WD SiliconDrive® N1x

Superior Reliability and Long Life for Embedded OEMs and System Integrators

Buy with total confidence.

WD has been a storage pioneer and leader since 1970. The award-winning WD brand delivers cost-effective solid state storage for a wide variety of applications requiring high speed, high reliability, and long life.

WD SiliconDrive N1x is the clear choice for demanding applications requiring high performance, 24/7 reliability, and a long service life.

Product Highlights

- Fast data transfer
- Low power consumption
- High tolerance to shock and vibration
- Low total cost of storage ownership

Product Features

Advanced Wear-Leveling

Lengthens drive life and preserves drive speed with a combination of dynamic and static wear-leveling algorithms designed to overcome performance degradation issues occurring in traditional SSDs that result from continual heavy use.

Advanced Error Correction

Enables error free data transmission by deploying advanced error correction technologies to detect and correct errors resulting from signal noise or other kinds of interference that causes data distortion.

Speed Assurance

Maintains SSD speed without performance degradation whether the drive is new or has been in service for years. Integrated features assure consistent performance with no external refresh utility, media over-provisioning, or forced idle times used by traditional SSDs.

Native Command Queuing (NCQ)

Increases the performance of SATA drives by placing read / write commands in the optimal sequential order for the fastest execution.

Data Integrity Protection

Prevents data loss from unexpected power loss during write operations to ensure data integrity and availability.

ATA SMART Commands

Self-Monitoring Analysis and Reporting Technologies (SMART) detect and warn when an SSD needs replacement.

Markets

- Data center multimedia streaming appliances
- Industrial automation
- Interactive kiosks
- Medical
- Netcom
- Telecom and networking infrastructure
- Transportation
- Video surveillance

Applications

- Data base or multimedia servers
- Digital graphics rendering
- NAS server and storage arrays
- POS terminals
- Storage appliances
- Video on demand
- Wireless infrastructure

WD SiliconDrive N1x

Specifications[1]	WD SiliconDrive N1x		
Model number	SSC-D0032SC-2500	SSC-D0064SC-2500	SSC-D0128SC-2500
Formatted capacity	32 GB	64 GB	128 GB
User sectors per drive	62,533,296	125,045,424	250,069,680
Form factor	2.5-inch		
Interface	SATA 3 Gb/s		
Interface connector	SATA		
Hot swappable	Yes		
RoHS compliant[2]	RoHS 6/6		
Performance			
Interface burst speed	3 Gb/s		
Maximum read transfer rate	Up to 240 MB/s		
Maximum write transfer rate	Up to 140 MB/s		
Sustained read transfer rate	Up to 240 MB/s		
Sustained write transfer rate	Up to 140 MB/s		
4 KB random read IOPS	Up to 5000 IOPS		
4 KB random write IOPS[3]	Up to 3500 IOPS		
Reliability/Data Integrity			
MTBF (hours)	1,400,000		
Non-recoverable read errors per bits read	<1 in 10^{15}		
Limited warranty[4]	5 years		
Operational Lifespan - LifeEST™			
Read	Unlimited		
Service Life	5 years		
Maximum GB written per day	175.3	350.7	701.4
Power Management			
DC input voltage	5V		
Standby (idle watts)	0.6W		
Read (peak watts)	2.0W		
Write (peak watts)	2.4W		
Environmental			
Temperature (°C) Operating Non-operating	 0 to 70 -55 to 125		
Relative humidity (non-condensing)	8% to 95%		
Operating Shock	1000G, Half-sine, 0.5 ms Duration, 50g Pk, MIL-STD-810F, Method 516.5, Procedure I		
Vibration	16.3gRMS, MIL-STD-810F, Method 514.5, Procedure I, Category 24		
Altitude	80,000 f.t, MIL-STD-810F, Method 500.4, Procedure II		
Physical Dimensions			
Length (in./mm, max)	3.9/98.9		
Width (in./mm, ± .01 in.)	2.75/69.86		
Height (in./mm, max)	0.4/9.5		

[1] As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 3.0 Gb/s or SATA 1.5 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

[2] WD complies with the Restriction of Hazardous Substances (RoHS) Directive 2002/95/EC of the European Parliament, which is effective in the EU beginning July 1, 2006. RoHS aims to protect human health and the environment by restricting the use of certain hazardous substances in new equipment, and consists of restrictions on lead, mercury, cadmium, and other substances.

[3] Average IOPS of 100% random 4k writes across 1,000,000 LBAs.

[4] The term of the limited warranty may vary by region. Visit support.wdc.com/warranty for details.

Western Digital, WD, the WD logo, and SiliconDrive are registered trademarks in the U.S. and other countries; and LifeEST is a trademark of Western Digital Technologies, Inc. Other marks may be mentioned herein that belong to other companies. Product specifications subject to change without notice.

© 2010 Western Digital Technologies, Inc. All rights reserved.

Western Digital
20511 Lake Forest Drive
Lake Forest, California 92630
U.S.A.

2879-771354-A03 Oct 2010

For service and literature:
http://support.wdc.com
www.westerndigital.com

800.ASK.4WDC	North America
800.832.4778	Spanish
+800.6008.6008	Asia Pacific
00800.27549338	Europe (toll free where available)
+31.880062100	Europe/Middle East/Africa

RoHS COMPLIANT