PE3is2CO3
Silicom's Dual HW Accelerator sku3 Crypto Compression PCI E G3 Server Adapter

**Description**

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

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

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

The Silicom's Coleto 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 32 SR-IOV Virtual functions

**Common Key features:**
- PCI Express X8 lanes
- Support PCI Express Base Specification 3.0 (8 GTs)
High performance, reliability, and low power use in Intel DH8950CL PCH controller.
Technical Specifications

Coleto Creek SKU2 / SKU3 performance per a single controller:

<table>
<thead>
<tr>
<th>Coleto Creek chip</th>
<th>Sku2</th>
<th>Sku3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Quick Assist Technology Capability</td>
<td>*50Gbps</td>
<td>*50Gbps</td>
</tr>
<tr>
<td>IPSec</td>
<td>*43Gbps</td>
<td>*43Gbps</td>
</tr>
<tr>
<td>SSL</td>
<td>*50Gbps</td>
<td>*50Gbps</td>
</tr>
<tr>
<td>Compression</td>
<td>*20G</td>
<td>*23G</td>
</tr>
<tr>
<td>Kasumi/ Snow3G</td>
<td>*30Gbps</td>
<td>*30Gbps</td>
</tr>
<tr>
<td>RSA Decrypt 1k-bit</td>
<td>165K (ops/sec)</td>
<td>190K (ops/sec)</td>
</tr>
<tr>
<td>RSA Decrypt 2k-bit</td>
<td>35K (ops/sec)</td>
<td>40K (ops/sec)</td>
</tr>
</tbody>
</table>

Operating Systems Support

Operating system support: Linux

PE3iS2CO2/3: General Technical Specifications

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<tr>
<th>Interface Standard:</th>
<th>PCI-Express Base Specification Revision 3.0 (8 GTs)</th>
</tr>
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<tbody>
<tr>
<td>Board Size:</td>
<td>Low profile add-in card: 218.44mm X 68.91mm (8.6&quot;X 2.713&quot;)</td>
</tr>
<tr>
<td>PCI Express Card Type:</td>
<td>X16 Lane</td>
</tr>
<tr>
<td>PCI Express Voltage:</td>
<td>+12V +/- 8% and external 3x2 connector</td>
</tr>
<tr>
<td>PCI Connector:</td>
<td>Gold Finger: X16</td>
</tr>
</tbody>
</table>
| Controller:         | Sku2: Intel DH8950CL  
                       | Sku3: Intel DH8955CL |
| Holder:             | Metal Bracket: Full Height and Low Height |
| Operating Humidity: | 0%–90%, non-condensing |
| Operating Temperature: | 0°C – 45°C (32°F – 113°F)  
                       | Air flow requirement for this adapter is 200 LFM |
| Storage:            | -40°C–65°C (-40°F–149°F) |
| EMC Certifications: | FCC Part 15, Subpart B Class A  
                       | Conducted Emissions  
                       | Radiated Emissions  
                       | Conducted Emissions  
                       | Radiated Emissions  
                       | Immunity for ITE Amendment A1: 2001  
                       | CE EN 61000-3-2 2000, Class A  
                       | Harmonic Current Emissions  
                       | Voltage Fluctuations and Flicker  
                       | CE IEC 61000-4-2: 1995  
                       | ESD Air Discharge 8kV. Contact Discharge 4kV.  
                       | CE IEC 61000-4-3:1995  
                       | Radiated Immunity (80-1000Mhz), 3V/m 80% A.M. by 1kHz  
                       | CE IEC 61000-4-4:1995  
                       | EFT/B: Immunity to electrical fast transients 1kV Power |
Leads, 0.5Kv Signals Leads  
CE IEC 6100-4-5:1995  
Immunity to conductive surges COM Mode; 2kV,  
Dif. Mode 1kV  
CE IEC 6100-4-6:1996  
Conducted immunity (0.15-80 MHz) 3VRMS 80% A.M. By 1kHz  
CE IEC 6100-4-11:1994  
Voltage Dips and Short Interruptions  
V reduc >95%, 30% >95% Duration 0.5per, 25per, 250per

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<thead>
<tr>
<th>P/N</th>
<th>Description</th>
<th>Notes</th>
</tr>
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<tr>
<td>PE3iS2CO2</td>
<td>Dual HW Accelerator sku2 Crypto Compression PCI E G3 ServerAdapter</td>
<td>Gen 3.0 X16, Based on Intel ColetoCreek SKU2 DH8950CL, Low-Profile, RoHS compliant</td>
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Model P/N -LP Assemble low profile metal bracket

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