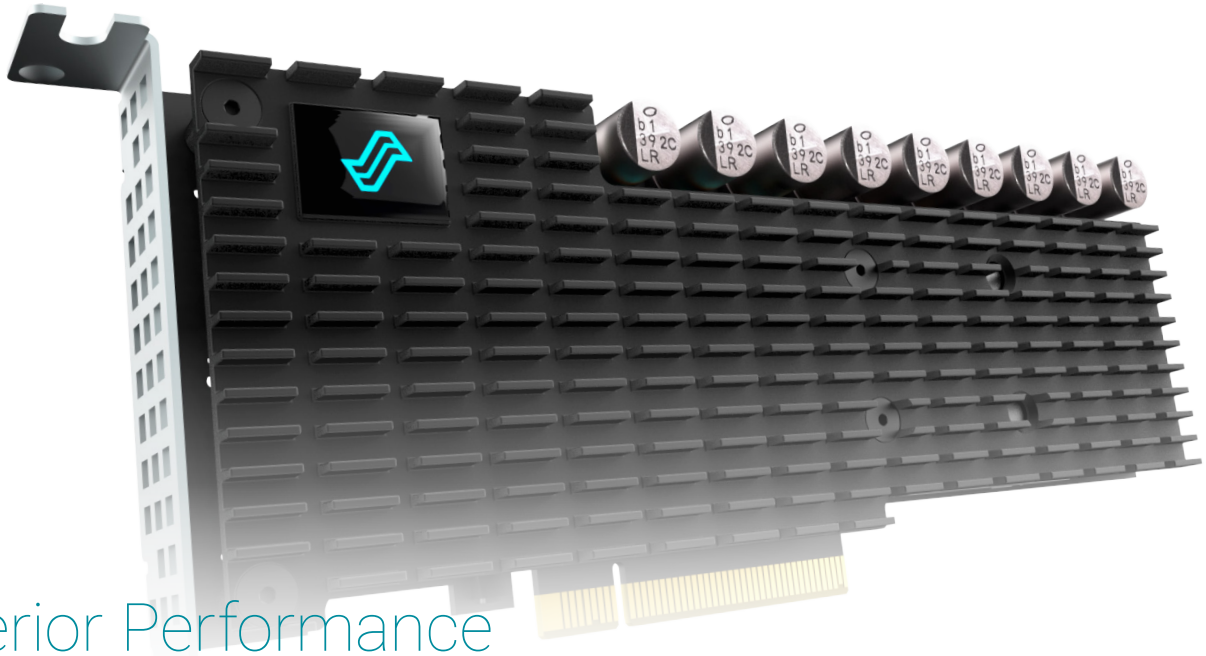
LIQID **Element**
PCIe AIC SSD Specifications



Superior Performance

The Liqid Element PCIe Add-In-Card (AIC) features high storage capacity and extreme performance for mission-critical and performance-demanding workloads. It is an ultra-thin, standard form factor half-height half-length (HHHL) card that works seamlessly with systems that have existing PCIe slots. This makes the Element AIC ideal for deployment in data center and enterprise applications.

The Element AIC offers a Gen 3.0 x8 PCIe interface, which enables high throughput and low latency transactions and utilizes the latest NVMe protocol in order to deliver increased performance and efficiency from a single device. The AIC outperforms legacy architectures by delivering 1.25 M IOPS of random performance, over 7 GB/s of throughput, and ultra-low transactional latency of 20 us.

The Element AIC's innovative design enables multiple drive con gurations ranging from maximum performance to maximum redundancy. The AIC also features enterprise-class power failure protection for increased reliability to prevent data loss and ensure uninterrupted work in case of power failure.

> Ultra Fast PCIe Gen 3.0 x8 Interface

> Performance of 1.25 M IOPS and 7 GB/s

> High-capacity NVMe SSD, up to 16 TB

> Enterprise-class Power Failure Protection

Key Features

- High Performance PCIe SSD
- Ultra Fast PCIe 3.0 x8 Interface
- NVMe 1.2.1 Protocol Supported
- High Capacity Design, up to 16 TB
- Standard Form Factor SSD
- Low Profile HHHL Card
- Plug-n-Play Compatibility
- UEFI Boot Support
- Enterprise Grade Reliability
- Power Loss Data Protection
- Active Thermal Throttling
- Active Power Management
- Advanced ECC and Data Protection
- Advanced Error Recovery
- Active Telemetry Monitoring
- Low Overhead Architecture
- No Host CPU or DRAM Off Load
- RAID on Card Supported Data Protection

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LIQID Element
PCIe AIC SSD Specifications

Specification	Model: Element PCIe AIC SSD
Raw Capacity	Up to 16 TB
NAND Type	TLC 3D NAND
Read Bandwidth (GB/s)	~7.0
Write Bandwidth (GB/s)	~6.3
Ran. Read IOPS (4k)	~1,250,000
Ran. Write IOPS (4k)	~900,000
Ran. Write IOPS (4k) (SS)	~275,000
Read Access Latency	~80 µs
Write Access Latency	~20 µs
Protocol	NVMe 1.2.1
Bus Interface	PCI Express 3.0 x8
Endurance *	884 - 30,765 Terabytes Written (TBW)
Security	AES Data Encryption
Weight	6-10 oz
Warranty	3 years or maximum endurance used
Form Factor	Standard Form Factor HHHL Card
Temperature	Op: 0 to 55 deg C
	Non-Op: -40 to 75 deg C
Power	Active: ~25 W Typical
	Input: 12 V Only (optional aux power cable)
Air Flow	Min 400 LFM
Humidity	5% to 95% (non-condensing)
Altitude	0 ft to 10,000 ft
Operating Environments	Windows, Windows Server 2012, 2012 R2
	RHEL; SLES; CentOS, Solaris, SUSE, VMware
Agency & Safety	UL, CB, CE, CCS, KCC, HF, BSMI, VCCI, FCC Class B and CISPR Class B, JEDEC

*TBW table per capacity/configuration available upon request

Data Center Selection

Toshiba 3D NAND:

LQD-E1APNAA04M960G00
Liqid Element 960GB, TN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

LQD-E1APNAA04M001T92
Liqid Element 1.92TB, TN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

LQD-E1APNAA04M003T84
Liqid Element 3.84TB, TN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

LQD-E1APNAA04M007T68
Liqid Element 7.68TB, TN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

LQD-E1APNAA04M015T40
Liqid Element 15.40TB, TN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

Samsung 3D NAND:

LQD-E1APNAB04M003T84
Liqid Element 3.84TB, SN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

LQD-E1APNAB04M007T68
Liqid Element 7.68TB, SN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

LQD-E1APNAB04M015T40
Liqid Element 15.40TB, SN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

Enterprise Selection

Toshiba 3D NAND:

LQD-E1APNAA04M800G00
Liqid Element 800GB, TN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

LQD-E1APNAA04M001T60
Liqid Element 1.60TB, TN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

LQD-E1APNAA04M003T20
Liqid Element 3.20TB, TN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

LQD-E1APNAA04M006T40
Liqid Element 6.40TB, TN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

LQD-E1APNAA04M012T80
Liqid Element 12.80TB, TN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

Samsung 3D NAND:

LQD-E1APNAB04M003T20
Liqid Element 3.20TB, SN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

LQD-E1APNAB04M006T40
Liqid Element 6.40TB, SN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

LQD-E1APNAB04M012T80
Liqid Element 12.80TB, SN, NVMe PCIe Gen 3.0 x8 HHHL AIC SSD

Please contact your sales rep for more information and to determine which configuration is best for use. Specification subject to change without notice.

About Liqid

A leader in composable infrastructure, Liqid enables users to configure and manage physical, bare-metal server systems in seconds. Storage, compute, networking and graphics processing devices are interconnected over PCI-Express fabric to deliver dynamically configurable bare-metal servers perfectly sized with the exact physical resources required by the application being deployed.

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