

The Flex Advantage

- » Industry-leading experience in the delivery of fully-integrated and tested server and storage solutions
- » Vertical integration of key enabling capabilities and technologies: design, printed circuit boards, power supplies
- » Global sourcing and supply-chain expertise, combined with best-in-class manufacturing for datacenter products
- » Worldwide distribution, service, repair, and reverse logistics capabilities

T5224DN 2U24 HA NVMe All-Flash Array



The T5224DN is a 2U rack-mount dual-controller 24 PCIe/NVMe SSD All-Flash Array ideally designed for Software Defined Storage (SDS) usage.

The SDS appliances that are built from T5224DN are best suited for high-performance applications, which include Big Data analytics, and enterprise data applications. The controllers are based on Intel's recently announced Xeon[®] Scalable[®] processors (aka Skylake-SP). Each controller supports up to two processors with 16 DDR4 DIMMs of main memory. There is extensive I/O provided in and out of the box thru 48 PCIe Gen3 lanes that can be flexibly carved out into a variety of PCIe slot options.

The controller provides on-board networking in the form of four 10GbE ports that can be configured as a mix of SFP+ and BASE-T. In addition, there is a dedicated 1GbE management port. Optionally, each controller can support up to one processor SKU that has the Intel OmniPath[®] 100Gb port embedded in it. Other external ports available at the rear are two USB3.0, one VGA and one RS-232. M.2 sockets are available, offering high performance boot options for the OS as well as for storing logs. TPM2.0 is supported via a pluggable module.

The High Availability of the controllers is provided via a x16 PCIe NTB that runs between the two controllers. Each controller houses 5 dual-rotor fans that enable the enclosure to be cooled in a fail-safe fashion supporting processors up to 165W TDP. The enclosure supports 24 dual-port PCIe/NVMe U.2 SSDs in the front. Each SSD slot is rated for the full 25W power limit to enable the highest performing SSDs to be used. For critical data backup protection in the event of a power loss, two options are provided in the form of NV-DIMM with Supercap and the other a Battery Backup Unit (BBU) per controller. The enclosure is powered by two redundant 80+ Titanium 2KW CRPS power supplies. The depth of the chassis is under 30" enabling it to be used in standard depth data-center racks.

- » The dual hot-plug high performance controllers, fastest dual-port SSDs, serviceable dual-rotor fans in a running system and redundant power supplies make T5224DN a highly available, very serviceable, high performance system that enterprise and cloud customers expect
- » Benefit from Flex's proven design, manufacturing and delivery experience to support your organization's datacenter storage needs and total-cost-of-ownership (TCO) objectives
- » Flex's T5224DN leverages modular-design principles to provide a robust, highly-configurable and easily serviceable platform
- » Flex's products incorporate storage technology with thermally-optimized mechanical designs and advanced power solutions to increase your organization's storage density, performance and energy efficiency

Product Features and Specifications

Form Factor	2U rack-mount
High Availability	Supports two controllers in Active-Active configuration PCIe 3.0 x16 Non-Transparent Bridge (NTB) for inter-controller communication
Redundancy	Hot-swap controllers, power supplies, and dual-rotor fans
Processor	<ul style="list-style-type: none"> » Dual Intel Xeon® Scalable® (aka Skylake-SP) processors per controller » Up to 165W TDP » Up to 1x Omni Path processor SKU via CPU1
Drive Bays	24x Hot-Swap 2.5" dual-ported NVMe U.2 form factor, up to 25W
Expansion Slots	<ul style="list-style-type: none"> » 2x PCI-E 3.0 x16 Full-Height Half-Length (FHHL) or » 3x PCI-E 3.0 x16 Half-Height Half-Length (HHHL) or » 3x PCI-E 3.0 x16 / x8 Half-Height Half-Length (HHHL) and 1x PCI-E 3.0 x8 OCP Mezzanine slot per controller
Network Controllers	<ul style="list-style-type: none"> » Supports 4x on-board 10GbE ports » Supports 1x on-board dedicated 1GbE management port
Internal Drives	<ul style="list-style-type: none"> » Support for 2x M.2 PCIe modules per controller (22mm x 80mm / 110mm x 2) » Support for 2x M.2 SATA modules per controller (22mm x 80mm x 2)
System Fans	5 x 40mm dual-rotor fan modules per controller
Supercap	Internal 2.5" bay for super capacitor pack
Battery Backup (BBU)	Optional
I/O Connectors	<ul style="list-style-type: none"> » 1x video connector » 1x Serial port (RS-232) » 2x USB 3.0 ports » 2x 10GbE (SFP+) and 2x 10G-BASE-T (RJ45) ports » 2x 10G-BASE-T (RJ45) ports » 1x 1GbE (RJ45) dedicated management port
System Management	AST2500 BMC with IPMI 2.0 and iKVM
Trusted Platform Module	TPM 2.0 Connector
Power Supply	<ul style="list-style-type: none"> » Supports 1+1 CRPS redundant configuration » 2000W 80+Titanium
Dimensions	<ul style="list-style-type: none"> » 440.0 (W) x 87.9 (H) x 719 (D) mm » 17.3" (W) x 3.46" (H) x 28.3" (D)
Mounting	Supports standard tool-less fixed rail kit



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