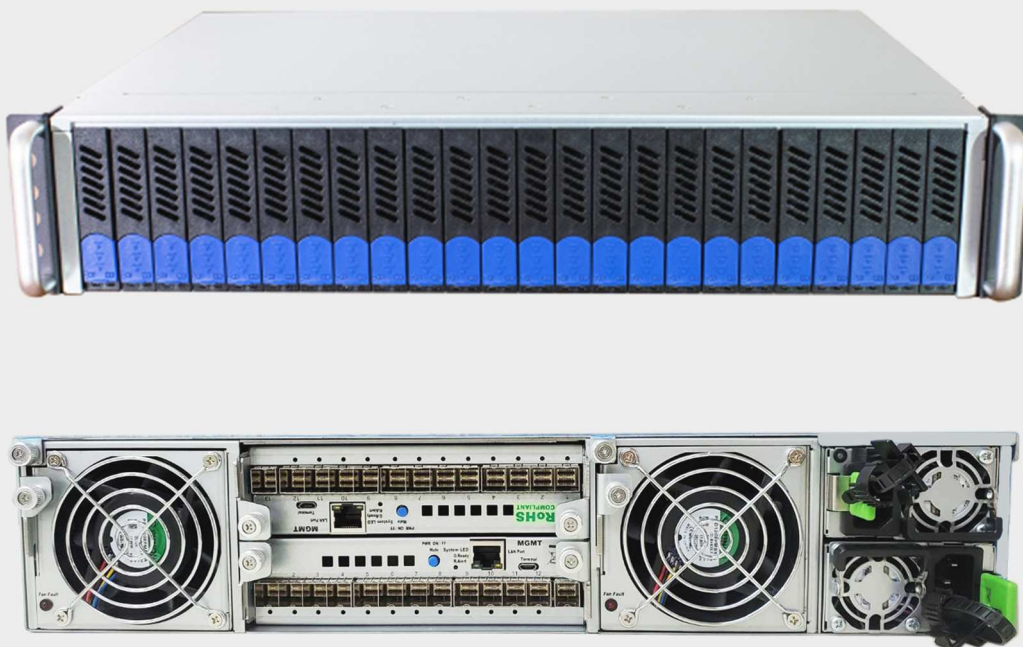# PCIe Gen4 24Bays NVMe JBOF

## Overview

Ustorage PCIe Gen4 24bays JBOF is the highest density and performance NVMe JBOFs. it adopts Microchip PCIe Gen4 fan-out PFX switch PM40100 or fabric PAX switch PM42100. Both of PCIe Gen4 switch are PCI Express Base 4.0 Specification-compliant, integrated hot and surprise –plug controllers per port.

The PCIe Gen4 JBOF includes two of PCIe switch modules, support single port or dual ports NVMe drive based on SKUs. The on-board MCU implements various of features for enclosure and drives management.

Redundant FANs and power supplies design, 1+1 fail-over prevents system malfunction caused by single component failure, It allows maintenance staff to replace the faulty components without shutdown system power.

US_PM4-2425F is fan-out JBOF, the feature of "Virtual switch" that allows multiple host servers connect to JBOF and accessing the SSDs in same domain.
US_PM4-2425A is fabric JBOF, supports MR-IOV and SR-IOV. The GUI provides the friendly user interface for namespace creation and VFs assignment, also including drives and enclosure management.





## Features

- LEDs for drive fault, activity and present indication.

- Enclosure management support CLI, Telenet and GUI (Fabric JBOF)

- Support SRNS/SRIS in connecting Ustorage host cards with up to 3 meters MiniSAS-HD SFF8674 cables.

- Redundant and hot swappable design for FANs module and CRPS power supplies.

- Total upstream (Hosts) bandwidth is PCIe Gen4 x16 lanes* 6 head-nodes=1,536 GT/s for whole JBOF enclosure.
  Downstream (Device) support 24bays PCIe Gen4 x4(Single port) or 2x2(Dual ports) NVMe SSDs.

# Specifications

| Model | US_PM4-2425-F/A |
|---|---|
| PCIe Switch | Microchip Switchtec Gen4 PFX PM40100 for US_PM4-2425**F**  or<br>Microchip Switchtec Gen4 PAX PM42100 for US_PM4-2425**A** |
| Form Factor | EIA-310D 2U form factor |
| Dimensions | 2U 19" 19" 480mm (W) x 3.5" 88mm (H) x 14.2" 360mm (D) |
| Power supply | Two 800W 80 PLUS Titanium power supply |
| SSD I/F | SFF8639 U.2 form-factor, support single port and dual ports NVMe drives |
| System cooling | Two 80mm (W) x 80mm (H) x38mm (D) FANs |
| LEDs indication | SSD Activity (Blue), Present (White) and Fault (Red) LEDs per slot<br>FAN Fault (Red) LEDs<br>PSU Fault (Red) LEDs<br>System healthy (Red/Green) LEDs<br>PCIe port link width matching (Red) and host port (Blue) LEDs |
| Real I/O (Per switch module) | Three Quad-ports SFF-8674 connectors, Micro USB port for terminal,<br>RJ45 Ethernet 10/100 port, Mute button/Power on button. |
| System Alarm | Buzzer beeping for critical events<br>(FANs, PSUs, over voltages and temperatures) |
| I/O Capability (per enclosure) | Total Upstream bandwidth: PCIe Gen4 x 16*6(head-nodes)=1536 GT/s<br>Downstream bandwidth: 24bays SSDs with PCIe Gen4 1x4 or 2x2 |
| Serviceability | Hot-Swappable SSDs, FANs, PSUs |
| Environment conditions | Operating Temperature: 5C to 35C<br>Storage Temperature: -10C to 85C<br>Operating Humidity: 10% to 90% relative humidity non-condensing<br>Storage Humidity: 5% to 95% relative humidity non-condensing |
| Enclosure management | CLI running in USB or Ethernet port for US_PM4-2425-FS/D<br>GUI running in management server for US_PM4-2425-AS/D |

US_PM4-2425-XX

**S: Support single port x4 drives**

**D: Support dual ports 2x2 drives**

**F: PFX fan-out JBOF**

**A: PAX fabric JBOF**