








## An Optimized and Scalable High Performance Computing / Deep Learning Solution

Quanta Cloud Technology (QCT) offers cutting-edge High Performance Computing (HPC) / Deep Learning (DL) solution that integrates adaptive hardware with software stacks and vertical applications. This unique solution combines QCT's best-in-class infrastructure with high-bandwidth and low-latency interconnect. Furthermore, QCT's solution offers seamless connectivity with leading parallel file systems, to provide a scalable cluster architecture for supercomputing users. QCT delivers its starter kit with comprehensive software tools, which comply with OpenHPC conventions, to simplify deployment processes and to speed time-to-market. The QCT QxSmart HPC/DL solution is a fast and reliable way to build a HPC or deep learning environment across many industries, while reducing the time and effort to implement projects.

### Solution Highlights

-  Starter kit and integrated system to speed time-to-market
-  Software installation, system and rack assembly to simplify deployment processes

### Benefits

-  Power HPC systems with the latest technology
-  Reduce effort spent on system integration
-  Scale out on-demand with modularized architecture designs



Intel® Xeon® Scalable Processor  
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### What QCT HPC/DL Solution Can Offer

The QxSmart HPC/DL Solution is composed of validated software tools and industrial applications powered by QCT's infrastructure platform. This architecture simplifies the deployment process and minimizes time-to-value, which brings huge benefits to end users, administrators, and developers.

#### End Users:

- ✓ Accelerate time-to-value through the QCT Starter Kit
- ✓ Speed up productivity with intelligent workload management

#### Administrators:

- ✓ Simplify complex IT environments
- ✓ Streamline cluster deployment, monitoring, and management

#### Developers:

- ✓ Compile on de facto standard application frameworks
- ✓ Maximize ROI on comprehensive software tools

### HPC/DL Software Stack

HPC/DL Applications										
NIS	Torque / SLURM / Moab / PBS Pro			Firewall	Intel/GNU/PGI Compilers & Libraries		MPICH/MVAPICH2 OpenMPI / Intel MPI	Hadoop / Spark	Caffe2 / TensorFlow Keras / CUDA	
User Authentication	Resource Management	Job Scheduling	Task Launching	Network Security	Compilers & Math Libraries		Application Frameworks			
DHCP/PXE	Cobbler / Ansible / Warewulf	Pacemaker Corosync	Ganglia	Nagios	Collectl	QSM	PDSH	Lmod / Modules	Docker	Singularity
System Deployment		System Monitoring				System Operation		System Environment		
Network File System			Lustre File System			BeeGFS File System			Network and Parallel Distributed File System	
Red Hat Enterprise Linux			CentOS Linux			Scientific Linux			Operating System	
Server			Networking			Storage			Adaptive Platform	

# Specifications



Found at: [www.QCT.io/wheretobuy](http://www.QCT.io/wheretobuy)

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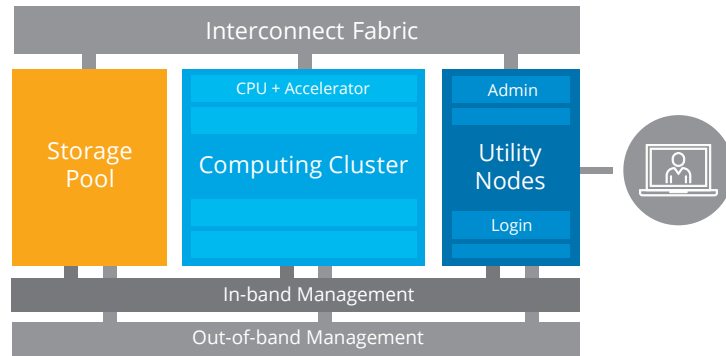
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QCT authorized partner

## QxSmart HPC/DL System Architecture



## QxSmart HPC/DL System Component

Compute Node	General	<p><b>QuantaPlex T42D-2U</b> - Form Factor: 2U 4 Node - Support AEP/NVMe</p>	Accelerated	<p><b>QuantaGrid D52BV-2U</b> - Dual Intel® Xeon® Scalable Processors - Support AEP/NVMe - Up to 3TB DDR4-2666 - Up to 8 3.5"/2.5" HDD/SSD - Up to 4 GPU</p>	Deep Learning	<p><b>QuantaGrid D52G-4U</b> - Dual Intel® Xeon® Scalable Processors - Support AEP/NVMe - Up to 3TB DDR4-2666 - Up to 24 2.5" SSD - Up to 8 GPU</p>
	Utility Node	<p><b>QuantaGrid D52B-1U</b> - Dual Intel® Xeon® Scalable Processors - Up to 3TB DDR4-2666 - Up to 12 2.5" SATA/NVMe SSD</p>	Inter-connection	<p><b>Intel® Omni-Path Switch Mellanox InfiniBand Switch Ethernet Switch</b></p>		
Storage Node	<p><b>QuantaGrid D52BQ-2U</b> - Dual Intel® Xeon® Scalable Processors - Up to 3TB DDR4-2666 - Up to 24 2.5" SAS/SATA SSD</p>	<p><b>QuantaVault JB4242</b> - Up to 8 2.5" SSD - Up to 24 3.5" SAS/SATA HDD</p>	<p><b>QuantaVault JB4602</b> - Up to 60 SAS/SATA HDD</p>			

## About Quanta Cloud Technology (QCT)

Quanta Cloud Technology (QCT) is a global data center solution provider. We combine the efficiency of hyperscale hardware with infrastructure software from a diversity of industry leaders to solve next-generation data center design and operation challenges. QCT serves cloud service providers, telecoms and enterprises running public, hybrid and private clouds.

Product lines include hyper-converged and software-defined data center solutions as well as servers, storage, switches, integrated racks with a diverse ecosystem of hardware component and software partners. QCT designs, manufactures, integrates and services cutting edge offerings via its own global network. The parent of QCT is Quanta Computer, Inc., a Fortune Global 500 corporation.

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