

Hifn Swarm™

Encryption Storage Appliances

iSCSI Made Easy for IP SAN Environments



Affordable, Easy to Manage, Network Storage

Hifn Swarm IP Storage Appliances deliver advanced storage networking to businesses that want the benefits of storage consolidation, centralized management, automation, advanced data protection and seamless integration with Microsoft® Windows environments. Hifn Swarm is an affordable alternative for organizations with complex storage requirements.

- Economical iSCSI storage leverages low cost Gigabit Ethernet
- Ideal solution for the consolidation of server storage
- Microsoft iSCSI Boot enabled allowing servers or blades to boot from SAN

Integrated D2D and Tape

Hifn Swarm integrates multiple tiers of backup capability including advanced disk-to-disk (D2D) snapshot functionality with integrated tape support for offsite archive requirements.

- Instant data recovery
- Backup Software independent. Compatible with all Windows backup software.
- Compatible with the Hifn Sypher Tape Encryption Appliance

RAID 6 Array Technology

All Swarm 3xxx series appliances are built with the latest RAID 6 technology tailored to today's high capacity disk drives. Older technologies like RAID 5 can risk the entire array in the event of a drive failure.

- First IP SAN Appliance utilizing RAID 6
- Protects against data loss during rebuilds

High Availability Mirrored Storage

Hifn's Swarm redundant appliances provide peace of mind and complete data protection. RAID 51/61 technology offers automatic active/active failover and multiple data access paths.

- High Availability with true active/active mirrored appliances
- MPIO-enabled redundant data paths
- Remove either appliance without data interference

Enabled for Encrypted Storage

Hifn Swarm includes hardware block encryption to protect and secure sensitive data at rest. This is ideal for remote sites or anywhere security and regulatory compliance is a concern.

- AES 256-bit encryption, selectable at the volume level
- Compatible with the Hifn Sypher key management system

Remote Data Replication





Hifn Swarm supports remote office backup and small office disaster recovery implementations.

- Can be used with encrypted or regular volumes
- Optimizes network throughput by only sending changed blocks
- Provides many-to-one site support

HIGHLIGHTS

- All the benefits of storage networking without the complexity of Fibre Channel
- Integrated Disk-To-Disk Snapshots simplifying the backup process
- Automated backup eliminating the need for a backup server
- iSCSI boot allowing your Microsoft servers to boot from SAN
- RAID 6 protection for high capacity drives
- RAID 51/61 true active/active failover for continuous data protection
- Centralized web based management allowing the configuration of all Swarm Appliances from a single interface
- AES 256-bit encryption for data at rest
- Remote Replication support between Swarm Appliances over wide area networks

Hifn Swarm Features

	Swarm 1000	Swarm 1000-HA	Swarm 3000	Swarm 3000-HA
				
Rack space required	1U	2U	3U	6U
RAID level (standard)	5	51 (mirrored)	6	61 (mirrored)
Number of disk drives	4	8	15	30
Raw/usable (mirrored) capacity				
250 GB hot swap SATA II drives	1 TB / 750 GB	2 TB / (750 GB)	3.75 TB / 3.25 TB	7.5 TB / (3.25 TB)
500 GB hot swap SATA II drives	2 TB / 1.5 TB	4 TB / (1.5 TB)	7.5 TB / 6.5 TB	15 TB / (6.5 TB)
750 GB hot swap SATA II drives	3 TB / 2.25 TB	6 TB / (2.25 TB)	11.25 TB / 9.75 TB	22.5 TB / (9.75 TB)
Hot swap power supplies	2	4	3	6
Host interfaces	2 x GbE iSCSI	4 x GbE iSCSI	3 x GbE iSCSI	6 x GbE iSCSI
Backup port	Standard: U320 SCSI Optional: 2G Fibre	Standard: U320 SCSI Optional: 2G Fibre	Standard: U320 SCSI Optional: 2G Fibre	Standard: U320 SCSI Optional: 2G Fibre
Failover level	N/A	Active/Active	N/A	Active/Active
Snapshot VSS integration	Point-in-time, automatic, standard	Point-in-time, automatic, standard	Point-in-time, automatic, standard	Point-in-time, automatic, standard

Hifn Swarm Specifications

Dimensions	H: 1.7" (43mm), W: 16.7" (424mm), D: 26.8" (681mm)	H: 3.4" (86mm), W: 16.7" (424mm), D: 26.8" (681mm)	H: 5.2" (132mm), W: 17.7" (450mm), D: 25.5" (647mm)	H: 10.4" (264mm), W: 17.7" (450mm), D: 25.5" (647mm)
Gross Weight	46 lbs (20.9 kg)	92 lbs (41.8 kg)	72 lbs (32.7 kg)	144 lbs (65.4 kg)
Operating Temperature	10° – 35°C (50° – 95° F)	10° – 35°C (50° – 95° F)	10° – 35°C (50° – 95° F)	10° – 35°C (50° – 95° F)
Non-Operating Temperature	-40° – 70°C (-40° – 158° F)	-40° – 70°C (-40° – 158° F)	-40° – 70°C (-40° – 158° F)	-40° – 70°C (-40° – 158° F)
Operating Humidity Range	8 – 90% non-condensing	8 – 90% non-condensing	8 – 90% non-condensing	8 – 90% non-condensing
Non-Operating Humidity	5 – 95% non-condensing	5 – 95% non-condensing	5 – 95% non-condensing	5 – 95% non-condensing
Power requirement	560W Dual-Redundant AC power supply 100 – 240VAC, 50-60Hz, 10 Amps	2 x 560W Dual-Redundant AC power supply 100 – 240VAC, 50-60Hz, 10 Amps	760W Triple-Redundant AC power supply 100 – 240VAC, 50-60Hz, 14 Amps	2 x 760W Triple-Redundant AC power supply 100 – 240VAC, 50-60Hz, 14 Amps
Regulatory compliance	USA – UL listed, FCC Canada – CUL listed Germany – TUV Certified Europe/CE Mark EN 60950/IEC 60950 Compliant	USA – UL listed, FCC Canada – CUL listed Germany – TUV Certified Europe/CE Mark EN 60950/IEC 60950 Compliant	USA – UL listed, FCC Canada – CUL listed Germany – TUV Certified Europe/CE Mark EN 60950/IEC 60950 Compliant	USA – UL listed, FCC Canada – CUL listed Germany – TUV Certified Europe/CE Mark EN 60950/IEC 60950 Compliant



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