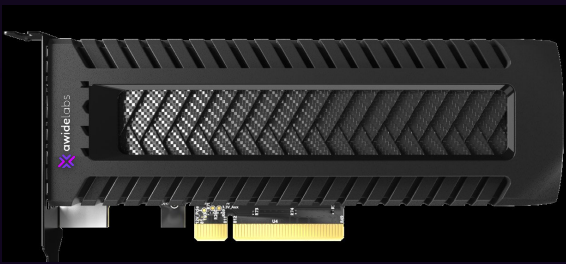


The Power of Awide Labs Data Processor (ADP)

Overcome storage inefficiencies, massively accelerate application performance, and dramatically lower overall infrastructure costs for databases, analytics, machine learning, and more. The **Awide Labs Data Processor (ADP)** radically simplifies the way data is processed and SSD storage is managed. Delivered on an easy-to-deploy, low-profile PCIe card, Awide Labs ADP exponentially increases performance, reliability, capacity, and efficiency to multiply the effectiveness of your infrastructure investments.



Awide Labs ADP improves performance, capacity, efficiency, and reliability across a wide range of applications.

I Performance

Achieve unprecedented performance up to 10x higher for databases, analytics, AI/ML, and more.

Awide Labs breakthrough data structures and algorithms deliver the equivalent of hundreds of cores of host software. Accessible via a standard block interface, ADP appears as a block device in the system and will accelerate any application. A direct Key-Value (KV) interface that uses the same APIs as existing software as well as ADP-Rocks, a RocksDB binary compatible API, is provided for an easy change to supercharge your software. With databases like PostgreSQL, MySQL, MongoDB, and Cassandra, Awide Labs ADP delivers significant increases in instance density while reducing latency, enabling systems to be pushed to the max.

I Reliability

Get data protection at the speed of flash with ZERO performance penalty.

Traditional data protection solutions require tradeoffs in both performance and capacity. Awide Labs ADP eliminates these tradeoffs with advanced drive failure protection that maintains constant data availability and eliminates data loss and downtime. ADP supports multiple single drive failures, and with virtual hot capacity (VHC), there is no need for a hot spare. Because ADP manages the data, only actual data is rebuilt, unlike RAID-based solutions.

I Capacity

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

Awide Labs ADP supports TLC, QLC, Intel® Optane™, including ZNS and open channel - all common flash technologies and SSDs from any vendor. ADP increases endurance by up to 10x, making it possible to take advantage of high-capacity, low-cost SSDs. Data is efficiently compressed and packed with 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.

I Efficiency

One easy-to-deploy solution for every workload for up to 80% better economics.

Awide Labs ADP provides value across a broad range of applications with one-solution fits-all acceleration. Awide Labs ADP makes it valuable and easy to deploy across an entire data center. Compact yet powerful, ADP gets more out of the existing infrastructure footprint to keep up with organizational data growth and application adoption.

Awide Labs Data Processor unleashes the full potential of flash storage by enabling enterprise applications to access data up to **1,000 times faster**, using just a fraction of traditional computational load and power.

Specifications

Performance	RR: 3M IOPS, RW: 1.3M IOPS, SR: 55 GB/s, SW: 6.5 GB/s
Capacity	128 TB 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™
Supported Servers	All standard servers including Dell, HPE, Lenovo, Supermicro, Quanta, Wywinn, Inspur, Sugon, Fujitsu, Hitachi, Tyan, MiTac, Intel, Cisco, AIC
OS Support	Most popular Linux variants including RHEL, Ubuntu and Debian
Host API	Standard block device; KV Library API, ADP-Rocks (RocksDB compatible API)
Physical Dimensions	Low Profile HHHL (6.6" x 2.536") - Tall and Short Bracket
Host Bus Type	8-lane, PCIe Gen 5 Compliant
Power Fail Protection	All data is protected from sudden power failure 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, +12 Vdc through PCIe slot
Operating Voltage	+12V dc, through PCIe edge connector
Warranty	3 years, free advanced technical support, advanced replacement option
Write Atomicity	Support for Atomic Writes up to 64KB for explicit or transparent double write elimination
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

Awide Labs ADP Advanced Features

- ◆ **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

ADP - A1P5TB - 26001

PART NUMBER

Awide Labs Data Processor PCIe Adapter Card, Low-Profile w/ Tall bracket

ADP - A1P5SB - 26001

PART NUMBER

Awide Labs Data Processor PCIe Adapter Card, Low-Profile w/ Short bracket