

# Qumulo QC-Series 4U Hybrid Storage Appliances

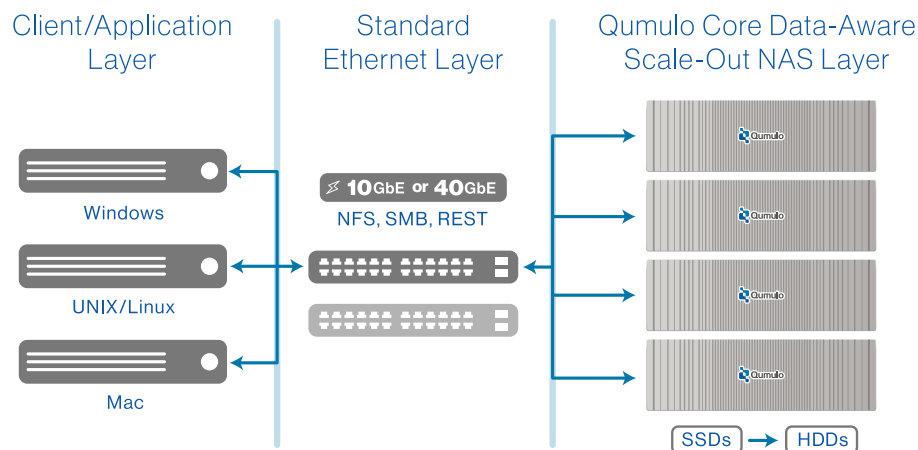
## Leader in Data-Aware Scale-Out NAS

Qumulo, the leader in data-aware scale-out NAS software, helps CIOs and storage administrators store, manage and curate enormous numbers of digital assets. Qumulo Core is a software-only, flash-first hybrid design optimized for the widest range of workloads and file sizes and is 100% programmable through a REST API with built-in explorer. Qumulo Core's real-time analytics help businesses obtain instant answers about their data footprint by explaining usage patterns and which users or workloads are impacting their performance and capacity.

Qumulo Core is powered by QSFS, the Qumulo Scalable File System. QSFS provides real-time visibility into data and storage to solve the data management problems created by first generation scale-out NAS products. QSFS was designed to leverage the price/performance of commodity server hardware coupled with the modern technologies of flash, virtualization and the cloud.

The Qumulo QC-Series 4U hybrid storage appliances give users a choice between cost-optimized requirements and the highest density, lowest cost per GB data-aware scale-out NAS solution. The QC260 provides 260TB of raw HDD capacity and 6.2TB of raw SSD capacity per node. The QC260 also features the new HGST Ultrastar He10 HDD technology for higher capacity, power efficiency and reliability. The QC208 provides 208TB of raw HDD capacity and 6.2TB of raw SSD capacity per node. The QC104 provides 104TB of raw HDD capacity and 6.2TB of raw SSD capacity per node.

## Architecture



## QC-Series 4U

QC104 | QC208 | QC260



**Qumulo Core: Gold Winner**  
**2015 Products of the Year**

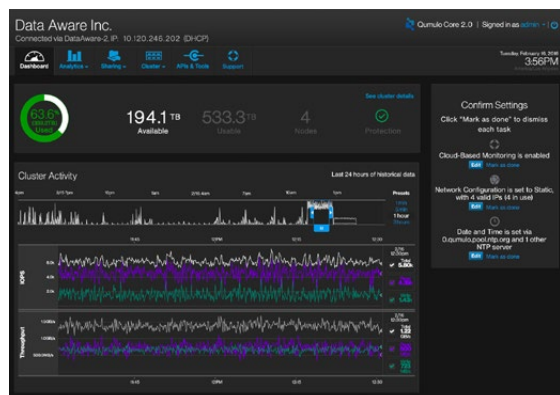
Storage Systems: Disk and Hybrid Systems

## Key Features & Benefits

- **Real-Time Analytics** – QSFS Doesn't Just Store Data, but also Curates and Manages It
- **Software-Only Solution** – Qumulo Core Runs on Commodity Hardware, on Dedicated Appliances, or in Virtual Machines
- **Flash-First Hybrid Design** – Maximizes both Price/Performance and Price/Capacity
- **SaaS Software Delivery Model** – Pay-as-You-Go for Continual Infrastructure Software Innovation
- **No Compromise Storage** – Optimized for the Widest Range of Workloads and Files Sizes
- **100% Programmable** – Public and Self-Documenting REST API with Interactive API Explorer Built into Web UI

## Real-Time Analytics – Makes Your Data Visible at Scale

Gain immediate and actionable insights into your data. Qumulo Core provides an unparalleled real-time view of your data and workload enabling you to navigate through your directory structure in a single view.



Qumulo Core Diagnostics Dashboard

### On any file, folder or directory, you can see:

- **Real-time display of capacity usage**
  - Meta-data aggregation intelligence built directly into the file system
  - Capacity information is updated in seconds
- **Real-time view of your storage workload**
  - IOPS and throughput broken down and filterable by Read and Write
  - List of the top client IPs reading or writing to your file system
  - Filterable views that allow you to see what's pertinent to you

### See who or what is utilizing your cluster's performance capabilities

- **Activity by Client**
  - Real-time view of the hottest 20 client IPs on the cluster in terms of IOPS and throughput
- **Activity by Path**
  - Real-time view of the hottest 20 paths on the cluster in terms of IOPS and throughput
- **IOPS Hot Spots**
  - Real-time view of how the IOPS load is distributed across the file system
- **Throughput Hot Spots**
  - Real-time view of how the throughput load is distributed across the file system
- **Capacity Trends**
  - Provides intelligently aggregated insights for storage data management and capacity planning

## QC-Series 4U Technical Specifications

Qumulo Core Software	QC104	QC208	QC260
<b>Supported protocols</b>	NFS (v3), SMB (v2.1), REST		
<b>Management API</b>	REST		
<b>Total cluster size</b>	4 – 1,000 nodes		
<b>Data protection</b>	Erasure Coding		
Per Node	QC104	QC208	QC260
<b>Connectivity ports</b>	4 x 40GbE QSFP+		
<b>Management ports</b>	1 x IPMI 1GbE Base-T (RJ45)		
<b>Storage media (all hot-swappable)</b>	26 x 4TB HGST HDD	26 x 8TB HGST He8 HDD	26 x 10TB HGST He10 HDD
	13 x Intel S3510 480GB eMLC SSD		
<b>CPU</b>	2 x Intel Xeon E5 2620v3 2.40GHz 6-cores		
<b>Memory</b>	128GB		
<b>Raw storage capacity</b>	104TB	208TB	260TB
<b>Power supply</b>	2 x 750W (fully redundant, hot-swappable)		
<b>Dimensions (H x W x D) / Weight</b>	7" (17.8cm) x 17.2" (43.7cm) x 29" (73.7cm) / Weight: 155lbs (70kg)		
<b>Power requirements</b>	100 – 240V, 50/60hz		
<b>Typical power consumption</b>	2.71A @ 240V, 5.91A @ 110V		
<b>Typical thermal rating</b>	650W (VA), 2,218 BTU/hr		
<b>Maximum power consumption</b>	3.55A @ 240V, 7.73A @ 110V		
<b>Maximum thermal rating</b>	850W (VA), 2,900 BTU/hr		
<b>Operating temperature</b>	50° F - 95° F (10° C - 35° C)		
<b>Non-operating temperature</b>	-40° F - 158° F (-40° C - 70° C)		
<b>Operating relative humidity</b>	8% to 90% (non-condensing)		
<b>Non-operating relative humidity</b>	5% to 95% (non-condensing)		
Certifications	QC104	QC208	QC260
<b>Safety</b>	UL, cUL		
<b>Country</b>	FCC (USA), NRTL (USA and Canada)		
<b>Emissions</b>	FCC Part 15 Class A, ICES-003 Class A		
<b>Immunity</b>	North America		

## About Qumulo

Qumulo, headquartered in Seattle, pioneered data-aware scale-out NAS, enabling enterprises to manage and store enormous numbers of digital assets through real-time analytics built directly into the file system. Qumulo Core is a software-only solution designed to leverage the price/performance of commodity hardware coupled with the modern technologies of flash, virtualization and cloud. Qumulo was founded in 2012 by the inventors of scale-out NAS, and has attracted a team of storage innovators from Isilon, Amazon Web Services, Google, and Microsoft. Qumulo has raised \$100 million in three rounds of funding from leading investors. For more information, visit [www.qumulo.com](http://www.qumulo.com)

