



# V-Switch 3400



SANRAD V-Switch 3400 Enterprise Series with integrated SANRAD StoragePro software is a versatile, open, high performance and scalable solution. V-Switch 3400 provides the connectivity and comprehensive storage management needed to easily attach a large number of iSCSI servers to an FC SAN. One can also create new, fully managed IP SAN using standard FC storage systems.

V-Switch 3400 provides the best cost performance in the V-Switch Enterprise Series. It uses a real-time operating system and high-end network processors to deliver high performance with complete component and system redundancy.

SANRAD StoragePro software is included and integrated into the V-Switch 3400 and delivers storage pooling, virtualization and management services.

SANRAD StoragePro GDR software can be added to provide unlimited data replication and site recovery between any V-Switches located at facilities connected by any local, metropolitan or wide area IP network.

## Key Features and Benefits

### SAN Connectivity and Management for Every Server.

SANRAD's unique network architecture couples standard IP and FC connectivity with integrated storage virtualization and management. It inexpensively delivers FC SAN connectivity and storage services throughout the enterprise, and is completely non-disruptive.

Customers can maintain and grow their existing FC infrastructures, natively connecting additional servers where performance matters most, and using SANRAD's iSCSI connectivity and management for other purposes including, user file, email or database storage.

SANRAD's V-Switches are storage-agnostic. IT managers can utilize existing resources and employ different brands and classes of storage to meet the varying cost, performance and reliability requirements of the organization.

<b>CREATE AND MANAGE LARGE STORAGE POOLS</b>	Dynamically create large storage pools by consolidating several storage systems into a centrally managed pool that can easily scale to several peta-bytes.
<b>OPEN HETEROGENEOUS ARCHITECTURE</b>	Use any brand or type storage system directly connected or connected thru a FC SAN fabric to the V-Switch for creating and expanding the storage pool.
<b>NETWORK-BASED VIRTUALIZATION AND VOLUME CREATION</b>	Create thousands of custom storage volumes across all the connected storage systems within the storage pool to improve storage utilization and reduce storage costs.
<b>TIERED STORAGE</b>	Combine and virtualize storage systems with diverse properties into the same storage pool to provide various service levels, storage costs and performance grades for different applications.
<b>LOCAL DATA PROTECTION</b>	Mirror local inter-campus/inter-datacenter synchronous data over FC or dedicated fiber optic cables (dark fiber). Use SNAPshot, virtual shadow copy service (VSS) and cloning to help eliminate the possibility of data loss and to ensure business continuity.
<b>HIGH AVAILABILITY</b>	Cluster V-Switches (Active/Active) with automatic failover, failback and multi-pathing provides uninterrupted access to data even during system outage.
<b>STORAGE SECURITY</b>	Use Access Control Lists and iSCSI login authentication (CHAP, SRP) for complete access control and data protection.
<b>SIMPLE AND CENTRALIZED MANAGEMENT</b>	Centralize the management of many V-Switches with the StoragePro web based GUI or use a comprehensive CLI with SSH.
<b>HIGH SPEED DATA MIGRATION</b>	Copy over 1TB of data per hour between storage systems without interrupting production to simplify storage maintenance, repair and replacement.
<b>REMOVABLE ONBOARD COMPACT FLASH</b>	Quickly replace or replicate V-Switch configurations, mirror the configuration database for fast recovery or replacement.
<b>1 UNIT RACK SIZE, FRONT FACING INTERFACES, HOT SWAP POWER SUPPLIES</b>	Save precious rack space and access all network and storage connections from the front face. Adjustable rack mounts fit racks up to 39" in depth. Dual redundant hot-swappable power supplies deliver continuous operation and easy replacement with no down time.
<b>REMOTE REPLICATION AND DISASTER RECOVERY. (SOLD SEPARATELY)</b>	Use SANRAD StoragePro Global Data Replication, GDR, to provide data replication and site recovery between V-Switches located at facilities connected by any local, metropolitan or wide area IP network.



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V-Switch 3400 uses a real-time operating system and high-end network processors to deliver high performance with complete component and system redundancy.

### Storage Virtualization and Volume Management:

Maximum no.of servers supported: 200  
 Maximum no.of volumes supported: 51,200  
 Maximum capacity:4096 TB (4.096 PB)  
 Maximum volume size: 64 TB

### FC Interfaces:

4 FC ports  
 Copper SFP HSSDC2  
 Optic LC SFP SW/LW  
 1 or 2 Gb/s auto speed detection  
 L,N or NL ports

### Management Interfaces:

RS232 DB-9 port  
 Ethernet 10/100 RJ45 port

### Network Interfaces:

3 1Gbit iSCSI Ethernet ports  
 Copper RJ45 1000BaseT  
 Optic SFP 1000Base-SX  
 Optic SFP 1000Base-LX

### Internet Standards:

RFC791 IP v4  
 RFC 793 TCP, RFC 894 IP/Ethernet  
 RFC 1042,IP/802  
 RFC 1517  
 RFC 792 ICMP, 950 ISSP  
 RFC 3720-iSCSI  
 SSH-2  
 RFC 854 Telnet

### Fibre Channel ANSI Standards:

FC-AL-2  
 FC-PLDA  
 FC-FLA  
 FC-PH-3  
 FCP

### Management Standards:

SNMP V2  
 RFC 2863  
 RFC 2011  
 RFC 2012  
 ID SCSI MIB 05  
 ID iSCSI MIB 09

### SCSI Standard:

SCSI-3  
 SAM-2  
 SPC-3  
 SBC-2

### Ethernet Standards:

IEEE 802.3z  
 IEEE 802.3.ab

### Wake up on LAN

### Removable Compact Flash

### Dimensions:

1.75"H x 17.2"W x22.8" D  
 (4.4 H x 43.8 W x 58 D cm).  
 Standalone surface mounting or  
 fits standard 19 inch EIA rack

### Power:

Dual Hot Swap Power Supplies 100-250V,  
 50-60Hz Auto, Switching, 75 WATT

### Weight:

14.1 lb (6.4 kg)

### Operating Temperature:

32° to 122°F (0°-50°C)

### Storage Temperature:

-40° to 75°F (-40°-167°C)

### Humidity (non-condensing):

10 to 95%

### Altitude:

-500ft to -10,000ft; (-152m -3050m)

### Regulatory Compliance:

EMC (Emission):  
 USA & CANADA: FCC part 15 Class A  
 Europe and Rest of the World:  
 EN55022 Class A  
 Immunity: EN55024  
 Safety:  
 USA & CANADA:  
 USA &CANADA: UL60950 (pending)  
 Japan: EN60950  
 Europe and Rest of the World: EN609050

Rear View of V-Switch



StoragePro Management GUI

Typical Installations

