

Tyrone[®] VERTA

D4ZC-24D DUAL CONTROLLER UNIFIED STORAGE

Simplicity & Flexibility to Scale now comes in **Dual Controller**



The era of having multiple units for different storage needs is passing as diverse storage products prevent optimum utilization and can be difficult to manage. VERTA series from Tyrone Systems, consolidates all your storage requirements.

UNIFIED ARCHITECTURE

Tyrone Opslag Verta D4ZC-24D is an active- active dual-controller unified storage system that provides FC, 10G, IB and IP connectivity for concurrent SAN or NAS operations.

- Unified Storage Solution Supports both Block and File Protocols
- Supports both Block (iSCSI, FCP, SRP) & File (SMB, NFS, FTP, AFP) protocols
- Dual Redundant Active- Active Controller with load balancing
- 4U Rack Space.

Supports a variety of File & Block protocol, client systems & different configurations for host connectivity

Clients supported	Windows, MAC OS, Linux, FreeBSD, Solaris
File Protocols	SMB, AFP, FTP & NFS
Block Protocols	iSCSI Target, FC Target, SRP Target
Host Interface(s)	Bundled: 2 10G (SFP+) Ethernet ports, 1 x Management port (per controller) Optional Add-ons 2 or 4 GbE (RJ45) Ethernet ports (SMB/NFS/FTP/AFP/iSCSI) 2 or 4 10G (SFP+/RJ45) Ethernet ports (SMB/NFS/FTP/AFP/iSCSI) 2 25G (SFP28) Ethernet ports (SMB/NFS/FTP/AFP/iSCSI) 2 100G (QSFP) Ethernet ports (SMB/NFS/FTP/AFP/iSCSI) 2 or 4 16G Fibre-channel ports (FCP) 2 100G (QSFP) InfiniBand ports (SRP or IPoverIB)
Management	Web based GUI for management Hardware monitoring SNMP support
Advanced Features	Supports SSD Caching (Optional upgrade), Built-in Snapshot with rollback Snapshot, High Availability, File System with Journaling support, Inbuilt user authentication, Support for ADS & NIS, Support for Volume Replication
System Physical Specification	CPU (Default 1) Intel Xeon processor (16 cores per controller) Memory 64GB DDR4 ECC memory (per controller) RAID LEVEL 0, 1, 0+1, 5, 6, 50 & 6 HDD Bays 24 hot-swap SAS/SATA LFF/SFF HDDs/SSDs in same enclosure HDD Type SAS/SATA/SSD Max Expansion 204 HDD's P. Supply 1+1 Redundant power supplies Others Fault-tolerant and redundant modular components for controller, PSU, FAN module, and dual port disk drive interface

FLEXIBLE SCALABILITY

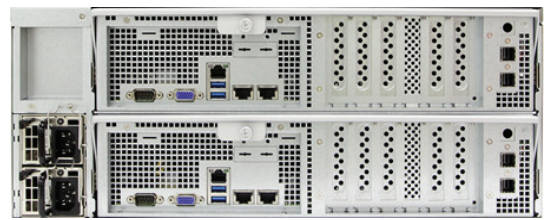
Highly scalable solution offering storage capacity starting from 8TB to over 3 PetaByte. Storage capacity can be easily enhanced by adding JBOD units to primary storage. For performance scaling along with capacity scaling, multiple VERTA units can be clustered together.

FLEXIBLE DATA PROTECTION AND REDUNDANCY

systems support various RAID levels (0, 1, 0+1, 5, 6, 50 & 60) for protection against disk failure and are bundled with redundant power supply as a default feature. VERTA also supports multiple snapshots with scheduling as a default feature and supports local & remote replication.

EASY MANAGEMENT AND INTEGRATION

Tyrone systems believe in keeping things simple. VERTA can seamlessly integrate with ADS & NIS and our web-based management UI is very intuitive and easy to use. For system health monitoring, it has support for IPMI 2.0 & for SNMP.



Features	Detailed Specifications	
Form Factor	4U 24-bay	
Controller	Dual-redundant	
System Memory (per node)	16 DIMM slots across 8 memory channels (4 memory channels per CPU; 2DPC) - 512GB DDR4 2400/2133 RDIMM DRx4 - 128GB DDR4 2400/2133 RDIMM SRx4 - 1024GB DDR4 2400/2133 LRDIMM QRx4 - 2048GB DDR4 2400/2133 LRDIMM 3DS 8Rx4"	
Host Board	Onboard host ports: 2 10G (SFP+) ENET ports(Per controller); 1 x Mgmt port(Per Controller) - 2 or 4 GbE (RJ45) Ethernet ports (SMB/NFS/FTP/AFP/iSCSI) - 2 or 4 10G (SFP+/RJ45) Ethernet ports (SMB/NFS/FTP/AFP/iSCSI) - 2 25G (SFP28) Ethernet ports (SMB/NFS/FTP/AFP/iSCSI) - 2 100G (QSFP) Ethernet ports (SMB/NFS/FTP/AFP/iSCSI) - 2 or 4 16G Fibre-channel ports (FCP) - 2 100G (QSFP) InfiniBand ports (SRP or IPoverIB)"	
Max. Drives Number	Up to 204 HDDs/SSDs using add-on JBODs	
Drive Interface	12Gb/s SAS	
Supported Drives	SAS/SATA LFF/SFF HDDs/SSDs	
Drive Advanced Features	S.M.A.R.T. support	
RAID Options	RAID 0,1,0+1,5,6,50 & 60	
Advanced Features	Default software features include: - SED (self-encrypting drives) - Thin-provisioning (block-level) - Snapshot: 64 per source volume, 128 per system - Remote replication (file-level) Optional features: SSD cache	
OS Support	Windows, Linux, MAC OS, FreeBSD, Solaris	
Protocol Support	File-level protocol: SMB, NFS, FTP, AFP Block-level protocol: iSCSI, FCP, SRP"	
Management	User account management - ADS - Web-based management UI - NIS - System Health monitoring	
Notification	Email, SNMP	
Availability and Reliability	Redundant, hot-swappable hardware modules	
Power Supply Unit	1100W 1+1 redundant power supply 80+ Platinum AC INPUT : 100-120V,50/60Hz,12A DC OUTPUT : 850W AC INPUT : 200-240V,50/60Hz,8A DC OUTPUT : 1100W	1200W 1+1 redundant power supply (BTO) AC INPUT : 110~240V,47-63Hz,15-7.5A
System Cooling (per node)	4 x 60x56mm easy swap fans	
Environmental Specifications	Storage temp : -10°C ~ 60°C / Op temp : 0°C~ 35°C / Storage op humidity : 5%~95%	
Packaging Size (W x D x H)	mm : 657 x 940 x 468 / inches : 25.9 x 37 x 18.4	
Weight (without HDDs)	Kgs : 50/lbs :110.2"	
Mounting	Standard : 28" slide rail	

1: The protocols are interface specific and not all protocols work with all interfaces e.g. FC target requires FC ports. Not all protocol options are available for all clients e.g. SRP is not available for MAC OS.
 2: Not all host interfaces combinations are available. For e.g. it is not possible to have 12 Gigabit ports + 4 10G ports in the same unit.
 3: SSD acceleration uses up to 4 HDD bays for populating SSDs reducing the number of available bays.