DATA SHEET

Pliops XDP-RAIDplus

Best-In-Class SSD Data Protection

Pliops XDP-RAIDplus is a best-in-class data protection service for enterprise SSD environments, including NVMe and NVMEoF environments, and overcomes the limitations of conventional RAID controllers while accelerating application performance, enabling higher SSD endurance and usable life, and unlocking capacity.

Specifications

Performance	RR:3M IOPS, RW:1.3M IOPS, SR:55GB/s, SW:6.6 GB/s
Capacity	128TB protected RAW disk capacity
RAID support	RAID 0, 5
Compression	Hardware accelerated LZ4
SSD Vendors	All drive vendors including Samsung, WD, Micron, Intel, Kioxia, Hynix, Seagate
SSD Support	**Interface**: PCIe Gen 3/4/5 NVMe & NVMe-oF, SAS, SATA **Types**: TLC SSD, QLC SSD, ZNS SSD, Intel® Optane™
OS Support	Most popular Linux variants including RHEL, Ubuntu and Debian
Supported Servers	All standard servers including Dell, HPE, Lenovo, Supermicro, Quanta, Wywinn, Inspur, Sugon, Fujitsu, Hitachi, Tyan, MiTac, Intel, Cisco, AIC
Power Fail Protection	All data is protected from sudden power failure protection using onboard Supercapacitors
Operating Temperature	10-52°C @ 250 LFM
Storage Temperature	5°C to 35°C, < 90% non-condensing
Power	Typical <25W, Max 45W, +12Vdc through PCIe slot
Operating Voltage	+12V dc, through PCIe edge connector
Physical Dimensions	Low Profile HHHL (6.6" X 2.536") - Tall and Short Bracket
Host Bus Type	8-lane, PCIe Gen 3 Compliant
Warranty	3 years, free advanced technical support, advanced replacement option
Write Atomicity	Support for Atomic Writes up to 64KB for double write elimination
Host API	Standard block device
Regulatory Certifications	AS/NZS CISPR 22, ICES -003, Class B, EN55022/EN55024, VCCI V-3, RRA no 2013-24 & 25, RoHS compliant, EN/IEC/UL 60950, CNS 13438, FCC 47 CFR part 15 Subpart B, class B, WEEE
MTBF	Up to 4.5M Hours

XDP-RAIDplus Features & Benefits:

- 6x more capacity than traditional RAID allows for data growth challenges
- Rapid Recovery - Enable strict availability SLAs
- Extend SSD useful life beyond hardware refresh cycles
- Greater Resiliency with protection against 2 sequential single drive failures
- Eliminate need for dedicated hot spare with built in Virtual Hot Capacity feature
- Significant write amplification reduction
- Ultra fast rebuild rate for large capacity drives
- Full data & metadata protection in the event of sudden power down

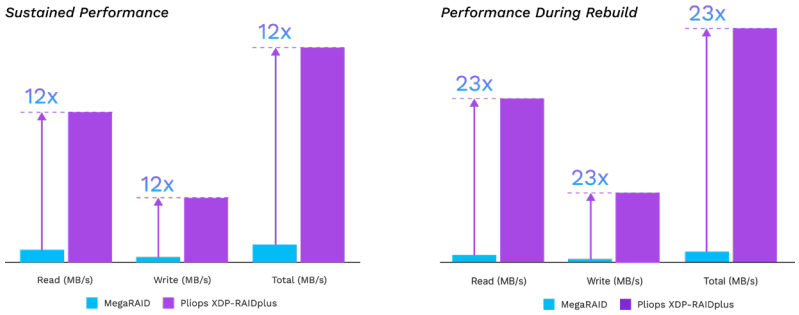
Part Number PLALAS4FI-000
Pliops Extreme Data Processor PCIe Adapter Card, Low-Profile w/ Long bracket

Part Number PLALAS4HI-000
Pliops Extreme Data Processor PCIe Adapter Card, Low-Profile w/ Short bracket

Performance

12x Faster than traditional RAID

According to Principled Technologies, XDP-RAIDplus can, on the same setup, provide up to 12x increased throughput and 65% lower drive rebuild time compared to a standard RAID controller. Even during rebuild, Pliops XDP-RAIDplus has 23x higher throughput.

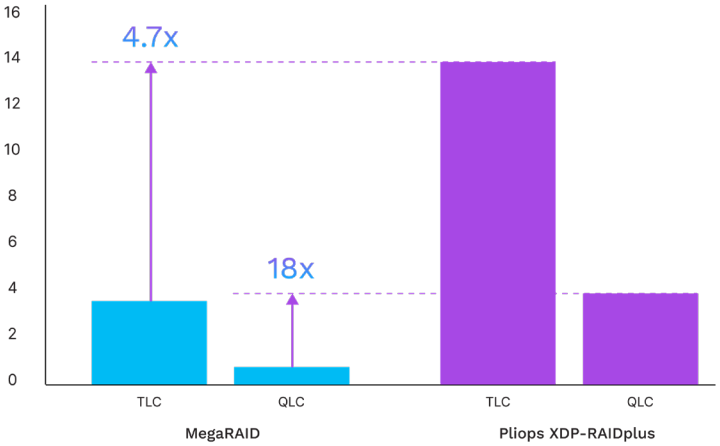


Endurance

Get 18x Higher endurance with QLC & 5x Higher endurance with TLC

Pliops XDP-RAIDplus increases SSD endurance by converting all writes to sequential and writing in large block sizes, thus minimizing garbage collection, wite amplification and providing uniform performance even up to 85% fill rate.

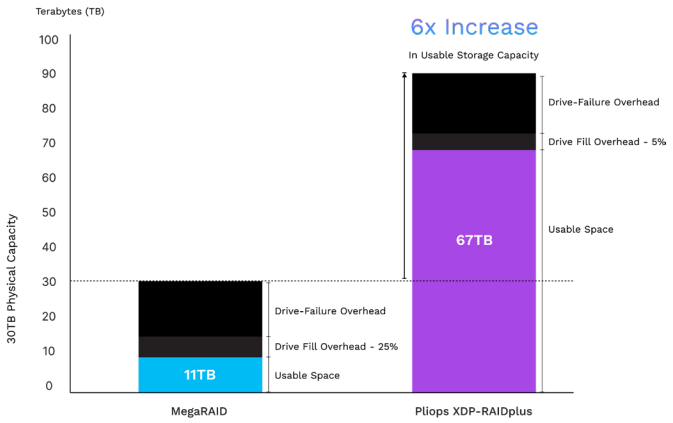
XDP-RAIDplus supports multiple single drive failures, and with virtual hot capacity (VHC), there is no need for a hot spare. So users get the protection of RAID 5 without the performance penalty.



Capacity

Store up to 6x more data with no performance cost.

Data is efficiently compressed and packed, leaving no gaps, so there is no internal fragmentation. When using the block storage API, the volume can also be thinly provisioned, enabling the full use of all SSD capacity at maximum performance.



Availability

5x faster data rebuild than traditional RAID

Pliops XDP RAIDplus only rebuilds the data on the failed drive unlike traditional RAID. With hardware acceleration, this results in a 5x quicker rebuild time thus minimizing impact on application quality of service and more reliable usage of high density storage.