

QCT Next-generation NVMe Storage Servers featuring Excelero NVMeMesh



Leverage low latency NVMe flash with highly efficient software-defined storage to unlock next-level performance for the most demanding workloads

Solution Overview

Deploying NVMe flash in a distributed manner leveraging software-defined storage enables you to maximize performance and capacity utilization and create new business opportunities. QCT partners with Excelero, world leader in elastic NVMe, to leverage the high IOPs performance capabilities of NVMe flash at scale without the traditional data transmission bottlenecks. Together we introduce Excelero NVMeMesh on QCT All-NVMe storage servers: QxStor Excelero NVMeMesh, was designed to provide you the best-fit solution for high performance computing (HPC), enterprise databases, and mission-critical workloads .

Solution Highlight:



Pre-validated All-NVMe scalable 1U server



Linear scalability and low latency



Centralized management and serviceability

Use Cases :

- High Performance Computing & AI
- Enterprise Databases
- Mission-critical workloads

The QCT All-NVMe Storage Server offers a world-class high density 1U chassis with 12 2.5" hot-pluggable NVMe SSD drives, based on the latest Intel® Xeon® Scalable Processor and Mellanox ConnectX®-5 Remote Direct Memory Access (RDMA) technology, with 100GbE PCIe and Open Compute Project (OCP) interfaces. This server also includes enhanced serviceability and a pre-validated design to ensure this new solution is easy to deploy and adopt.

The All-NVMe Storage Server from QCT with Excelero NVMeMesh enables customers to use NVMe across the network with local performance. The joint solution brings impressive performance benefits for mission-critical workloads. Excelero's unique elastic NVMe architecture ensures unlimited scalability and highest efficiency.

Excelero NVMeMesh

Excelero's NVMeMesh enables shared NVMe across any network and supports any local or distributed file system. The solution features an intelligent management layer that abstracts underlying hardware with CPU offload, creating logical volumes with redundancy, and providing centralized, intelligent management and monitoring. With Excelero's NVMeMesh, applications can enjoy the latency, throughput and IOPs of a local NVMe device with the convenience of centralized storage while avoiding proprietary hardware lock-in and reducing the overall storage TCO.

NVMeMesh was built to give customers maximum flexibility in designing storage infrastructures. For that reason, customers can choose the network fabric and protocol that best meets their performance or efficiency requirements. NVMeMesh supports the widest selection of supported protocols and fabrics, including TCP/IP, InfiniBand, RoCE v2, RDMA and NVMe-oF. NVMeMesh offers flexible protection levels for differing application needs, including mirrored and parity-based redundancy. It provides performance analytics for pinpointing anomalies quickly and at scale. NVMeMesh is deployed as a virtual, distributed non-volatile array and supports both converged and disaggregated architectures, giving customers full freedom in their architectural design.

Converged and Disaggregated Infrastructures

The All-NVMe Storage Server from QCT with Excelero NVMeMesh was designed and validated for a variety of workloads that require high throughput, IOPs, and/or low latency. The reference architecture is particularly optimized to overcome those challenges as it enables customers to leverage the combined performance capacity of all NVMe SSD's across the network with practically no overhead. The solution also features high availability and can be deployed in both converged and disaggregated architectures.



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Servers featuring
Excelero NVMesh



Found at:
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QCT authorized partner

Specification (QCT appliance)



Model	QuantaGrid D52B-1U	
Infrastructure	Converged	Disaggregated
Form Factor	1U	1U
CPU	(2) Intel® Xeon® Gold 6230 Processor	(2) Intel® Xeon® Silver 4110 2.10GHz
Memory	(12) 16GB 2666MHz DDR4	(12) 16GB 2666MHz DDR4
Network	(2) Mellanox ConnectX-5, Single/Dual-Port100G	(2) Mellanox ConnectX-5, Single/Dual-Port100G
Storage	(2) M.2 256GB (12) 2.5" NVMe SSD	(2) M.2 256GB (12) 2.5" NVMe SSD
Minimum Node	1 node	1 node

* QCT appliance with one socket design based on AMD ROME platform for QxStor Excelero NVMesh is coming soon

About Excelero

Excelero delivers low-latency distributed block storage for hyperscale applications such as AI, machine learning and GPU computing, in the Cloud and on the Edge. Founded in 2014 by a team of storage veterans and inspired by the Tech Giants' shared-nothing architectures for web-scale applications, the company has designed a software-defined block storage solution that meets the low-latency performance and scalability requirements of the largest web-scale and enterprise applications.

Excelero's distributed NVMe technology enables customers to benefit from the performance of local flash with the convenience of centralized storage while avoiding proprietary hardware lock-in and reducing the overall storage TCO. Excelero's storage software is deployed by major web-scale customers, for data analytics and machine learning applications and in Media & Entertainment post-production and HPC environments.

About QCT

Quanta Cloud Technology (QCT) is a global datacenter solution provider extending the power of hyperscale datacenter design in standard and open SKUs to all datacenter customers.

Product lines include servers, storage, network switches, integrated rack systems and cloud solutions, all delivering hyperscale efficiency, scalability, reliability, manageability, serviceability and optimized performance for each workload.

QCT offers a full spectrum of datacenter products and services from engineering, integration and optimization to global supply chain support, all under one roof.

The parent of QCT is Quanta Computer Inc., a Fortune Global 500 technology engineering and manufacturing company.

<http://www.QCT.io>

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