



V-Switch 2000



SANRAD V-Switch 2000 with integrated SANRAD StoragePro software is an open and easy to use solution that provides the connectivity and storage management needed to attach iSCSI enabled servers to new or existing SCSI or FC storage systems.

V-Switch 2000 is the most affordable V-Switch, ideal for small to medium sized businesses and remote offices. V-Switch 2000 uses a real-time operating system and network processors to deliver the performance needed for moderate sized enterprises.

SANRAD StoragePro software is included and integrated into the V-Switch 2000 and delivers storage pooling, virtualization and management services.

SANRAD StoragePro GDR software can be added to provide unlimited data replication and site recovery between 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.

CREATE AND MANAGE LARGE STORAGE POOLS	Dynamically create large storage pools by consolidating several SCSI and / or FC storage systems into a centrally managed pool that can easily scale to several petabytes.
OPEN HETEROGENEOUS ARCHITECTURE	Use any brand or type of storage system directly connected or connected through an FC SAN fabric to the V-Switch for creating and expanding the storage pool.
NETWORK-BASED VIRTUALIZATION AND VOLUME CREATION	Create thousands of custom storage volumes across all connected storage systems within a storage pool to improve utilization and reduce costs.
TIERED STORAGE	Combine and virtualize storage systems with diverse properties within the same storage pool to provide various service levels, storage costs and performance grades for different applications.
LOCAL DATA PROTECTION	Mirror data synchronously within a data center or across campus over FC or dedicated fiber optic cables (dark fiber), SNAPshot, virtual shadow copy service (VSS) and cloning help to eliminate the possibility of data loss and ensures business continuity.
HIGH AVAILABILITY	Cluster V-Switches (Active/Active) with automatic failover, failback and multi-pathing to provide uninterrupted access to data even during system outage. (note: available for FC storage systems only – not available for SCSI storage systems)
STORAGE SECURITY	Use Access Control Lists and iSCSI login authentication (CHAP, SRP) for complete access control and data protection.
SIMPLE AND CENTRALIZED MANAGEMENT	Centralize the management of many V-Switches with the StoragePro web-based GUI, or use a comprehensive CLI with SSH.
HIGH SPEED DATA MIGRATION	Copy over 500GB of data per hour between storage systems without interrupting production to simplify maintenance, repair and replacement.
REMOVABLE ONBOARD COMPACT FLASH	Quickly replace or replicate V-Switch configurations. Mirror the configuration database for fast recovery, replacement and replication of V-Switches.
1 UNIT HALF RACK SIZE FRONT FACING INTERFACE	Save precious rack space with compact size, install 2 units side by side. All network and storage connections are on the front face.
REMOTE REPLICATION AND DISASTER RECOVERY. (SOLD SEPARATELY)	Use SANRAD StoragePro Global Data Replication, GDR to provide unlimited data replication and site recovery between V-Switches located at facilities connected by any local, metropolitan or wide area IP network.

V-Switch 2000

Storage Virtualization and Volume Management:

Maximum no. of servers supported: 200
 Maximum no. of volumes supported: 51,200
 Maximum capacity: 2048 TB (2.048 PB)
 Maximum volume size: 64 TB

Network Interfaces:

2 Gbit iSCSI Ethernet ports:
 Copper RJ45 1000BaseT

Storage Interfaces:

2 FC or 2 SCSI ports

FC Specifications

1 or 2 Gb/s auto speed detection
 Pluggable SFP connectors
 L or N or NL ports

Parallel SCSI Specifications:

Up to 160 MB/s
 LVD or SE transceiver modes
 VHDCI 68 pin connectors

Management Interface:

RS232 DB-9 port

Ethernet Standards:

IEEE 802.3z
 IEEE 802.3.ab

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

Fibre Channel ANSI Standards:

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

Management Standards:

SNMP V2
 RFC 854 Telnet
 RFC 2863
 RFC 2011
 RFC 2012
 RFC 2013
 ID SCSI MIB 05
 ID iSCSI MIB 09

SCSI Standard:

Ultra 3 SCSI 160
 Wide Ultra2 SCSI 80
 Ultra2 SCSI 40
 SCSI 3

Dimensions:

1.75" H x 8.4" W x 17.8" D (4.4 cm H x 21.4 cm W x 45.4 cm D)
 Standard half 19-inch EIA rack or standalone

Power:

Power Supply 130 WATT100-250V,
 50-60Hz Auto Switching

Weight:

7 lb (3.2 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: UL60950 (pending)
 Japan: EN60950
 Europe and Rest of the World: EN609050

Rear View of V-Switch



StoragePro Management GUI

Typical Installations

