PE3IS2CO3X8
Dual HW Accelerator sku3 Crypto Compression PCI E G3 Server Adapter SKU3 / SKU2 Intel® Based

Product Description

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

Silicom’s Dual HW Accelerator PCI Express Server adapters support Intel QuickAssist Technology for Hardware Crypto and Compression accelerator engines. The Silicom’s PE3IS2CO3X8 PCI Express Server adapter is 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

- Intel® QuickAssist Accelerator
- 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 (sku2) DH8950CL / (sku3) DH8955CL PCH controller

Technical Specifications

<table>
<thead>
<tr>
<th>SKU2 / SKU3 performance per a single controller:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intel® chip</strong></td>
<td>Sku2</td>
</tr>
<tr>
<td>Intel@ Quick Assist Technology Capability</td>
<td>50Gbps</td>
</tr>
<tr>
<td>IPSec</td>
<td>43Gbps</td>
</tr>
<tr>
<td>SSL</td>
<td>50Gbps</td>
</tr>
<tr>
<td>Compression</td>
<td>20G</td>
</tr>
<tr>
<td>Kasumi/ Snow3G</td>
<td>30Gbps</td>
</tr>
<tr>
<td>RSA Decrypt 1k-bit</td>
<td>165K (ops/sec)</td>
</tr>
<tr>
<td>RSA Decrypt 2k-bit</td>
<td>35K (ops/sec)</td>
</tr>
</tbody>
</table>

*x8/ Gen3 card level will limit the IO performance to 54Gbps

Operating Systems Support

| Operating System support: | Linux |

General Technical Specifications

| Interface Standard:       | PCI-Express Base Specification Revision 3.0 (8 GTs) |
| Board Size:               | Low profile long add-in card: 311.99mm X 68.91mm (12.283”X 2.713”) |
| PCI Express Card Type:    | X8 Lane          |
| PCI Express Voltage:      | +12V ± 8% and external 3x2 connector |
| PCI Connector:            | Gold Finger: X8  |
| **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 61000-4-5:1995  
Immunity to conductive surges COM Mode; 2kV, Dif. Mode 1kV  
CE IEC 61000-4-6:1996  
Conducted immunity (0.15-80 MHz) 3VRMS 80% A.M. by 1kHz  
CE IEC 61000-4-11:1994  
Voltage Dips and Short Interruptions  
V reduc >95%, 30% >95% Duration 0.5per, 25per, 250per |
## Order Information

<table>
<thead>
<tr>
<th>P/N</th>
<th>Description</th>
<th>Notes</th>
</tr>
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<tr>
<td>PE3IS2CO3X8</td>
<td>Dual HW Accelerator sku3 Crypto Compression PCI E G3 ServerAdapter</td>
<td>Gen 3.0 X8, Based on Intel SKU3 DH955CL, Low-Profile, RoHS compliant</td>
</tr>
<tr>
<td>PE3IS2CO2X8</td>
<td>Dual HW Accelerator sku2 Crypto Compression PCI E G3 ServerAdapter</td>
<td>Gen 3.0 X8, Based on Intel SKU2 DH950CL, Low-Profile, RoHS compliant</td>
</tr>
</tbody>
</table>

Model P/N - LP

1V0