

# Nytro® Flash Accelerator Cards



## Selector Guide



Product Name	Nytro® XP6500	Nytro XP6500	Nytro XP6500	Nytro XP6500
Product Family Type	Nytro XP6500			
Part Number	XP6500-8A1536LP	XP6500-8A4096LP	XP6500-8A1536FH	XP6500-8A4096FH
Product Description	Maximize performance with consistent ultra-low latency and up to 1.3TB of flash capacity while packing it all in a half-height form factor with tethered supercapacitors.	Maximize performance with consistent ultra-low latency and up to 3.4TB of flash capacity while packing it all in a half-height form factor tethered supercapacitors.	Maximize performance with consistent ultra-low latency and up to 1.3TB flash storage on a full-height PCIe card with integrated supercapacitors.	Maximize performance with consistent ultra-low latency and up to 3.4TB flash storage on a full-height PCIe card with integrated supercapacitors.
Flash Memory Type	MLC	MLC	MLC	MLC
Usable Capacity <sup>1</sup>	1.3TB	3.4TB	1.3TB	3.4TB
Form Factor	Half-height, half-length (MD2)	Half-height, half-length (MD2)	Full-height, half-length (MD2)	Full-height, half-length (MD2)
Host Bus Type	×8 lane PCI Express 3.0	×8 lane PCI Express 3.0	×8 lane PCI Express 3.0	×8 lane PCI Express 3.0
Read Bandwidth <sup>2</sup>	Up to 4.0GB/s	Up to 4.0GB/s	Up to 4.0GB/s	Up to 4.0GB/s
Write Bandwidth <sup>2</sup>	Up to 1.5GB/s	Up to 2.2GB/s	Up to 1.5GB/s	Up to 2.2GB/s
Read IOPS <sup>2</sup>	Up to 300,000 (4K)	Up to 275,000 (8K)	Up to 300,000 (4K)	Up to 275,000 (8K)
Write IOPS <sup>2</sup>	Up to 100,000 (4K)	Up to 75,000 (8K)	Up to 100,000 (4K)	Up to 75,000 (8K)
Write Latency (QD=1) <sup>2</sup>	14µs	14µs	14µs	14µs
Additional Features	<ul style="list-style-type: none"> <li>• Host offload architecture delivers PCIe flash performance without burdening host CPU and host memory</li> <li>• Instant recovery from power failure delivers highest uptime capability</li> <li>• Plug and play - no user intervention required</li> <li>• Non-destructive firmware upgrade doesn't put valuable data at risk</li> </ul>			
Operating Systems <sup>3</sup>	RHEL: 6.4, 6.5, 6.6, 7.0	RHEL: 6.4, 6.5, 6.6, 7.0	RHEL: 6.4, 6.5, 6.6, 7.0	RHEL: 6.4, 6.5, 6.6, 7.0
	CentOS: 6.4, 6.5	CentOS: 6.4, 6.5	CentOS: 6.4, 6.5	CentOS: 6.4, 6.5
	OEL: 6.5/6.4	OEL: 6.5/6.4	OEL: 6.5/6.4	OEL: 6.5/6.4
	SLES: 11 SP2	SLES: 11 SP2	SLES: 11 SP2	SLES: 11 SP2
	Windows Server: 2008 R2-SP1, 2012	Windows Server: 2008 R2-SP1, 2012	Windows Server: 2008 R2-SP1, 2012	Windows Server: 2008 R2-SP1, 2012
	Solaris: 11 U1	Solaris: 11 U1	Solaris: 11 U1	Solaris: 11 U1
	VMware: 5.1 ESXi	VMware: 5.1 ESXi	VMware: 5.1 ESXi	VMware: 5.1 ESXi

1. One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to product capacity

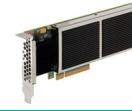
2. Results will vary by board capacity, over-provisioning (OP) settings, flash type and server capability. All numbers measured as fully preconditioned with 17% OP (default setting) and 20% compressible data. The 1.5TB model is 4K optimized and measured with 4K blocks. The 4TB model is 8K optimized and measured with 8K blocks. Highly tuned configuration for maximum performance. Subject to change.

3. See the complete list in the latest release notes.

# Nytro® Flash Accelerator Cards



## Selector Guide



Product Name	Nytro® XP6302	Nytro XP6302	Nytro XP6302
Product Family Type	Nytro XP6300		
Part Number	ST1300KN0012	ST1750KN0012	ST3500KN0012
Product Description	Accelerate applications with up to 1.3TB of flash capacity while packing it all in a half-height form factor.	Accelerate applications with up to 1.75TB of flash capacity while packing it all in a half-height form factor.	Accelerate applications with up to 3.5TB of flash capacity while packing it all in a half-height form factor.
Flash Memory Type	eMLC	eMLC	MLC
Usable Capacity <sup>1</sup>	1.3TB	1.75TB	3.5TB
Form Factor	Half-height, half-length (MD2)	Half-height, half-length (MD2)	Half-height, half-length (MD2)
Host Bus Type	×8 lane PCI Express 3.0	×8 lane PCI Express 3.0	×8 lane PCI Express 3.0
Read Bandwidth <sup>2</sup>	Up to 3.7GB/s	Up to 3.8GB/s	Up to 3.9GB/s
Write Bandwidth <sup>2</sup>	Up to 1.6GB/s	Up to 2.1GB/s	Up to 2.1GB/s
Read IOPS <sup>2</sup>	Up to 280,000 (4K)	Up to 280,000 (4K)	Up to 238,000 (8K)
Write IOPS <sup>2</sup>	Up to 131,000 (4K)	Up to 148,000 (4K)	Up to 94,000 (8K)
Additional Features	<ul style="list-style-type: none"> <li>• Host offload architecture delivers PCIe flash performance without burdening host CPU and host memory</li> <li>• Instant recovery from power failure delivers highest uptime capability</li> <li>• Plug and play - no user intervention required</li> <li>• Non-destructive firmware upgrade doesn't put valuable data at risk</li> </ul>		
Operating Systems <sup>3</sup>	RHEL: 5.9, 5.10, 6.3-6.6, 7.0	RHEL: 5.9, 5.10, 6.3-6.6, 7.0	RHEL: 5.0-5.10, 6.0-6.5, 7.0
	CentOS: 6.4, 6.5	CentOS: 6.4, 6.5	CentOS: 5.3-5.10, 6.0-6.5
	OEL: 5.9, 5.10, 6.5	OEL: 5.9, 5.10, 6.5	OEL: 5.4-5.9, 6.0-6.5
	SLES: 11 SP3	SLES: 11 SP3	SLES: 10 SP0-SP4, 11 SP1-SP3
	Debian: 6.0.5, 7	Debian: 6.0.5, 7	Debian: 6.0.5, 6.0.7, 7
	Fedora 19, 20	Fedora 19, 20	Fedora: 17, 18
	Ubuntu: 12.04, 14.04 LTS	Ubuntu: 12.04, 14.04 LTS	Ubuntu: 10.04, 11.1, 12.04, 14.04 LTS
	Windows Server: 2008 R2, 2008 R2-SP1, 2012 R2	Windows Server: 2008 R2, 2008 R2-SP1, 2012 R2	Windows: XP SP2, Windows7-SP1, 8, Windows Server: 2003 R2 SP2, 2008 R2-SP1, 2012 R2 SP1
	Solaris: 10U10, 11 (x86 & SPARC); 11.2 (SPARC)	Solaris: 10U10, 11 (x86 & SPARC); 11.2 (SPARC)	Solaris 10U10, 11 (x86 & SPARC)
	FreeBSD: 9, 9.2, 10	FreeBSD: 9, 9.2, 10	FreeBSD: 7.2, 7.4, 8.2, 8.3, 9.0
VMware: 5.1 ESXi, 5.5 ESXi	VMware: 5.1 ESXi, 5.5 ESXi	VMware: ESX4.0U4, 4.1U2, 5.0 U1, 5.1, 5.5	

1. One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to product capacity

2. Results will vary by board capacity, flash type, server capability. All numbers measured as fully preconditioned with 28% OP and 80% data entropy. Highly tuned configuration for maximum performance. Subject to change.

3. See the complete list in the latest release notes.

# Nytro® Flash Accelerator Cards



## Selector Guide



Product Name	Nytro® XP6209	Nytro XP6210
Product Family Type	Nytro XP6200	
Part Number	ST1796KN000	ST1860KN000
Product Description	Accelerate read-intensive applications with up to 1.79TB flash storage on a half-height PCIe card.	Accelerate read-intensive applications with up to 1.86TB flash storage on a full-height PCIe card.
Flash Memory Type	eMLC	eMLC
Usable Capacity <sup>1</sup>	1.79TB	1.86TB
Form Factor	Half-height, half-length (MD2)	Full-height, half-length (MD2)
Host Bus Type	×8 lane PCI Express 2.0	×8 lane PCI Express 2.0
Read Bandwidth <sup>2</sup>	Up to 2.0GB/s	Up to 2.0GB/s
Write Bandwidth <sup>2</sup>	Up to 1.27GB/s	Up to 1.27GB/s
Read IOPS (8K) <sup>2</sup>	Up to 121,000	Up to 162,000
Write IOPS (8K) <sup>2</sup>	Up to 45,000	Up to 46,000
Additional Features	<ul style="list-style-type: none"> <li>• Host offload architecture delivers PCIe flash performance without burdening host CPU and host memory</li> <li>• Instant recovery from power failure delivers highest uptime capability</li> <li>• Plug and play - no user intervention required</li> <li>• Non-destructive firmware upgrade doesn't put valuable data at risk</li> </ul>	
Operating Systems <sup>3</sup>	RHEL: 5.0-5.10, 6.0-6.5, 7.0	RHEL: 5.0-5.10, 6.0-6.5, 7.0
	CentOS: 5.3-5.10, 6.0-6.5	CentOS: 5.3-5.10, 6.0-6.5
	OEL: 5.4-5.9, 6.0-6.5	OEL: 5.4-5.9, 6.0-6.5
	SLES: 10 SP0-SP4, 11 SP1-SP3	SLES: 10 SP0-SP4, 11 SP1-SP3
	Debian: 6.0.5, 6.0.7, 7	Debian: 6.0.5, 6.0.7, 7
	Fedora: 17, 18	Fedora: 17, 18
	Ubuntu: 10.04, 11.1, 12.04, 14.04 LTS	Ubuntu: 10.04, 11.1, 12.04, 14.04 LTS
	Windows: XP SP2, Windows7-SP1, 8, Windows Server: 2003 R2 SP2, 2008 R2-SP1, 2012 R2 SP1	Windows: XP SP2, Windows7-SP1, 8, Windows Server: 2003 R2 SP2, 2008 R2-SP1, 2012 R2 SP1
	Solaris 10U10, 11 (x86 & SPARC)	Solaris 10U10, 11 (x86 & SPARC)
	FreeBSD: 7.2, 7.4, 8.2, 8.3, 9.0	FreeBSD: 7.2, 7.4, 8.2, 8.3, 9.0
VMware: ESX4.0U4, 4.1U2, 5.0 U1, 5.1, 5.5	VMware: ESX4.0U4, 4.1U2, 5.0 U1, 5.1, 5.5	

1. One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to product capacity.

2. Results will vary by board capacity, flash type, server capability. Highly tuned configuration for maximum performance. Subject to change.

3. See the complete list in the latest release notes

[seagate.com](http://seagate.com)