Hybrid Flash Storage

VS320D-RS12

Optimize Price and Performance
for SMB Workloads

| | Form Factor | 2U | | Storage Bay | 12 | | Storage Controller | 2 |

Key Benefits
Outstanding Performance

- Tiny and compact with dual active architecture.
- Excellent performance with 2.4 GB/s Sequential 1M R/W throughput.
- Outstanding scale-up capability up to 10 PB.

Dependable Data Experience

- 99.9999% high availability design with no single point of failure.
- Cache-to-flash to protect cache data in power outage.
- Non-disruptive firmware upgrade ensures continuous data service with zero downtime.

Versatile Connectivity

- Each controller with built-in 4-port 10 GbE (SFP+) and maximum 12 LAN ports allows direct connection to multiple LANs without switches.
- Optional high-speed 25 GbE iSCSI and 32 Gb Fibre Channel LAN cards.

Modern Simplicity

- ASUS Storage Manager, a flash-based storage management system, minimizes the learning curve and eases maintenance through an intuitive GUI.
- Data can be accessed in 5 minutes after installation.
- Wake-on-SAS allows you to remotely power on / off all cascaded ASUS expansion units for power saving.

Entry to Faster SAN Cost Effectively and "Pay as You Grow" Flexibility

The VS320D-RS12 (3.5" 2U 12-bay) is a compact hybrid flash storage system with a low acquisition cost. In the face of rapid, unpredictable growth of SMB, the flexibility to pay as you grow makes it an excellent solution. Offers outstanding performance ideal for modern enterprise applications such as large scale surveillance, and backup.

High Availability and Enterprise Reliability

The ASUS Storage series is a proven high availability SAN storage system with full redundancy in modular design. Its dual-active architecture and automatic failover / failback mechanism, coupled with cache-to-flash technology, enables the system to withstand critical situations.

Flexible I/O Modules and Scale-up Capacity as Needed

Each controller has two LAN card slots that can be configured as iSCSI, Fibre Channel, or a mix of both besides built-in 4-port 10 GbE iSCSI (SFP+). As a result, the series offers great flexibility with built-in 8-port 10 GbE iSCSI (SFP+) and up to 24 LAN ports in a dual-controller system. In addition, the VS320D-RS12 provides massive scale-up capabilities by connecting ASUS expansion units or 3rd-party expansion units with up to 420 disk drives or 10 PB raw capacity for future data growth.

Proven Simplicity - "Set and Forget" Data Services

ASUS Storage Manager, a storage management system with intuitive GUI designs, helps to save time in storage deployment considerably. ASUS Storage Manager also delivers enterprise storage features including complete RAID level protection, RAID EE with fast rebuild, thin provisioning, SSD cache, auto-tiering, and more. With the help of an intuitive dashboard and reporting system, managers can analyze business usage and monitor storage status in real time.

### Advanced Data Protection to Safeguard Assets

To protect against data loss and downtime events, ASUS Storage Manager provides complete array-based backup functions including local backup and remote replication. Based on snapshot technology, a solid safety net for disaster recovery can be built to meet the required RPO and RTO.

Secure Data and Secure Management

Supporting SED (Self-Encrypting Drives) will keep your sensitive data safe even if the drives are lost, stolen, or misplaced. Additionally, RBAC (Role-Based Access Control) helps to prevent unauthorized access to your data. All management communication is secured over https.

VS320D-RS12

Appearance
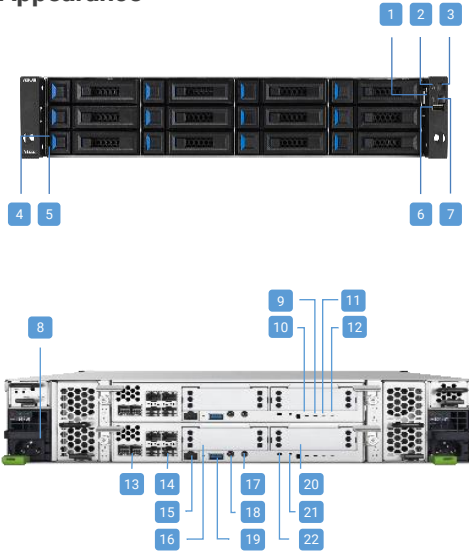
1. Enclosure Status LED
2. Enclosure Access LED
3. Enclosure Power Button / LED
4. Disk Drive Status LED
5. Disk Drive Power LED
6. USB Port
7. UID **(Unique Identifier)** Button / LED
8. Power Supply Unit
9. Master / Slave LED **(only for dual controllers)**
10. Controller Status LED
11. Dirty Cache LED
12. UID **(Unique Identifier)** LED
13. 12 Gb/s SAS Wide Port
14. 10 GbE iSCSI (SFP+) Port
15. Management Port
16. LAN Card Slot 1 **(LAN card is an optional part)**
17. Service Port
18. Console Port
19. USB Port
20. LAN Card Slot 2 **(LAN Card is an optional part)**
21. Reset to Factory Default Button
22. Buzzer Mute Button

System Specification

Model Name	VS320D-RS12
Architecture	Dual-active controller
CPU	
Processor	Intel® Xeon® 64-bit 4-core
Memory	
Memory Module	DDR4 ECC DIMM (per controller)
Total Memory Slots	4 (per controller)
Memory Expandable up to	256 GB (per controller)
Storage	
Drive Bays	3.5" Slot x 12
Maximum Drive Bays with Expansion Unit	420
Compatible Drive Type	3.5" & 2.5" SAS, NL-SAS, SED HDD 2.5" SAS, SED SSD
Drive Interface	SAS 12 Gb/s
Maximum Internal Raw Capacity	288 TB (calculate 24 TB SSD)
Maximum Raw Capacity with Expansion Units	10,080 TB (calculate 24 TB HDD)
Hot Swappable Drive	Yes
Connectivity Port	
PCIe Expansion	(Gen 3x8 Slot) x 2
1 GbE RJ45 LAN Port	1 (onboard management port per controller)
10 GbE SFP+ LAN Port	4 (onboard per controller) / 4 (option)
10 GbE RJ45 LAN Port	4 (option)
25 GbE SFP28 LAN Port	2 (option) / 4 (option)
16 Gb SFP+ Fibre Channel	2 (option) / 4 (option)
32 Gb SFP28 Fibre Channel	2 (option)
Expansion and External Port	
12 Gb/s SAS Wide Port	2 (onboard per controller)
USB Port	1 (front) / 2 (rear)
Others	Console Port x 1, Service Port (UPS) x 1
Software Specification	
Storage OS	ASUS Storage Manager
RAID Type	0 / 1 / 3 / 5 / 6 / 10 / 30 / 50 / 60 / 5EE / 6EE / 50EE / 60EE / N-way mirror
Storage Efficiency	Thin provisioning
Software Acceleration	SSD cache (option) / Auto tiering (option)
Data Protection	Snapshot / Local volume clone
Remote Replication	Asynchronous (built-in) / Synchronous (option)
Security	HTTPS / SSH / iSCSI CHAP / ISE & SED
Management	Web UI / Serial console / RESTful API / S.E.S. / LCM
Appearance	
Dimension (H x W x D) (mm)	88 x 438 x 515
Net Weight (kg)	16.4
Gross Weight (kg)	18.8
Others	
Memory Protection	Cache-to-Flash (Supercapacitor Module + Flash Module) (option)
System Fan	4 pcs
Power Supply Unit	850 W x 2 (80 PLUS Platinum)
Power Consumption	407 W
Certification	CE / FCC / BSMI / CCC
Environment	
Operation temperature	0˚C to 40˚C
Non operation temperature	-10˚C to 50˚C
Non operation humidity	10% to 90% (Non condensing)