



Virtual SAN With Hardware Encryption for as Low as 44 Cents per GB¹

To help address growth and security concerns, IT teams can now turn to hardware-secured, lower-risk, higher-performance solutions that are already optimized and engineered to take full advantage of VMware Virtual SAN™ 6.2 capabilities with integrated, transparent data encryption.

Micron® all-flash Accelerated VMware Virtual SAN Ready Nodes (AF-4, AF-6 and AF-8) with Micron's Trusted Computing Group Enterprise (TCG-E) (AES256) SSDs and advanced DRAM enable a higher degree of security with state-of-the-art data center efficiency features like deduplication, compression and erasure coding.

These SOLID Ready[®] solutions (collaboratively developed by Micron, VMware and Supermicro) have been optimized for best results and certified by VMware. They provide predictably high performance and seamless, effective data security that's easy to deploy and manage.



Figure 1: Supermicro® Virtual SAN 6.2 AF-4, AF-6 and AF-8 Ready Node compact chassis (powered by Micron enterprise SSDs and advanced DRAM)

Key Features

Better Security, Better Value

Our all-flash Virtual SAN Ready Nodes with TCG-E (AES256) encryption are optimized at the platform level for better security, performance, and value. With direct engineer-to-engineer collaboration, these SOLID Ready[®] solutions leverage domain expertise across hardware encryption and security, flash storage, software, memory and platform design. Realize the benefits of an all-flash, TCG-E (AES256)-enabled Virtual SAN: budget-friendly security, full performance and optimized design.

Flexible Delivery

Micron Accelerated VMware Virtual SAN Ready Nodes are available as turn-key platforms (just add software) with fast, factory-direct shipment from Supermicro. Prefer to build it yourself? These Virtual SAN 6.2 Ready Nodes are also available as detailed reference architectures (with a complete bill of materials). Choose the option that's best for you.

Easier Deployment

Micron Accelerated Virtual SAN Ready Nodes help free your IT teams to focus on high-value tasks — like rapid deployment, faster time to value and building your bottom line.

Seamless Support

Micron Accelerated VMware Virtual SAN Ready Nodes are supported by Supermicro in partnership with VMware — one solution from industry leaders.



¹SOLID Ready solutions are pre-engineered to provide best results. As a result of direct engineer-to-engineer collaboration throughout each phase of the design and validation process, SOLID Ready solutions leverage expertise across storage, memory, software and platform domains.



Advantages of VMware Virtual SAN 6.2

According to the VMware Virtual SAN 6.2 data sheet, the following are achievable:²

- **Inline Data Deduplication and Compression:** Get an overall increase in storage efficiency of up to 7X with Virtual SAN 6.2's real-time data reduction — only with all-flash designs.
- **Data Protection (Erasure Coding):** Improve usable storage capacity by up to 100% while leaving data protection levels unchanged.
- **Quality of Service (per VM):** Help eliminate “noisy-neighbor” performance challenges with the VM-specific performance and control of Virtual SAN 6.2.

Micron M510DC SSDs With TCG-E Hardware³

- **Data-at-Rest Security:** Get a superior level of protection with M510DC's data encryption and authentication features.
- **Full Performance:** Maintain maximum system performance with security that has no impact on platform CPU and memory resources.
- **Easy to Use:** Avoid interfering with platform or guest VM operation due to transparent and seamless implementation of TCG-E (AES256).
- **Compliance:** Ensure a higher level of protection with the M510DC's conformance to industry standards and government data security regulations.
- **SOLID Ready:** Get tested, optimized, data center-ready solutions.

Ready Node Configuration Quick Reference

Configuration	AF-4	AF-6	AF-8
Orderable SKU (platform ⁴)	SYS-2028U-VSMH12A	SYS-2028U-VSMH12B	SYS-2028UVSMH12C
Cache (per node)	1.2TB (2x 600GB M510DC)	1.2TB (2x 600GB M510DC)	1.8TB (3x 600GB M510DC)
Cache SSDs	HDS-2TM-MTFDDAK600MBP-16	HDS-2TM-MTFDDAK600MBP-16	HDS-2TM-MTFDDAK600MBP-16
Capacity (raw/node, no RAID)	7.68TB	11.52TB	20.16TB
Capacity (raw/node, RAID 5)	5.77TB	8.66TB	15.16TB
Effective node capacity ^{5,6}	Up to 40.42TB	Up to 60.62TB	Up to 106.12TB
Capacity SSDs	HDS-2TM-MTFDDAK960MBP-16	HDS-2TM-MTFDDAK960MBP-16	HDS-2TM-MTFDDAK960MBP-16
Storage controller (per node)	AOC-S3108L-H8iR SAS (2)	AOC-S3108L-H8iR SAS (2)	AOC-S3108L-H8iR SAS (3)
CPU	2x E5-2650V4	2x E5-2650V4	2x E5-2690V4
Memory	16x 16GB 2400 MHz ECC DDR4	16x 16GB 2400 MHz ECC DDR4	16x 32GB 2400 MHz ECC DDR4
Networking	Dual-port RJ45 or SFP + 10 GbE Quad-port SFP + 10 GbE Quad-port 40G QSFP (Mellanox®) Dual-port 40G QSFP (Mellanox)	Dual-port RJ45 or SFP + 10 GbE Quad-port SFP + 10 GbE Quad-port 40G QSFP (Mellanox) Dual-port 40G QSFP (Mellanox)	Dual-port RJ45 or SFP + 10 GbE Quad-port SFP + 10 GbE Quad-port 40G QSFP (Mellanox) Dual-port 40G QSFP (Mellanox)

How to Buy

Visit www.supermicro.com/solutions/VMware_VSAN.cfm to learn how to buy the Micron Accelerated VMware Virtual SAN Ready Node. And learn more at www.micron.com/accelerated-solutions.

micron.com

1. 44 cents/GB based on current solution MSRP pricing, RAID 5 configuration and 7X data reduction for all-flash Virtual SAN 6.2. Source for 7X data: https://www.vmware.com/files/pdf/products/vsan/VMware_Virtual_SAN_Whats_New.pdf
 2. Source: https://www.vmware.com/files/pdf/products/vsan/VMware_Virtual_SAN_Datasheet.pdf
 3. No hardware, software or system can provide absolute security under all conditions. Micron assumes no liability for lost, stolen or corrupted data arising from the use of any Micron products, including those products that incorporate any of the mentioned security features.
 4. Hardware-only platform SKU numbers (supplied as pre-assembled hardware); minimum of four nodes. VMware software also required and available for purchase.
 5. Effective capacity based on 7X data reduction as noted in Virtual SAN 6.2 Technical White Paper: https://www.vmware.com/files/pdf/products/vsan/VMware_Virtual_SAN_Whats_New.pdf
 6. Assumes deployment enables 7X data reduction; actual data reduction is dependent on several external factors.

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