

# CoreModule

## GPU Acceleration for MX7000

When you're working with complex and graphically demanding workloads, it is essential to have an efficient, reliable virtual desktop and performance computing environment. The Amulet Hotkey CoreModule is a unique, compact core expansion module that facilitates graphics virtualization and GPU compute acceleration for Dell EMC's PowerEdge MX7000 Modular Chassis platform. Designed with Dell compatibility in mind, it enhances the compute capability of the MX7000 sled infrastructure.



### Powerful GPU Accelerators for MX7000

For new deployments or when modernizing existing infrastructure:

- **Maximize business value:** by expanding workload support
- **Enhance user experience:** with graphics/remote display protocol offload
- **Boost productivity:** with rapid graphics and GPU compute acceleration
- **Upgrade flexibility:** up to 16 NVIDIA Tesla T4 GPUs, installed in pairs

### Flexibility for Demanding and Evolving Workloads

Deploy GPU acceleration in private, public and hybrid environments to support challenging workloads that require agility and flexibility. MX7000 servers with CoreModules combine Intel Xeon Scalable processor and NVIDIA Tesla GPU accelerator performance with the versatility, scalability, and efficiency of the MX7000 platform for:

- **Virtual desktops:** includes simplifying migration to Windows 10 VDI
- **Virtual workstations:** with advanced visualization and computing
- **Application delivery:** such as 3D CAD and enhanced e-store applications
- **GPU accelerated computing:** for IoT, HPC, data analytics, AI, deep/machine-learning, training, inferencing and more



### CoreModule Key Features

- Unique core expansion module enables GPU accelerators in Dell EMC PowerEdge MX
- Compatible with next-generation Dell EMC MX7000 Modular Chassis
- Interfaces with Dell EMC PowerEdge MX740c or MX840c compute sleds for superior scalability, reliability and performance
- Compact design fits inside MX7000 to maintain architecture and density advantages



### Powerful GPU Accelerators

- NVIDIA Turing GPU Architecture with NVIDIA Turing™ Tensor Cores and ray tracing RT cores
- Supports NVIDIA GRID, Quadro vDWS Software and NVIDIA Tesla HPC and learning frameworks
- Video encode/decode acceleration, including H.264/H.265 (HVEC)
- Supports leading hypervisor and virtualization solutions from VMware, Citrix, Microsoft and more
- One CoreModule can hold up to eight NVIDIA Tesla T4s in four CoreCartridges
- Up to two CoreModules in a MX7000 chassis generate up to 16x GPU for 256GB vRAM

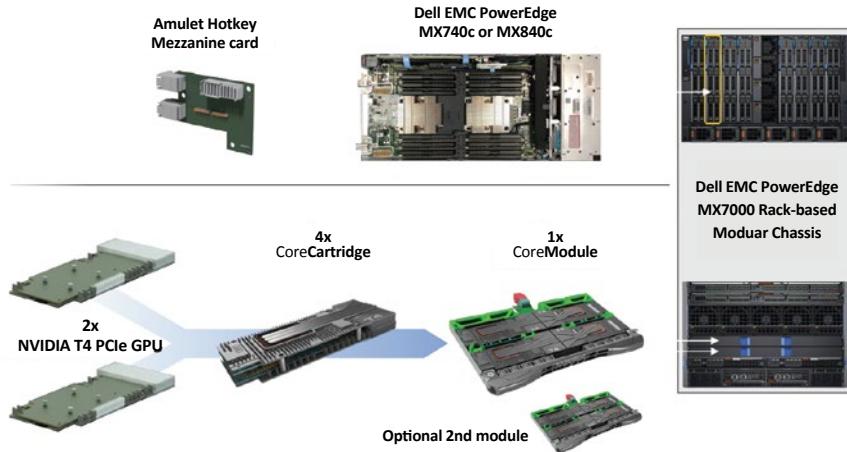


### Easy Installation and Configuration

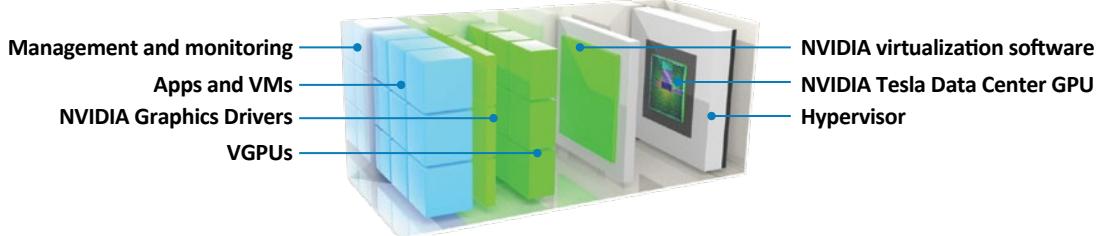
- CoreModules fit into the MX7000 Fabric B
- Amulet Hotkey Mezzanine card provides a dedicated, reliable and low-latency PCIe connection between the compute sled and CoreModule
- Integrated with MX7000 management tools for simple and rapid deployment

## Example System

A Dell EMC PowerEdge MX740c compute sled within the Dell EMC PowerEdge MX7000 communicates via an Amulet Hotkey Mezzanine card with a GPU in a CoreCartridge in the CoreModule. Each CoreCartridge contains two NVIDIA Tesla T4 PCIe GPUs. A single, fully populated CoreModule can provide GPU acceleration for up to eight MX740c compute sleds. The CoreModule installs in fabric B1 or B2. With two populated CoreModules, each MX740c compute sled can access two GPUs or up to four GPUs for the MX840c.



## Software Defined Data Center



## Simplify Migration to Windows 10 VDI

The increased graphics demands of Windows 10 applications drives the need for GPU acceleration to offload server CPUs and to improve the user experience. GPUs also enable organizations to realize VDI benefits for performance workstations with the density and efficiency of the PowerEdge MX architecture combined with graphics and compute acceleration.

## Software Defined Agility and Flexibility

Incorporating GPUs into PowerEdge MX deployments creates a powerful base for a software-defined data center stack of virtualized compute, storage, and networking resources. Together they are ideally suited for workloads that require both CPU and GPU compute resources including IoT, data analytics, HPC, AI and machine and deep learning frameworks. NVIDIA Tesla drivers and software support more than 600 GPU-accelerated applications.



### EMEA Sales

+44 (0)20 7960 2400  
emeasales@amulethotkey.com

### N America Sales

+1 (212) 269 9300  
ussales@amulethotkey.com

### APJ Sales

+61 409 930 884  
apsales@amulethotkey.com

### LATAM Sales

latamsales@amulethotkey.com

### Defence and Security

security@amulethotkey.com

### Technical Support

eurosupport@amulethotkey.com  
usssupport@amulethotkey.com  
latamsupport@amulethotkey.com  
apsupport@amulethotkey.com