

# Quantum®

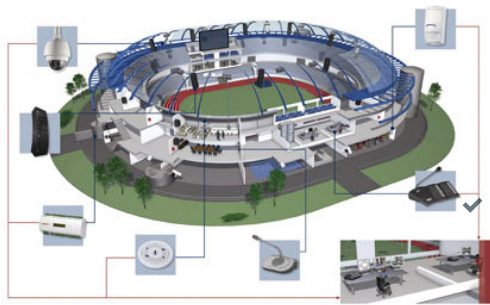
## Quantum VS-Series



### > DATASHEET

## An efficient, flexible platform designed for surveillance and industrial IoT applications

The Quantum VS-Series enables our customers to efficiently record and store surveillance footage and run an entire security infrastructure on a single cloud-like platform.



- ✓ Surveillance (VMS, Analytics, LPR)
- ✓ Building Automation (Lighting, HVAC, Access Control)
- ✓ IoT/Sensor Data Processing
- ✓ Business Operations



Quantum VS-Series

The VS-Series is:

- **Efficient:** With the highest camera density, and a software architecture that enables users to run their entire security infrastructure on a single hyperconverged platform.
- **Flexible:** The VS-Series is a software-defined, cloud-like platform which offers the broadest range of deployment options. Many appliances can scale out (for more cameras), or scale up (for increased retention).
- **Easy to deploy, operate and maintain:** The VS-Series comes pre-installed with certified VMS applications, and can be installed and configured in minutes. And it is backed by the world-class service and support of Quantum and our integrator partners.
- **Resilient:** The VS-Series software can tolerate and work around hardware and software issues, and is designed to eliminate downtime.

### FEATURES & BENEFITS

#### Reduced Capital Expense

The VS-Series has the best camera density, is purpose-built for video and IoT data sets, and enables our customers to run an entire security infrastructure on a single platform. All of this translates to reduced capital expense.

#### Reduced Operational Expense

Because the VS-Series is easy to deploy, operate, and maintain, security professionals can manage larger camera environments with less time and expense.

#### Reduced Business Risk and Improved Security








With the VS-Series, we've pre-configured and pre-optimized the compute and storage for use with VMS applications. The reduced technical and operational complexity means security professionals can focus on their job—security and loss prevention. And the resilient architecture translates to reduced data loss and downtime, data availability for longer durations, and ultimately a highly available surveillance platform.

> **LEARN MORE:**  
[www.quantum.com/vs-series](http://www.quantum.com/vs-series)

# QUANTUM VS-SERIES

## VS-SERIES PRODUCT LINE OVERVIEW

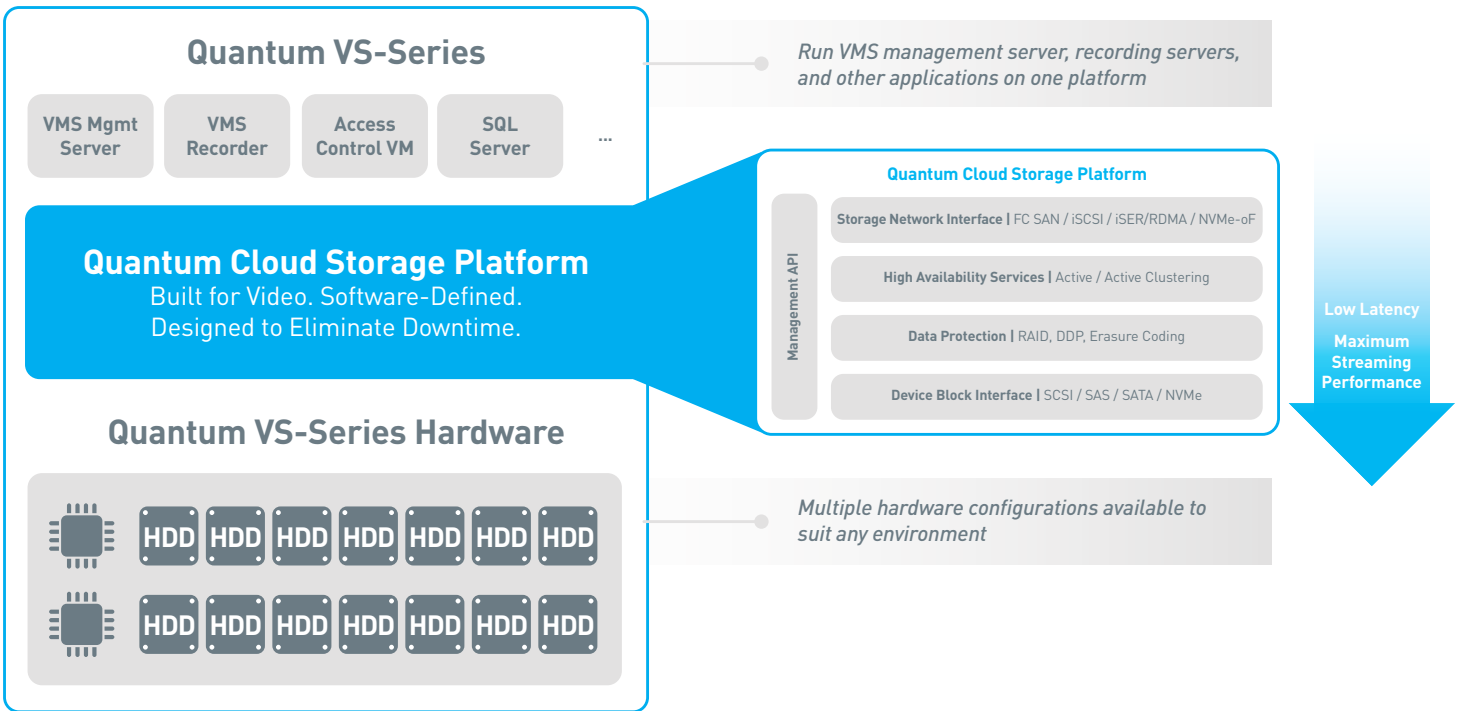
The VS-Series is available in a broad range of appliances or as software as shown below, either from Quantum or through one of our integrator partners. Detailed specifications are included at the end of this datasheet.

 <b>VST102, VST104 Mini-Towers</b> 2 drive, 1 CPU, 24 TB* 4 drive, 1 CPU, 48 TB*	 <b>VS1104</b> 1U, 4 drive, 1 CPU 8 to 48 TB*	 <b>VS2112</b> 2U, 12 drive, 2 CPU 144 TB* Additional Capacity Available with Expansion Disk Tray	 <b>VS2124</b> 2U, 24 drive, 2 CPU 288 TB* Additional Capacity Available with Expansion Disk Tray	 <b>VS4160</b> 4U, 60 drive, 2 CPU 720 TB* Additional Capacity Available with Expansion Disk Tray	 <b>J2024 Expansion Disk</b> 2U, 24 drive 288 TB*	 <b>VS-Series Software</b> Deploy on hardware of your choice
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------

\*All capacities shown are raw capacity. Expect capacities to increase 33% this year.

## VS-SERIES ARCHITECTURE

Each VS-Series product combines purpose-built server hardware with the Quantum Cloud Storage Platform, a software-defined storage and compute platform that is at the core of the VS-Series.



### Efficient, Cloud-like Architecture

The Quantum Cloud Storage Platform provides an efficient, cloud-like architecture that can handle the streaming performance required from ten cameras to tens of thousands of cameras.

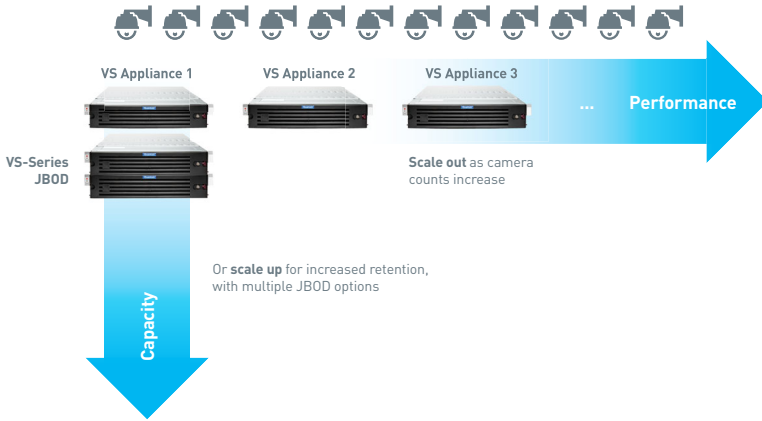
In addition, the architecture is able to run the VMS management server, video recording servers, and other applications for building operations and security infrastructure.

The Quantum Cloud Storage Platform is:

- **Software-defined:** Run on bare metal, in a VM, or in the cloud. No hardware dependence.
- **Highly available:** With capabilities that include active/active clustering, failover, and different forms of data protection.
- **Tuned for low latency and fast streaming performance:** Because the Quantum Cloud Storage Platform was built for video and video-like data, we've stripped out the data services that don't apply to video, making the architecture more efficient and maximizing streaming performance to the storage.

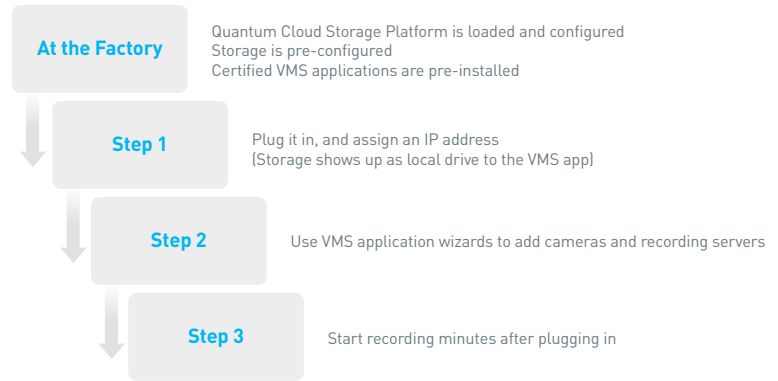
**Scale Out as Camera Counts Increase, or Scale Up for Increased Retention**

The VS-Series architecture provides for the most flexibility when it comes to deployment options, as well as scaling. Systems can scale out as camera counts increase, or scale up with JBODs for increased retention.



**Easy to Deploy, Operate and Maintain**

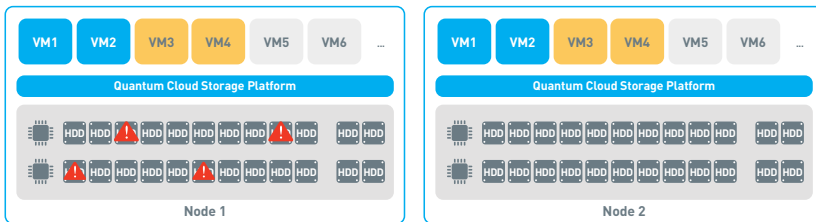
The VS-Series can be installed and configured in minutes, and Quantum pre-loads and pre-configures both the VS-Series software, as well as certified VMS applications, so the user can plug it in, assign an IP address, and move right to setting up their video management environment directly from the VMS application user interface.



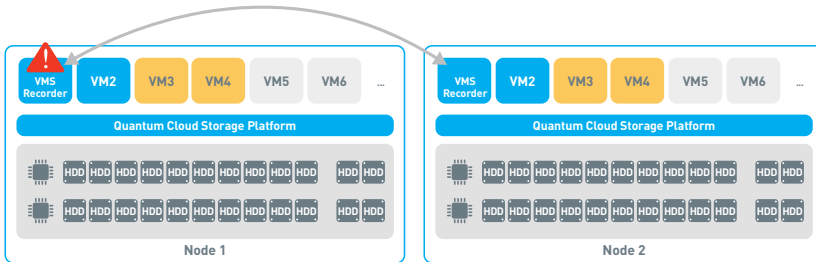
**Resilient: Designed to Eliminate Downtime**

The VS-Series is designed to tolerate and work around server and hard drive failures, with the Quantum Cloud Storage Platform managing failover processes for common failure scenarios.

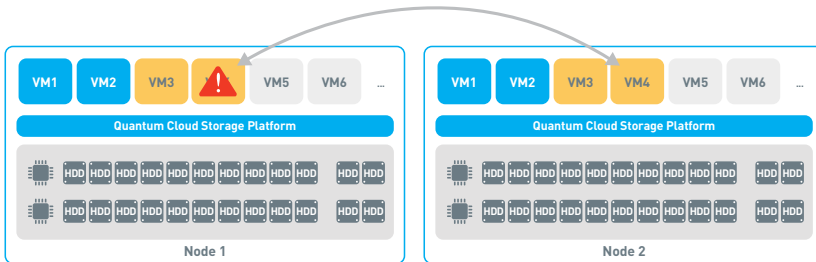
*(Note: Capabilities listed below may not apply to the VST10x mini-tower configurations.)*



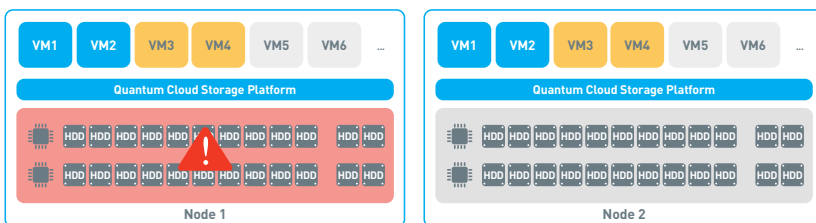
When a drive fails: Quantum Cloud Storage Platform automatically rebuilds the contents of the drive. Up to 4 drives can fail per node.



When a VMS Recorder fails: The (N+1) availability configuration kicks in, and the VMS recorder on another node is automatically restarted.



When other VMs fails: The synchronous replication enables the Quantum Cloud Storage Platform to restart the VM on the replicated node without any loss of data.



When a node fails: The VMs with synchronous replication turned on can be restarted on the replicated node.

# TECHNICAL SPECIFICATIONS

Specification	VST102 Appliance	VST104 Appliance	VS1104 Appliance	VS2112 Appliance	VS2124 Appliance	VS4160 Appliance	J2024 Expansion Disk
<b>Form Factor</b>	Mini-Tower	Mini-Tower	1U Rackmount	2U Rackmount	2U Rackmount	4U Rackmount	2U Rackmount
<b>Drives</b>	2X 12 TB HDD	4X 12 TB HDD	4X 12 TB HDD	12X 12 TB HDD	24X 12 TB HDD	60X 12 TB HDD	24X 12 TB HDD
<b>Storage Capacity (Raw)</b>	24 TB	48 TB	48 TB	144 TB	288 TB	720 TB	288 TB
<b>Availability</b>	Hot Swap HDD		Redundant, Hot-Swap Power Supplies Hot-Swap HDD	Redundant, Hot-Swap Fans and Power Supplies Hot-Swap HDD	Redundant, Hot-Swap Fans and Power Supplies Hot-Swap HDD	Redundant, Hot-Swap Fans and Power Supplies Hot-Swap HDD	Redundant, Hot-Swap Fans and Power Supplies Hot-Swap HDD Bays
<b>Capacity Expansion</b>	No		No	Yes	Yes	Yes	No
<b>CPU</b>	Intel i3-1225-V6 6C/6T		Intel E3-1225v6 (4C/4T)	Dual Intel 4116 12C/24T	Dual Xeon 6130 16C/32T	Dual Xeon 6130, 2.1 GHz, 16C/32T or Dual Xeon 8160 24C/48T	N/A
<b>Memory</b>	8 GB		16 GB	128 GB		256 GB	N/A
<b>Networking</b>	2 RJ45 1GbE ports		2 RJ45 1GbE	4X 10GbE SFP+		4X 10GbE SFP+	N/A
<b>Management</b>	-		1 RJ45 IPMI	1 RJ45 IPMI		1 RJ45 IPMI	N/A
<b>Physical Dimensions</b>	Height: 240 mm (9.45")		Height: 43 mm (1.7")	Height: 89 mm (3.5")		Height: 178 mm (7")	Height: 89mm (3.5")
	Width: 210 mm (8.27")		Width: 437 mm (17.2")	Width: 437 mm (17.2")		Width: 437 mm (17.2")	Width: 437 mm (17.2")
	Depth: 279 mm (11")		Depth: 650 mm (25.6")	Depth: 863 mm (34.0")		Depth: 767 mm (30.2")	Depth: 863 mm (34.0")
	Weight w/o HDD: 16.6 kg (15 lbs)		Product w/o HDD: 15.9 kg (35 lbs)	Depth with Cable Management: 1042 mm (41.0")		Product w/o HDD: 77.3 kg (170.5 lbs)	Product w/o HDD: 19.5 kg (43 lbs)
<b>Power Supply</b>	250 W Flex ATX multi-output		500 W high-efficiency	1600 W Redundant		2000 W Redundant	800 W / 1000 W Redundant
<b>Power Requirements</b>	100 – 240 V, 50 – 60 Hz		100 – 240 V, 50 – 60 Hz	100 – 127 Vac / 13 – 9 A / 50 – 60 Hz, 200 – 240 Vac / 10 – 8 A / 50 – 60 Hz		100 – 120 Vac / 12.5 – 9.5 A / 50 – 60 Hz 200 – 220 Vac / 10 – 9.5 A / 50 – 60 Hz 220 – 230 Vac / 10 – 9.8 A / 50 – 60 Hz 230 – 240 Vac / 10 – 9.8 A / 50 – 60Hz	800 W with input 100 – 127 V, 50 – 60 Hz 1000 W with input 200 – 240 V, 50 – 60 Hz
<b>LED Indicators</b>	Power, HDD, Network, System Information		System Information, Suspend Static, UID/ Remote UID	Power, Hard Drive, Network, System Information, Power Fail		Power, Hard Drive, Network, System Information, Power Fail	Network, Fan Fail/Over Heat, Power, Power Fail, Unit Identification
<b>Environmental</b>	Operating : 0 to 40 °C (32 to 104 °F)		Operating: 10 to 35 °C (50 to 95 °F)	Operating: 10 to 35 °C (50 to 95 °F)		Operating: 10 to 35 °C (50 to 95 °F)	Operating: 5 to 35 °C (41 to 95 °F)
	Non-Operating: -40 to 70 °C (-40 to 158 °F)		Non-Operating: -40 to 70 °C (-40 to 158 °F)	Non-Operating: -40 to 60 °C (-40 to 140 °F)		Non-Operating: -40 to 70 °C (-40 to 158 °F)	Non-Operating: -40 to 70 °C (-40 to 158 °F)
	Humidity: 5% to 95% non-condensing		Humidity: 5 to 95% non-condensing	Humidity: 5 to 95% non-condensing		Humidity: 8 to 90% non-condensing	Humidity: 8 to 90% non-condensing

Note: Some configurations, features, and capabilities reflect options planned for later this year.

## ABOUT QUANTUM

Quantum technology and services help customers capture, create, and share digital content—and preserve and protect it for decades at the lowest cost. Quantum's platforms provide the fastest performance for high-resolution video, images, and industrial IoT, with solutions built for every stage of the data lifecycle, from high-performance ingest to real-time collaboration and analysis and low-cost archiving. Every day the world's leading entertainment companies, sports franchises, research scientists, government agencies, enterprises, and cloud providers are making the world happier, safer, and smarter on Quantum. See how at [www.quantum.com](http://www.quantum.com).

**Quantum**

[www.quantum.com](http://www.quantum.com)  
800-677-6268