

PRODUCT BRIEF | CXL

CMM-NVDIMM

CXL MEMORY MODULE NON-VOLATILE NVDIMM

Compute Express Link™ (CXL™) is a high-speed interconnect offering coherency and memory semantics using high-bandwidth low-latency connectivity between the host processor and devices including memory based modules. CXL leverages the PCI-Express™ (PCIe™) physical layer for high-speed connectivity between memory and host processors. By taking advantage of the existing architecture found in servers CXL promises to provide transformational capability without incurring additional investment in infrastructure. Viking's expertise is suited for developing products in this space.

Viking is partnering with other industry leaders to develop products using the CXL protocol, including an introductory product that will provide persistent memory expansion. The application for the device will include expanding persistent memory capacity to local host platforms, or as a part of a memory pooling appliance, etc.

CAPACITY & PERFORMANCE

- ▶ Up to 64 GB DDR4 memory capacity, 128 GB DDR4 in early 2025
- ▶ PCIe Gen5 Add-In Card (AIC), Full Height, Half Length, consisting of up to four DDR4 NVDIMMs

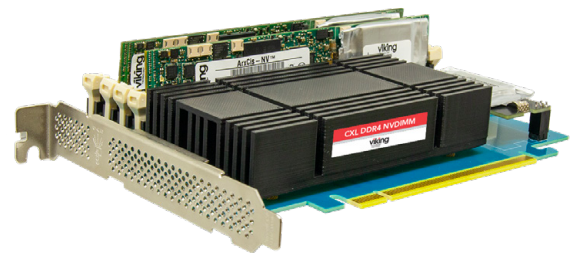
APPLICATIONS

Traditional Database with accelerated logging & journaling

Storage for caching & tiering

AI/ML/Analytics with real time access to large database & faster checkpointing

AHPC with checkpointing overhead reduction



FEATURES

- ▶ CXL standard Type 3 memory expander Rev 2.0 with persistent memory capability
- ▶ DDR4 SDRAM NVDIMM compliant to SNIA standard
- ▶ Load/Store access to Storage Class Memory
- ▶ Supports CXL Global Persistent Flush
- ▶ Data Persistence across power loss

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PERFORMANCE	CONFIGURATION	CAPACITY	NVDIMM SPEED	BACKUP ENERGY
TBD	4 NVDIMMs	64 GB	2666	Platform provided
TBD	4 NVDIMMs	64 GB	2666	Integrated
TBD	2 NVDIMMs	32 GB	2933	Integrated
TBD	1 NVDIMM	16 GB	2933	Integrated
TBD	4 RDIMMs	64 GB	2666	N/A
TBD	2 RDIMMs	32 GB	2933	N/A
TBD	1 RDIMM	16 GB	2933	N/A

RELIABILITY, AVAILABILITY & SERVICEABILITY (RAS):

- Supports CXL Global Persistent Flush
- Data Persistence across power loss
- Self-contained energy source for module data back during power failure
- High-reliability CXL with end-to-end robust data error containment
- End-to-end data integrity protection and ECC protection on internal and external memory
- CXL & NVDIMM diagnostics
- Secure boot and secure firmware update



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