PCIe 4.0 SSD
Dual Port, High Availability

PBlaze®6 6630 Series NVMe™ SSD

PBlaze6 6630 Series based on the Memblaze self-developed Unified Framework Platform, support dual-port, advanced enterprise SSD optimized for PCIe4.0 server that delivers a massive 150% improvement in energy efficiency over the previous generation PCIe 3.0 PBlaze5 920, dramatically reducing power consumption of data center. PBlaze6 6630 Series offers capacity from 1.6TB to 7.68TB, all capacities come in 2.5-inch U.2 form factor.

High Availability of System with Dual-port

PBlaze6 6630 series supports dual-port and allows access via two ports simultaneously, which solves the single-path failure, ensures continuous data access andmeets enterprise high availability requirement. Suitable for multi-path highly available storage system architecture and all-flash arrays. With no impact on enterprise business-critical continuity, minimising QoS impact.

Ultra-long Write Endurance Ensures Long-term and Stable Operation of the Applications

PBlaze6 6630 series enables newly-upgraded MemSpeed4.0 technology set, achieving ultra-long write endurance. As per JESD219 standard, PBlaze6 6630 write endurance can be up to 1.7 DWPD (5 years), PBlaze6 6536 endurance can be up to 3.5 DWPD (5 years).

High Performance to Accelerate Enterprise Applications

The PBlaze6 6630 series has a built-in optimised IO scheduling mechanism that ensures QoS and performance consistency of IO access, guaranteeing the high and consistent performance required by enterprise-class applications. PBlaze6 6530 series combined performance of the dual-port PBlaze6 6630 series is essentially equivalent to that of the single-port PBlaze6 6530 series, meeting the high-performance requirements of enterprise-level users.

Rich Enterprise Features, make Data Safe

Compared to the previous generation PBlaze5 series, the PBlaze6 6630 series support richer enterprise features: Firmware Upgrade Without Reset, Telemetry, Persistent Event Log, Latency Statistics & High Latency Logging, NVMe-MI for Out-of- Band Management, Trim etc. to meet different business needs.

Key Features

Dual Port
PCIe 4.0, NVMe1.4
Random Read 1200K IOPS
Sequential Read 6.8 GB/s
Latency Read/Write 71/9µs

Reliability

AES 256 Data Encryption
Full Data Path Protection
Power Failure Protection
Variable Sector Size Management
Sanitize

Easy-to-use

Firmware Upgrade without Reset
Telemetry
Persistent Event LogLatency Statistics & High Latency Logging
NVMe-MI for Out-of-Band Management

Advanced Feature Support

Timestamp
Weighted Round Robin
8TB/s Enterprise TRIM

PBlaze6 6630 Series [1]	6630			6636		
User Capacity (TB)	1.92	3.84	7.68	1.6	3.2	6.4
Form Factor	2.5-inch U.2					
Interface	PCIe 4.0 2 x 2, Dual Port					
128KB Sequential Read(GB/s)	6.5	6.8	6.4	6.5	6.8	6.4
128KB Sequential Write(GB/s)	2.7	4.6	4.6	2.7	4.6	4.6
Sustained Random Read (4KB) IOPS	920K	1200K	1120K	920K	1200K	1120K
Sustained Random Write (4KB) IOPS (Steady State) [2]	110K	195K	240K	230K	410K	430K
Lifetime Endurance DWPD [3]	1.5	1.5	1.7	3.3	3.3	3.5
Latency Read/Write (μs) [4]	71 / 9					
Operating Temperature	Ambient: 0°C to 35°C with suggested airflow; Case: 0°C to 70°C					
Uncorrectable Bit Error Rate	$< 10^{-17}$					
Mean Time Between Failures	2 million hours					
Protocol	NVMe 1.4					
NAND Flash Memory	3D TLC NAND					
Operation System	RHEL, SLES, CentOS, Ubuntu, Windows Server, VMware ESXi					
Power Consumption	<14 W					
Basic Feature Support	Power Failure Protection, Full Data Path Protection, S.M.A.R.T, Flexible Power Management,Hot Pluggable					
Advanced Feature Support	Dual Port, TRIM,Multi-namespace, EUI64/NGUID, AES 256 Data Encryption & Crypto Erase, Firmware Upgrade without Reset, Timestamp, Weighted Round Robin, Variable Sector Size Management & NVMe End-to-End Data Protection(DIF/DIX), Latency Statistics & High Latency Logging, Telemetry, Sanitize, Persistent Event Log					
Software Support	Open-source management tool, CLI debug tool OS in-box driver (Easy system integration)					

Applications & Workloads

Database

Searching, Indexing, CDN

Cloud and Hyper-scale Computing

High Performance Software-defined Storage

Deep Learning and Big Data Analytics

High Performance Storage System

ERP, SAP HANA

BOSS, Banking, Taxing

High Frequency Trading

Online Payment

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NOTES:

[1] Performance may vary due to different system configurations and firmware version.

[2] Measurement is performed at Steady State.

[3] DWPD, Drive Writes per Day for 5 years.

[4] Average latency measured with 4KB random I/O pattern.

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