



PE2ISCC2 Encryption Server Adapter

HW Accelerator Crypto Compression PCI Express Server Adapter

Product Description

Silicom's HW Accelerator Crypto Compression PCI Express Server adapters are based on standard on-chip HW accelerator Intel Cave Creek controller.

Silicom's Cave Creek PCI Express Server adapters support Intel QuickAssit Technology for Hardware Crypto and Compression accelerator engines.

The Silicom's Cave Creek PCI Express Server adapters are optimized to Intel Architecture (IA) support.

The Silicom's Cave Creek PCI Express Server adapters are based on Intel production process that provides the best industry performance, power and cost.



Key Features

Performance Features:

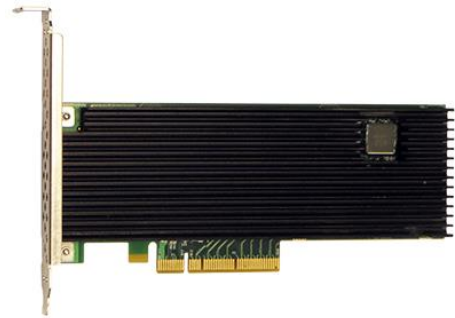
- Intel® QuickAssist Accelerator2
 - Symmetric Cryptographic Functions
 - Cipher Operations
 - Hash/Authenticate Operation
 - Cipher-Hash Combined Operation
 - Key Derivation Operation
 - Random Number Generation
 - Public Key Functions
 - RSA Operation
 - Diffie-Helman Operation
 - Digital Signature Standard Operation
 - Key Derivation Operation
 - Elliptic Curve Cryptography: ECDSA* and ECDH*
 - Random Number Generation and Prime Number Testing
 - Compression/Decompression
 - Deflate (Lempel-Ziv 77-Stac)
 - Support for SR-IOV

Common Key features:

- Support PCI Express Base Specification 2.0 (5 GTs)
- High performance, reliability, and low power use in Intel 8920CC SKU 4 Quad integrated MAC chip Controller

Performance Features:

- Intel® QuickAssist Accelerator
- Symmetric Cryptographic Functions
- Cipher Operations



- Hash/Authenticate Operation
- Cipher-Hash Combined Operation
- Key Derivation Operation
- Random Number Generation
- Compression/Decompression
- Deflate (Lempel-Ziv 77-Stack)
- Support for 32 SR-IOV Virtual Functions
- Support PCI Express Base Specification 2.0 (5 GTs)
- High performance, reliability, and low power use in Intel DH8926CL (sku11)

Performance Features:

Function	Cave Creek DH8900CC (SKU 1) No Acceleration	Cave Creek DH8903CC (SKU 2) Enterprise Entry Acceleration	Cave Creek DH8910CC (SKU 3) Mid Performance Acceleration	Cave Creek DH8920CC (SKU 4) Max Performance Acceleration
Performance Bulk Crypto only (AES 256-CBC 1150B)	Not supported	3Gbps	10Gbps	20Gbps
PKE (RSA1024 w/CRT)	Not supported	10K Ops/s	20K Ops/s	28K Ops/s
Compression (Deflate, Stateless, Dynamic, Level 1, 4KB buffers)	Not supported	3Gbps	5Gbps	7Gbps
Pattern Matching (Fixed String, Stateless, 5% hit rate, 2KB buffers)	Not supported	2Gbps @ 1 x20K patterns	4Gbps @ 2 x20K patterns	6Gbps @ 2 x20K patterns
Max Total Throughput when services used simultaneously	Not supported	3Gbps	10Gbps	20Gbps

Technical Specifications

Operating Systems Support	
Operating system support:	Linux Windows
PE2ISCC2: General Technical Specifications	
Interface Standard:	PCI-Express Base Specification Revision 2.0 (5 GTs)
Board Size:	Low profile short add-in card: 167.64mm X 68.91mm (6.60"X 2.713")
PCI Express Card Type:	X4 Lane

PCI Express Voltage:	+12V +- 8%
PCI Connector:	Gold Finger: X8
Controllers:	Intel DH8903CC (SKU2)
Weight:	170g (6 oz)
Power Consumption:	4.44W, 0.37A at 12V : Typical without data 5.16W, 0.43A at 12V: Typical with data
Holder:	Metal Bracket: Full Height and Low Height
Operating Humidity:	0%–90%, non-condensing
Operating Temperature:	0°C – 45°C (32°F – 113°F)
Storage:	-40°C–65°C (-40°F–149°F)
EMC Certifications:	FCC 47CFR Part 15:2013, Subpart B Class B Conducted emissions Radiated emissions EN 55022: 2010, Class B Conducted disturbance at mains terminals Conducted disturbance at telecommunication port Radiated disturbance EN 61000-3-2: 2006+A1(09)+A2(09) Harmonic current emissions EN 61000-3-3: 2008 Voltage fluctuations and flicker EN 55024: 2010 Immunity to electrostatic discharge (ESD) Radiated immunity to radio frequency electromagnetic field Conducted immunity to electrical fast transients / bursts (EFT/ B) Conducted immunity to voltage surges Conducted immunity to disturbances induced by radio frequency field Conducted immunity to voltage dips and short interruptions
MTBF:	246 years *According to Telcordia SR-332 Issue 2 Environmental condition – GB (Ground, Fixed, Controlled). Ambient temperature 25°C. Temperature rise of 15°C above the system ambient temperature was assumed for the cards components.

Order Information

P/N	Description	Notes
PE2iSCC2	Network Compression Accelerator PCI Express Server Adapter	X8, Based on Intel 8903CC SKU2, Low-Profile, RoHS compliant

Order information: Model P/N -LP

