



PCIe/NVMe Gen3x4 SSD Family



KEY BENEFITS

- **Full Form Factor**
- **Full Capacities**
- **Performance to diverse application**
- **Support UEFI/Legacy BIOS with OptionROM to be used as bootable storage.**

*Unigen PCIe NVMe solutions feature a performance throughput of *2500MB/s Read and *2000MB/s Write; ultra high read IOPS up to 300K.*

Unigen PCIe NVMe SSD family deliver outstanding performance, low latency and Quality of Service.

NVMe is a standardized interface that enables higher performance and lower latency than previous generations.

The Unigen PCIe/NVMe Gen3x4 SSD Series are designed around the Marvell 88SS1093 and 88SS1095 SSD controllers and Toshiba's most current Floating-Gate 15nm MLC NAND Flash.

These drives are ideally suited for enterprise and data center client, mid-range and high performance environments.

With exceptional performance and low latency, Unigen's new NVMe family includes QoS features for continuous transmission of high-bandwidth streaming.

They are offered in M.2 2280/22110, U.2 - 2.5" 7mm and HHHL (Half-Height, Half-Length) add-in-card form factors and optimized firmware supporting industrial, embedded and networking applications.

NVMe PCIe SSD performance reaches *2500GB/s sequential read and *2000GB/s sequential writes, and up to 300K random read IOPS.

Hardware based power loss protection features are also available on selected models.

NVMe PCIe Product Offerings:

- **M.2 2280 PCIe SSDs** with densities up to 1TB are available with heatsinks to ensure the fastest read and write performance for workstation and desktop PC/NB systems like Gaming PCs.
- **M.2 22110 PCIe SSDs** with densities up to 1TB are available with built-in Hardware Power Loss Protection (PLP) features to ensure data safety for enterprise grade in cloud computing applications and data centers.
- **2.5" 7.0mm U.2 PCIe SSDs** are Hot-pluggable with densities up to 2TB and are available with ultra-optimized performance for enterprise grade server, workstation, and desktop PCs.
- **HHHL (Half-Height, Half-Length) PCIe** add-in-card with densities up to 2TB are available as a system cache memory with ultra-random performance. These are a great fit for enterprise-JBOD, data center servers and cloud computing applications.

*Performance depends on system application and SSD capacity.

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Technical Specifications										
Model Name	Unigen PCIe-NVMe Solid-State Drive									
Nand Flash Memory	15nm MLC									
Interface	PCIe Gen 3.0 x 4									
Protocol	NVMe 1.1 / 1.2 Compatible									
Performance										
Capacity	128GB		256GB		512GB		1024GB		2048GB	
	M.2 2280 / 22110									
Access	HHHL and U.2									
	Seq. Read	Seq. Write	Seq. Read	Seq. Write	Seq. Read	Seq. Write	Seq. Read	Seq. Write	Seq. Read	Seq. Write
Product Segment	Seq. Read	Seq. Write	Seq. Read	Seq. Write	Seq. Read	Seq. Write	Seq. Read	Seq. Write	Seq. Read	Seq. Write
High-Performance	Up to 1600MB/s	Up to 500MB/s	Up to 2200MB/s	Up to 1000MB/s	Up to 2500MB/s	Up to 1500MB/s	Up to 2500MB/s	Up to 1800MB/s	Up to 2500MB/s	Up to 2000MB/s
Capacity-Optimized	Up to 1600MB/s	Up to 300MB/s	Up to 2200MB/s	Up to 550MB/s	Up to 2500MB/s	Up to 900MB/s	Up to 2500MB/s	Up to 1200MB/s	Up to 2500MB/s	Up to 1500MB/s
Entry-Application	Up to 1600MB/s	Up to 160MB/s	Up to 2200MB/s	Up to 300MB/s	Up to 2500MB/s	Up to 500MB/s	Up to 2500MB/s	Up to 800MB/s	Up to 2500MB/s	Up to 1200MB/s
	4K Ran. Read	4K Ran. Write	4K Ran. Read	4K Ran. Write	4K Ran. Read	4K Ran. Write	4K Ran. Read	4K Ran. Write	4K Ran. Read	4K Ran. Write
High-Performance	130K	125K	180K	165K	290K	230K	300K	260K	300K	260K
Capacity-Optimized	130K	60K	180K	100K	290K	160K	300K	200K	300K	220K
Entry-Application	130K	30K	180K	60K	290K	80K	290K	100K	300K	120K
Reliability										
MTBF	1,500,000 hours									
ECC	LDPC									
UBER	10^{15} bits read (Client) 10^{16} bits read (Enterprise)									
High-Performance	DWPD	1								
Capacity-Optimized		1~3								
Entry-Application		0.3								
Operating Temperature	Operating: 0° ~ 70°C									

About Unigen

Unigen Corporation, founded in 1991, is an established leader in the design and manufacture of custom DRAM and Flash modules, and Original Design and Manufacturing, Warehousing and device Programming services.

Headquartered in Fremont, California, the company has ISO 9001 and ISO 14001 certified manufacturing in California, and in Asia. Unigen markets its custom designed products to OEMs worldwide in embedded, industrial, networking, server, telecommunications, imaging, and medical industries.

The company's OEM services include NPI (New Product Introduction), assembly, supply chain management, testing, and post-sales support.

For more information on Unigen and its products go to www.unigen.com



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