

Oceanspace™ S5000 Series



Huawei Symantec

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Oceanspace™ S5000

Huawei Symantec Oceanspace™ S5000 series is the first end-to-end FC-based SAN product with independent intellectual property rights in China. The S5000 is designed for the mid-range and high-end storage markets with first-class features such as high density, FC and iSCSI connectivity, modular interfaces, and multi-level data protection mechanism. It ensures data integrity and business continuity while meeting the requirements of large databases, high performance computing, online transaction processing (OLTP), centralized storage, data backup, disaster recovery and data migration.

Product Features

High Performance

- **64-bit multi-core architecture:** The S5000 series delivers enhanced processing capability with 64-bit multi-core processors, 64-bit dual-channel memories, 64-bit 10 Gbit/s system buses, and 64-bit real-time operating systems.
- **Solid state drives (SSDs):** Solid state memory increases storage performance in the S5000 series.
- **Application-oriented patented algorithm:** Configuration flexibility of the read/write mode of hard disks allows the host to achieve optimal I/O performance.
- **Dynamic load balancing:** The dual controllers of the S5000 series process services serve as hot backup for each other, while the cache mirroring utilizes two dedicated channels to balance data load..

High Reliability

- **Built-in UPS:** The power failure protection feature in the built-in UPS ensures protections against data loss. .
- **Pre-copy technology:** Prevents data loss with advanced faulty disks detection.
Bad sector repair: Prolongs the service life of the disks by lowering failure rate by 50% with bad sectors detection and repair technology.
- **Global hot spare disk:** Hot backup for disks within the same enclosure or across enclosures, and offers flexibility for the hot spare disks slots.

- **Advanced data protection technologies:**

Increases data protection with value-added features:

HyperImage generates real-time copies of online data so that data can be restored from the snapshots instantly. HyperImage can also create multiple point-in-time snapshots to provide continuous data protection.

HyperCopy, an across-platform volume copy technology, enhances data protection among heterogeneous storage devices.

HyperMirror implements remote disaster recovery for data.

Low TCO

- **Modular interfaces:** Combination of FC and iSCSI host interfaces ensures connectivity to the FC SAN and IP SAN mixed networking. Up to 16 host ports are provided to decrease the total cost of ownership of switches.
- **High disk density:** Lowers expansion cost by 60% with scalable disk enclosure.

- **Hierarchical storage: Delivers higher performance at lower cost by moving data to lower cost storage tiers.**

- **User-friendly management and maintenance designs: Provides ease of management with web-based GUI and programmable CLI.** Reduces operation and maintenance costs with alarms delivered via SMS, email, sound and light..

Low Power Consumption

- **Energy-saving hard disks:** Lower power consumption by more than 40% with automatic hard disks spin down as the service load decreases.
- **High-speed air cooling:** Doubles air cooling efficiency according to hydromechanics principles feature.
- **Intelligent fan control:** Designed to enhance adaptability to the environment, the control enables the fans to reduce power consumption by nearly 15% and noise levels.

Technical Specifications

Model	Oceanspace S5300	Oceanspace S5500	Oceanspace S5600
Hardware features			
Architecture	Dual controllers in active-active mode		
Storage processor	64-bit Multi-core processor		
Standard Cache	4~8 GB	8~16GB	16~32GB
Standard Host ports	8x4 Gbit/s FC ports, or 4x4 Gbit/s FC ports + 4x1 Gbit/s iSCSI ports, or 16x8 Gbit/s FC ports, or 8x8 Gbit/s FC ports + 4x10 Gbit/s iSCSI ports	6x4 Gbit/s FC ports, or 8x4 Gbit/s FC ports + 4x1 Gbit/s iSCSI ports, or 16x8 Gbit/s FC ports, or 8x8 Gbit/s FC ports + 4x10 Gbit/s iSCSI ports	16x4 Gbit/s FC ports, or 8x4 Gbit/s FC ports + 4x1 Gbit/s iSCSI ports, or 12~16x8 Gbit/s FC ports, or 4x8 Gbit/s FC ports + 4x10 Gbit/s iSCSI ports
Number of HDD	120	120~240	240~480
Disk specifications	SATA HDD: 500 GB/1 TB (7200 rpm)		
	FC HDD: 300 GB/450 GB/600GB (15k rpm)		
	SSD: 100GB/200GB		
HDD density	24/frame		
Performance features			
Number of host connections	256	256	256
LUNs	1024	1024	2048
RAID features			
Supported RAID levels	0、1、3、5、6、10、50		
Reliability			
Redundancy protection capabilities	Controller, power supply, fan, UPS module, and cascading module (HDD frame)		
HDD protection	Global hot spare disk, disk pre-copy, intelligent disk repair, disk health assessment (DHA)		
Power-off protection	Data coffer, integrated UPS		
compatibility			
Supported operating systems	Windows, Linux, Solaris, HP-UX, AIX, FreeBSD, MAC OS X		

Others	VMware, Hyper-V, XenServer		
Software features			
Host multi-path	UltraPath(for Windows/Linux/AIX)、STMS(Solaris)、PV-Links(HP-UX)		
Value-added software	HostAgent Agent, HyperImage , HyperCopy, HyperMirror/A , HyperMirror/S		
Management features			
Management interfaces	Web-based GUI, CLI		
Fault alarms	Management GUI alarms, audio/video alarms, email alarms, text message alarms,SNMP		
Remote management	Supports Web-based remote login and modem dialing		
Physical features			
Power	AC 200 V to 240 V (50/60 Hz); DC -48 V to -60 V		
Power consumption (controller frame)	AC: 810 W; DC: 750 W	AC: 820 W; DC: 760 W	AC: 840 W; DC: 780 W
Power consumption (HDD frame)	AC: 670 W; DC: 620 W		
Size (H x W x D)	4 U, 175 mm (H) x 446 mm (W) x 600 mm (D)		
Weight (without HDD)	< 45 kg (Controller frame); < 38 kg (HDD frame)		

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