

For enterprise and SMB businesses, Tyrone Opslag Unified Block Series is the perfect choice for a highly reliable, scalable and affordable SAN storage system.



## OPSLAG UNIFIED BLOCK SERIES

### Dual Active Controller & High Availability Design

Tyrone Opslag Unified Block series of products are high performance, simple, secure, scalable and affordable SAN storage system for enterprise and SMB. It is an ideal solution to the applications of mission critical data center, virtualization integration, media and entertainment, or large-scale surveillance; and also, backup and disaster recovery in enterprise, SMB or ROBO (Remote Office/Branch Office) deployments.

The series features a wide range of form factors including a 24-bay, 4U 3.5" LFF chassis, 3U 16-bay, 2U 12-bay, and a 26-bay, 2U 2.5" SFF chassis. This allows more deployment flexibility to meet users' budgets and rack density limitations. The advanced series is a proven high availability SAN storage system. All of the critical components are hot pluggable and designed with full redundancy. This design allows this series to withstand multiple component failures and achieve 99.999% availability.

### PRODUCT HIGHLIGHTS

- High Performance SAN storage system with Dual (Active/Active) controller
- High availability design with no single point of failure
- Intel® Xeon® D-1500, Quad core processor, up to 128GB RAM per controller
- Latest 12Gb SAS 3.0 technology
- Built-in 10GbE iSCSI
- Up to 12,000MB/s sequential read and 8,000MB/s sequential write throughput, up to 1.5 million sequential IOPS
- Scale up solution supports over 2.6PB of raw storage capacity
- Advanced Storage Management
  - Thin Provisioning
  - SSD Cache (read and write cache)\*
  - Auto Tiering\*
  - Snapshot
- Flexible I/O host cards for iSCSI SAN or Fibre Channel SAN
- Local clone and remote replication for disaster recovery
- Virtualization support for VMware VAAI, Microsoft Hyper-V ODX, and Citrix
- Cache-to-Flash memory protection technology

\* Optional feature

## VALUE & PERFORMANCE SERIES

Opslag Unified Block Value Series is an ideal solution for applications in mission critical data center, virtualization integration, media/broadcast, or large scale surveillance; and also backup and disaster recovery.

The Performance Series brings enterprise-level features such as thin provisioning, SSD read and write cache, auto tiering and snapshot to the SMB businesses.

	VALUE SERIES		PERFORMANCE SERIES		
	D3V-QUA-424S	D3V-QUA-424D	D3-QUA-424D	D3-QUA-316D	D3-QUA-226D
Form Factor	4U 24-bay, LFF		4U 24-bay, LFF	3U 16-bay, LFF	2U 26-bay, SFF
RAID Controller	Single-upgradable		Dual-active controller		
Processor	Intel® D1500 family 4-core processor				
Memory (Per Controller)	DDR4 ECC 4GB, up to 64GB				
Host Connectivity (per Controller)	Host Card Slot 1 (optional): 4 x 16Gb FC (SFP+) ports Host Card Slot 2 (optional): 4 x 10GbE iSCSI (SFP+) ports 4 x 10GbE iSCSI (SFP+) ports 4 x 1GbE iSCSI (RJ45) ports 2 x 16Gb FC				
Expansion Connectivity	Built-in 2 x 10GBASE-T iSCSI (RJ45) ports Built-in 1 x 1GbE management port Built-in 2 x 12Gb/s SAS wide ports				
Drive Type	Mix & match 3.5" & 2.5" SAS, NL-SAS, SED HDD 2.5" SAS, SATA SSD			2.5" SAS,NL-SAS,SED HDD 2.5" SAS,SATA SSD	
Expansion Capabilities	Up to 10 expansion units using value/performance series 12Gb SAS expansion enclosure D3V-QUA-424S/D   D3-QUA-424D (LFF 24-bay), D3-QUA-316D (LFF 16-bay), D3-QUA-226D (SFF 26-bay)				
Max. Drives Supported	284	284	284	276	286
Dimension (H x W x D)	19" Rackmount 170.3 x 438 x 515 mm	19" Rackmount 170.3 x 438 x 515 mm	19" Rackmount 170.3 x 438 x 515 mm	19" Rackmount 130.4 x 438 x 515 mm	19" Rackmount 88 x 438 x 491 mm
Memory Protection	Cache-to-Flash module* Battery backup module + Flash module (To protect all memory capacity) Super capacitor module + Flash module (To protect up to 16GB memory per controller)				
LCM	USB LCM (optional)				
Power Supply	80 PLUS Platinum, two redundant 770W (1+1) AC Input 100 ~127V 10A, 50-60Hz 200 ~ 240V 5A, 50-60Hz DC Output +12V 63.4 A +5VSB 2.0A				

\* Optional feature in value series D3V-QUA-424S & D3V-QUA-424D

## JBOD

The JBOD Series is a cost-effective DAS (Direct Attached Storage) or JBOD (Just a Bunch Of Disks) for server expansion. The series features a range of form factors which allows more deployment flexibility to meet users' budget and rack density limitations.

	D2-QJC-424S	D2-QJC-424D	D2-QJC-226D
Form Factor	4U 24-bay, LFF		2U 26-bay, SFF
I/O Controller	Single-upgradable controller	Dual-active controller	
Host & Expansion Connectivity (per Controller)	5 x 12Gb/s SAS wide ports (SFF-8644)		
Drive Type	2.5" SAS, NL-SAS HDD 2.5" SAS, SATA SSD	Mix & match 3.5" & 2.5" SAS, NL-SAS HDD 2.5" SAS, SATA SSD	
HBAs & RAID Cards	Broadcom (LSI) 12Gb/s & 6Gb/s SAS HBA & RAID Controller Cards   ATTO 12Gb/s & 6Gb/s SAS HBA SAS RAID Controller Cards		
OS Support	Windows 2008, 2008 R2, 2012, 2012 R2, 2016 Storage Spaces SLES 10, 11, 12   RHEL 5, 6, 7   CentOS 6, 7   Solaris 10, 11 FreeBSD 9, 10   Mac OS X 10.11 or later   VMware, Hyper-V, & Citrix		
Dimension	19" Rackmount 170.3 x 438 x 515 mm	19" Rackmount 170.3 x 438 x 515 mm	19" Rackmount 88 x 438 x 491 mm
Power Supply	80 PLUS Platinum, two redundant 770W (1+1) AC Input 100 ~127V 10A, 50-60Hz 200 ~ 240V 5A, 50-60Hz DC Output +12V 63.4 A +5VSB 2.0A		