 enables organizations to:

- **Extend ROI:** to further enhance the FX2 business value
- **Enhance data processing performance:** with powerful FPGA resources
- **Boost Productivity:** with rapid graphics and GPU compute acceleration

Targeted Workloads

The CoreModule FX300 runs the Intel PAC in the FX2s enclosure at full power to provide hardware acceleration for:

- Big data analytics
- Artificial intelligence
- Video transcoding
- Cyber security
- High-performance computing (HPC), such as genomics and oil and gas
- Financial technology, or FinTech

Architected for scalability and efficiency

Amulet Hotkey designed the CoreModule FX300 to deliver superior scalability, reliability and performance. Install up to eight CoreModule FX300 units in a single, suitably powered FX2s enclosure with up to four CoreModule FX300 devices allocated to a single computer sled.



In partnership with:



Related products



CoreStation VFC640 14G blade server to refresh FX2s



KT-FX2S-001 FX2s enclosure upgrade kit for FX2 deployments



Sales

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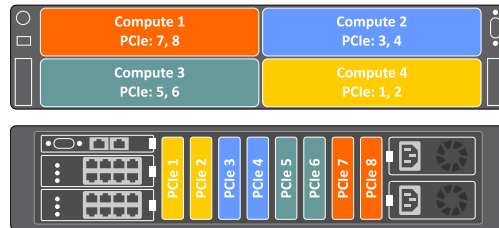
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PCIe Slot Mapping with Computer Blades

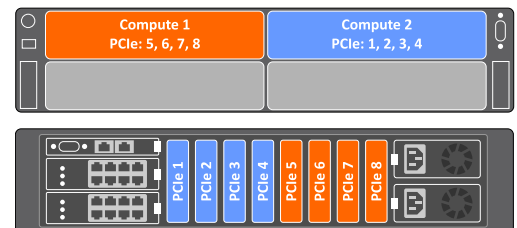
When using four compute blades in an FX2s chassis, two PCIe slots are automatically mapped to each blade.

No additional configuration is necessary.



PCIe Slot Mapping with Storage Blades

Four PCIe slots can be assigned to a compute blade for up to two blades in an FX2s chassis. Slot re-assignment is automatic when using FD332 storage blades in the remaining bays. Alternatively, the CMC can be used to manually reassign PCIe slots.



Dimensions



Specifications

Form factor:	Single-width expansion module for Dell PowerEdge FX2s enclosure
Power:	Up to 70 W per slot for CoreModule FX300 supplied by the FX2s enclosure. 2400 W PSUs (Dell 450-AGFW) recommended for configurations with higher power compute sleds. Power requirements may be calculated using Dell Enterprise Infrastructure Planning Tool (EIPT). Ask for assistance.
FX300 Management:	Fully integrated with the FX2s Chassis Management Controller (CMC) and blade server iDRAC for system configuration and lifecycle management
FPGA Management:	Platform Level Data Model (PLDM); IPMI 2.0
FPGA Thermals:	55°C TLA; 650 LFM
FPGA:	Intel® Arria® 10 GX FPGA - 10AX115N2F40E2LG
FPGA Memory:	8 GB DDR4, 2 banks; 128 MB flash; 65.7 MB on-chip
Cooling:	Forced air cooling from FX2s enclosure over passive heat sinks
Interfaces:	PCIe X8 Gen3 electrical, X16 mechanical; 1x QSFP+ with 4X 10 GbE support
Logic elements:	1150 K available; 3036 digital signal processing (DSP) blocks

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