

Taking aim at DRAM

Liquid and Intel® Optane™ Technology U.2 solid state drive (SSD) solutions combine the unparalleled high-throughput, low-latency, quality of service (QoS) and endurance of Intel Optane SSDs with Liquid’s industry-leading PCIe fabrics to scale 2-4x the capacity and bandwidth. Achieving DRAM memory-like speeds, the Liquid and Intel® Optane™ solution suite is available in capacities of up to 1.50 TB for high-value workloads.

The U.2 form factor offers a hot pluggable Gen 3.0 PCIe interface with single- and dual-port configurations, which enables high throughput and high availability. It utilizes the latest NVMe protocol in order to deliver increased performance and efficiency from a single device. The U.2 outperforms legacy architectures by delivering up to 3.60 GB/s throughput and 850 K IOPS of random performance and ultra-low transactional latency of <10 µs.

The Liquid solutions also supports Intel® Memory Drive Technology (IMDT) software that extends system memory transparently. IMDT integrates the SSD into the memory subsystem and makes it appear like DRAM to the OS and applications. As a fully transparent memory solution, no changes are required to the OS or applications.

- > NVMe PCIe Gen 3.0 x4 Interface
- > x4 Single-Port or x2 x2 Dual-Port
- > High-capacity Optane up to 1.50 TB
- > IMDT Software for DRAM Emulation

Key Features

- | | |
|--|--|
| - High Performance Intel® Optane™ Technology | - Hot Plug |
| - NVMe 1.0 Protocol Supported | - Active Thermal Throttling |
| - High Capacity Design, up to 1.50 TB | - Active Power Management |
| - Standard Form Factor SSD | - Advanced ECC and Data Protection |
| - 2.5" U.2 Form Factor Extended | - Advanced Error Recovery |
| - Plug-n-Play Compatibility | - Active Telemetry Monitoring |
| - UEFI Boot Support | - Low Overhead Architecture |
| - Enterprise Grade Reliability | - No Host CPU or DRAM Off Load |
| - Power Loss Data Protection | - RAID on Card Supported |
| - Dual Port (x2 x2 Active/Active) | - IMDT Software Support for DRAM Emulation |
| - Single-Port (x4) | |

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Specification

Model: Element LQD3925x SSD

Raw Capacity	Up to 1.50 TB
Media Type	Intel® Optane™ Technology
Read Bandwidth (GB/s)	~3.60
Write Bandwidth (GB/s)	~3.60
Ran. Read IOPS (4k)	~850,000
Ran. Write IOPS (4k)	~850,000
Ran. Write IOPS (4k) (SS)	~850,000
Read Access Latency	~10 µs
Write Access Latency	~10 µs
Protocol	NVMe 1.0
Bus Interface	PCI Express 3.0 x4 or x2 x2
Endurance*	Up to 164 PBW*
Security	256 Bits AES Data Encryption
Redundancy	x2 x2 Dual Port (Active/Active)
Warranty	3 years, or maximum endurance used
Form Factor	2.5" U.2 Form Factor (130mm) Extended Length
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

*PBW table per capacity/configuration available upon request

About Liquid

A leader in composable infrastructure, Liquid 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.

Selections

Liquid and Intel® Optane™ SSD

LQD3925x (Single-Port):

LQD-E1TPNIA04P001T50-S104-N1

1.50TB, Intel® Optane™, NVMe PCIe Gen 3.0 x4 single-port 1x4 U.2x SSD

LQD-E1TPNIA04P800G00-S104-N1

800GB, Intel® Optane™, NVMe PCIe Gen 3.0 x4 single-port 1x4 U.2x SSD

LQD3925xd (Dual-Port):

LQD-E1TPNIA04P001T50-M202-N1

1.50TB, Intel® Optane™, NVMe PCIe Gen 3.0 x4 dual-port 2x2 U.2x SSD

LQD-E1TPNIA04P800G00-M202-N1

800GB, Intel® Optane™, NVMe PCIe Gen 3.0 x4 dual-port 2x2 U.2x SSD

Liquid and Intel® Optane™ Persistent Memory

LQD-E1TPNIA04PM001T50-N1

1.50TB, Intel® Optane™ Memory, NVMe PCIe Gen 3.0 x4 U.2x SSD

LQD-E1TPNIA04PM800G00-N1

800GB, Intel® Optane™ Memory, NVMe PCIe Gen 3.0 x4 U.2x SSD

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

Contact Information

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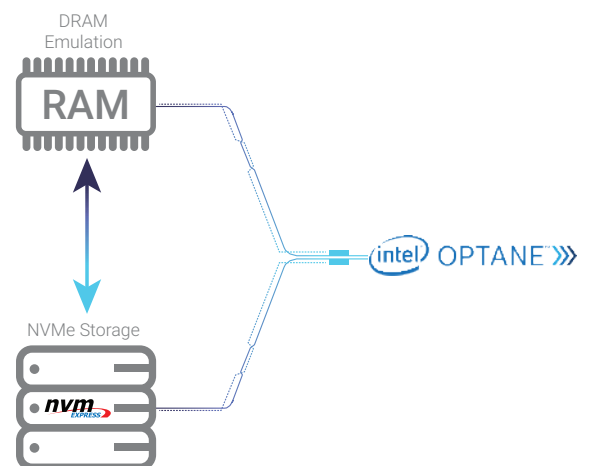
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Liquid and Intel® Optane™ Technology

Intel® Memory Drive Technology (IMDT) software enables the Liquid and Intel® Optane™ solutions to be fully integrated into the memory subsystem and presented transparently to the OS and applications layer as native DRAM. The technology also supports NVMe storage without DRAM emulation.



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