

Hifn Express DR 250 and DR 255 Capacity Optimization and Encryption Cards

HARDWARE-ACCELERATED DATA DE-DUPLICATION, COMPRESSION AND ENCRYPTION CARDS DELIVER EFFICIENT STORAGE AND STRONG DATA SECURITY



The Hifn Express DR 250 and DR 255 cards help systems deliver higher performance using only entry-level server hardware. The Hifn cards provide hardware offload for the intense computations underlying modern data de-duplication systems, including cryptographic quality hash algorithms, lossless data compression and enterprise-strength encryption.

Scalable Performance

- Hardware offload of CPU-intensive functions
- Combine all functions in a single pass over the data
- Sustained throughput up to 250 MB/sec per card
- Up to four cards per node

Capacity Optimization

- Works automatically with any type of data
- Significantly reduces the disk and tape storage requirement
- Replications occur more quickly and use less bandwidth

Data Encryption

- Ensures data cannot be used even if lost or stolen
- Part of a robust business strategy for data protection and regulatory compliance

Proven Solution

- NIST-certified, cryptographic-quality hash and encryption modes
- Robust compression algorithms standardized via IETF, ANSI and other bodies
- Hifn data reduction is used in more than 70% of the world's data networks and computer systems

APPLICATIONS

- Data de-duplication systems
- Secure storage systems
- Tape encryption

HARDWARE OFFLOAD FEATURES

- Multiple transforms in a single pass
- Hash
 - SHA-1, MD5
 - HMAC, SSLMAC
- Symmetric encryption
 - AES modes ECG, CBC, CTR modes
- 128, 192, 256 bit key lengths
 - DES, 3DES, ARC-4
- Lossless compression
 - LZS
 - MPPC



Express DR 250 card



Express DR 255 card

	EXPRESS DR 250	EXPRESS DR 255
Standard package contents	Individual Express DR card with bracket	
Standard warranty	1 year hardware warranty	
Order Code	8155HXL-G	8155HXL-ES
Key Features		
Hardware Algorithms	Hash: SHA-1 and MD5 Compression: LZS, MPPC Encryption: AES (ECG, CBC, CTR modes) 128/192/256 bit key lengths; DES; 3DES; ARC-4	
Algorithm Standards and Compliance	NIST Algorithm Validation Certificates: – AES FIPS 197; Cert. #266 – DES FIPS 46-3, FIPS 81 Cert. #322 – 3DES FIPS 46-3, FIPS 81, Cert. #348 – SHA FIPS 180-1, Cert. #345 – HMAC FIPS 198, Cert. #78 – PRNG FIPS 186-2, ANSI x9.62, ANSI x9.31 Cert #110 LZS standardized via ANSI (X3.241); IETF (RFC3943, RFC 2395, RFC 1974, RFC 1967); Frame Relay Forum (FRF.9); QIC (122)	
Performance		
Combined hash + compression + encryption	250 MB/sec	
Single algorithm	Hash 250 MB/sec; Compression 250 MB/sec; AES-CBC encryption 193 MB/sec	
Features	Up to 4 cards per system; bus-mastering DMA; hardware-assisted scatter-gather	
Card Specifications		
Bus Interface	PCI-X 133 MHz PCI-X Specification v1.0	PCI Express x4 PCI Express Base Specification, v1.1; PCI Express Card Electromechanical Specification, v 1.0
Form Factor	Full-height half-length PCI-X	Low-profile half-length PCI Express
Card Dimensions	H: 9.6 cm (3.77 in) L: 16.3 cm (6.42 in)	H: 6.94 cm (2.73 in) L: 16.76 cm (6.6 in)
Component Height (max)	Component side: 0.84 cm max. (0.33 in) Solder side: 0.27 cm max. (0.11 in)	
Bracket Dimensions	1.84 cm x 12.00 cm (0.73 in x 4.73 in)	1.84 cm x 7.92 cm (0.73 in x 3.12 in)
Environmental Specifications		
Temperature	Operating: 0° C/32° F to 70° C/158° F Storage: -10° C/14° F to 70° C/158° F	Operating: 10° C/50° F to 55° C/131° F Storage: -10° C/14° F to 70° C/158° F
Humidity	Operating: 10% to 90% RH non-condensing Storage: 5% to 95% RH non-condensing	
Required Airflow	None	
Power Dissipation	5.5W typ.	10.6W typ.
Material Safety	RoHS-6	
Agency Approvals		
Safety	USA/Canada: UL, cUL: UL60950-1, CSA C22.2	
EMI and EMC	USA: FCC Part 15, Class B; Europe: CE mark	
Enablement Software Support		
Operating Systems	Linux, Windows	



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