Arrow Data Storage

Data is growing at an unprecedented rate. Today's organizations are challenged with keeping up with the rapid pace of data growth, as well as ensuring that their storage platform meets their specific capacity and performance needs.

Performance-intensive apps need the speed of NVMe all-flash storage to ensure the highest possible throughput and the lowest latency. Data-intensive workloads are focused on storing lots of data, and while they can also benefit from the write performance of flash, their primary objective is high capacity.

Whether you need high-performance, high capacity, or a balance of both, Qumulo's file system was uniquely engineered to deliver whatever your apps need, with a choice of all-flash hardware for maximum throughput, or hybrid NVMe flash and disk nodes for optimal capacity.

All Qumulo storage clusters deliver high ingest performance for all workloads with flash-first writes. With our NVMe all-flash nodes, you'll see comparably high performance for all read operations too. On our hybrid-node hardware, Qumulo's AI-driven prefetch algorithms ensure that up to 90% of all reads are also from flash storage, while the disk tier delivers high capacity to let you store large amounts of data.

Qumulo customers can choose from a range of Arrow nodes to meet your specific requirements. The Active Class includes both NVMe all-flash and hybrid nodes designed to maximize overall performance. Customers can also select hybrid nodes from the General Class that focus primarily on high capacity and archive workloads, while still delivering the write performance of flash.

When multiple clusters are deployed, the clusters can work together to form a globally-distributed but highly connected storage fabric tied together with continuous replication. Clients interact with the storage clusters using industry-standard file protocols (SMB, NFS, FTP, S3 or the REST API), and administrators can manage the cluster via a web-based graphical user interface or command-line interface.

Scale to billions of files

Use any mix of large and small files and store as many files as you need. There is no practical limit to either capacity or file counts with Qumulo's advanced file-system technology, and no performance penalty for small files.

Maximize your rack space

Combine Qumulo with Arrow NVMe all-flash or hybrid nodes to achieve densities of up to 245TB per rack unit – that's up to 10.3PB per 42U rack!

Real-time visibility at scale

Get answers and solve administration problems in real time, no matter how many files and directories you manage.

Industry-leading performance

Qumulo delivers the most cost-effective high performance unstructured data platform on the market. High throughput and low latency enable unparalleled read and write performance.

Full multi-protocol support

Consolidate all your cloud-native and file workflows with Qumulo's support for SMB, NFS3, NFSv4.1, and object access to the same data.

Arrow Appliance Options by Licensing
Active Class All-NVMe Nodes

Per Node	QVRNVME-46T	QVRNVME-92T	QVRNVME-184T	QVRNVME-245T
Family	Quiver All-NVMe Flash			
Raw Storage Capacity	46 TB	92 TB	184 TB	245 TB
Rack Units	1U			
NVME Drives (hot swappable)	6 x 7.68TB	12 x 7.68TB	12 x 15.36TB	16 x 15.36TB
Connectivity Ports	4 x 100GbE or 2 x 100GbE			
Management Ports	1GbE Base-T (RJ45)			
CPU	AMD EPYC 9254, 24 cores/2.9GHz			
Memory	192GB			
Minimum Cluster Size (usable capacity)	105TB	210TB	420TB	558TB
Power Supply	2 x 1200W (fully redundant, hot-swappable)			
Dimensions	1.73" x 17.68" x 33.15" (44mm x 449mm x 842mm)			
Weight	44 LBS (20 KG)			
Power Requirements	100 – 240V, 50/60hz			
Typical Power Consumption	310 W	366 W	366 W	400 W
Typical Thermal Rating	1,058 BTU/hr	1,249 BTU/hr	1,249 BTU/hr	1,365 BTU/hr
Maximum Power Consumption	470 W	555 W	555 W	605 W
Maximum Thermal Rating	1,603 BTU/hr	1,894 BTU/hr	1,894 BTU/hr	2,064 BTU/hr
Operating Temperature	50° F – 95° F (10° C – 35° C)			
Non-operating Temperature	-40° F – 158° F (-40° C – 70° C)			
Operating Relative Humidity	20% to 90% (non-condensing)			
Non-operating Relative Humidity	20% to 90% (non-condensing)			

Active Class Hybrid NVMe Nodes

Per Node	QVRG2-96T	QVRG2-240T	C-192T	C-432T
Family	Quiver Hybrid		Arrow Hybrid	
Raw Storage Capacity	96 TB	240 TB	192 TB	432 TB
Rack Units	1U		2U	
HDD Drives (hot swappable)	12 x 8TB	12 x 20TB	24 x 8TB	24 x 18TB
NVMe Drives (hot swappable)	4 x 960GB or 4 x 1.92TB or 4 x 3.84TB	4 x 1.92TB or 4 x 3.84TB or 4 x 7.68TB	6 x 1.6TB	6 x 3.2TB
Connectivity Ports	2 x 25GbE (SFP28) 2 x 100GbE (QSFP28)		2 x 100GbE (QSFP28)	
Management Ports	1GbE Base-T (RJ45)			
CPU	2 x INTEL Silver 4210 10 cores/2.2GHz		AMD Rome 7282 16 cores/2.8 GHz	
Memory	96GB		128GB	
Power Supply	2 x 700 W (fully redundant, hot-swappable)		2 x 600 W (fully redundant, hot-swappable)	
Dimensions	1.7" x 17.6" x 34.7" (4.32cm x 44.8cm x 88.1cm)		3.2" x 17.3" x 33.1" (8.1cm x 43.9cm x 84.1cm)	
Weight	66 LBS (30 KG)		94 LBS (43 KG)	
Power Requirements	90-264V, 47/63hz		100 – 240V, 50/60hz	
Typical Power Consumption	389 W		385 W	321 W
Typical Thermal Rating	1327 BTU/hr		1314 BTU/hr	1085 BTU/hr
Maximum Power Consumption	469 W		585 W	456 W
Maximum Thermal Rating	1600 BTU/hr		1995 BTU/hr	1556 BTU/hr
Operating Temperature	41° F – 95° F (5° C – 35° C)		50° F – 95° F (10° C – 35° C)	
Non-operating Temperature	-40° F – 158 ° F (-40° C – 70° C)		-40° F – 158 ° F (-40° C – 70° C)	
Operating Relative Humidity	20% to 85% (non-condensing)		8% to 90% (non-condensing)	
Non-operating Relative Humidity	10% to 95% (non-condensing)		5% to 95% (non-condensing)	

Certifications

Safety	UL, cUL
Country	FCC (USA), NRTL (USA and Canada), CE (European Economic Area), Aus/NZ*
Emissions	FCC Part 15 Class A, ICES-003 Class A
Immunity	North America

General Purpose

Per Node	QVRG2-96T	QVRG2-240T	K-432T
Family	Quiver Hybrid		Arrow Hybrid
Raw Storage Capacity	96 TB	240 TB	432 TB
Rack Units	1U		2U
HDD Drives (hot swappable)	12 x 8TB	12 x 20TB	24 x 18TB
NVMe Drives (hot swappable)	4 x 960GB or 4 x 1.92TB or 4 x 3.84TB	4 x 1.92TB or 4 x 3.84TB or 4 x 7.68TB	6 x 1.6TB or 6 x 3.2TB
Connectivity Ports	2 x 25GbE (SFP28)		
Management Ports	1GbE Base-T (RJ45)		
CPU	2 x INTEL Bronze 3204 6 cores/1.9GHz		AMD Rome 7282 16 core/2.8GHz
Memory	64GB		128GB
Power Supply	2 x 700 W (fully redundant, hot-swappable)		2 x 600W (fully redundant, hot-swappable)
Dimensions	1.7" x 17.6" x 34.7" (4.32cm x 44.8cm x 88.1cm)		3.2" x 17.3" x 33.1" (8.1cm x 43.9cm x 84.1cm)
Weight	66 LBS (30 KG)		94 LBS (43 KG)
Power Requirements	90-264V, 47/63hz		100 – 240V, 50/60hz
Typical Power Consumption	373 W		321 W
Typical Thermal Rating	1327 BTU/hr		1095 BTU/hr
Maximum Power Consumption	441 W		456 W
Maximum Thermal Rating	1600 BTU/hr		1494 BTU/hr
Operating Temperature	41° F – 95° F (5° C – 35° C)		50° F – 95° F (10° C – 35° C)
Non-operating Temperature	-40° F – 158 ° F (-40° C – 70° C)		-40° F – 158 ° F (-40° C – 70° C)
Operating Relative Humidity	20% to 85% (non-condensing)		8% to 90% (non-condensing)
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