Nytro® XP7102 Add-In Card

Data Sheet

Key Features and Benefits

- PCIe Gen3 ×4 interface with NVMe protocol for improved latency, consistent response time and high throughput
- 30,000 IOPS/watt enables more computing with less energy consumption
- Ultra-low power consumption, with maximum active power of 11.5 watts
- Host-selectable performance optimisation to balance performance and power
- Usable capacity of up to 1.6 TB
- Supports standard NVMe drivers for easy deployment in current server platforms and infrastructure
- End-to-end data protection and LDPC error correction and Seagate RAISE technology for high data integrity and reliability
- Fully bootable device
- Optimised for read-intensive and mixed workloads
- Enterprise quality and reliability

Transforming Data Centre With Power-Optimised NVMe Solution

The Seagate® Nytro XP7102 add-in card is a power-optimised PCIe solid state drive (SSD) with NVMe support designed to deliver accelerated performance for power-sensitive applications in hyperscale and mega data centres.

The Nytro XP7102 featuring PCIe Gen3 ×4 interface with NVMe protocol is engineered to reduce latency by bringing flash storage closer to the system's processor and deliver a performance boost to existing server infrastructure. With performance of up to 30,000 IOPS/watt, the Nytro XP7102 enables more computing with less energy consumption and greater data centre efficiency.

Maximising Data Centre Efficiency and TCO Savings

The Nytro XP7102 is a cost-effective solution that supports easy deployment and management for lower total cost of ownership (TCO) in data centres. It can reduce deployment cost by enabling more processing power in existing servers and can also deliver significant cost savings through improved efficiency by enhancing performance without requiring a complete IT overhaul.

The Nytro XP7102 is a bootable PCIe solution that comes in the low-profile half-height half-length (HHHL) add-in card form factor and supports standard NVMe drivers for easy deployment in a wide range of server platforms.

With lower power consumption, the Nytro XP7102 can save on energy and cooling costs and requires less infrastructure to meet the demanding requirements of enterprise and hyperscale data centres.

Robust Enterprise Feature Set

By leveraging Seagate's existing enterprise expertise, mature reliability, manufacturing excellence, and system compatibility test and infrastructure, the Nytro XP7102 delivers the highest levels of data integrity and endurance for critical business applications.

The Nytro XP7102 enables end-to-end data protection, LDPC error correction and Seagate RAISE™ technology for solid reliability and endurance. With available power-loss data protection through on-board capacitors and a backup power rail monitor, the Nytro XP7102 helps maintain data integrity in the event of unexpected power interruptions.

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Nytro® XP7102 Add-In Card

Specifications	1600 GB[1]	800GB[1]
Standard Model	XP7102-1A2048	XP7102-1A1024
Interface	PCIe Gen3 ×4 NVMe 1.2a	PCIe Gen3 ×4 NVMe 1.2a
NAND Flash Type	MLC	MLC
Sector Size Support[2]	4 K / 512	4 K / 512
Form Factor	Half-height, half-length (MD2)	Half-height, half-length (MD2)
Performance		
Sequential Read (MB/s) Sustained, 128 KB[3]	2,500	2,500
Sequential Write (MB/s) Sustained, Peak 128 KB[3]	900	850
Random Read (IOPS) Sustained, 4 KB QD64[3]	245,000	245,000
Random Write (IOPS) Sustained, 4 KB QD64[3]	40,000	35,000
Random 70/30 R/W (IOPS) Sustained, 4 KB QD64[3]	110,000	80,000
Endurance/Reliability		
Lifetime Endurance (Drive Writes per Day)	3	3
Non-recoverable Read Errors per Bits Read	1 per 10^{16}	1 per 10^{16}
Mean Time Between Failures (MTBF, hours)	2 M	2 M
Power Management		
+12 V Max Power (W)	11.5	11.5
Average Read/Write Power (W)	8.1	8.1
Average Idling Power (W)	4.25	4.25
Environmental		
Temperature, Operating (°C)/Airflow	0 to 85 @ 300 LFM	0 to 85 @ 300 LFM
Temperature, Non-operating (°C)	–25 to 85	–25 to 85
Temperature Change Rate/Hr, Max (°C)	20	20
Shock, 0.5 ms (Gs)	1,500	1,500
Vibration, 7 Hz to 800 Hz (Grms)	3.08	3.08
Vibration, 20 Hz to 2,000 Hz (Grms)	16.3	16.3
Physical		
Height (in/mm, max)[4]	4.3/111	4.3/111
Length (in/mm, max)[4]	6.6/167	6.6/167
Width, Primary Side (in/mm, max)[4]	0.5/12.5	0.5/12.5
Width, Secondary Side (in/mm, max)[4]	0.08/2	0.08/2
Weight (g)	80	80
Carton Unit Quantity	1	1
Warranty		
Limited Warranty (years)	5	5

[1] One gigabyte, or GB equals one billion bytes; and one terabyte or TB, equals one trillion bytes when referring to drive capacity.

[2] Drives are shipped with 4 K sector size set as default. Drives can be re-formatted to 512 B sectors.

[3] Performance data is based on testing under certain workload conditions and is subject to change.

[4] These dimensions conform to the PCI Express Card Electromechanical Specification found at pcisig.com.

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Seagate 5-Year Warranty

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