



PE416IS2LBxL Crypto Compression Server Adapter

Dual Crypto / Compression LBG PCIe 4.0 Server Adapter Intel® C629 based

Product Description

Silicom's Dual LBG-x NS Crypto / Compression server adapters are 3rd generation of Silicom adapters which are based Intel 3rd generation chipset to integrate Intel® QuickAssist Technology.

Silicom's Dual LBG-x NS Crypto / Compression server adapters are optimized to Intel® Architecture provide Data Centers and Cloud applications benefit greatly from the high-performance security and compression capabilities, enabling more efficient network and storage architectures.

Simplest and highly mature architecture leading to highest reliability.



Silicom's Dual LBG-x NS Crypto/ Compression server adapters integrates 100Gbps accelerator.

Servers with Intel® QuickAssist technology create a new compute paradigm in cloud services. Virtualized machines with virtualized acceleration services allow for network function virtualization as standard practice.

Network elements share the same common standard hardware implementation. True software defines network elements run on standard server.

Silicom's Dual LBG-x NS Crypto / Compression server adapters uses Intel solution and drivers: Seamless integration with the customer's OS and application.



Key Features

- Intel® QuickAssist Technology for Crypto and Compression
 - Bulk: AES, 3DES, (A) RC4
 - Hash: MD5, SHA-1/2 SHA-3 HMAC
 - Wireless: KASUMI , ZUC, SNOW 3G
 - Public Key – DH, RSA, DSA, EDSA, ECDH
 - Compression/Decompression-Deflate
 - RDMA (iWARP) support per link
- PCI Express X16 lanes.
- Support PCI Express Base Specification 4.0 (16 GTs).
- Passive cooling.
- Support baseboard management controller (BMC).
- Efuse – electronic fuse.

System Acceleration Throughput per a single controller:

	INTEL® C629 CHIPSET	INTEL® C628 CHIPSET/INTEL® C627 CHIPSET	INTEL® C626 CHIPSET	INTEL® C625 CHIPSET
SSL/IPSec	100Gbps	100Gbps	40Gbps	20Gbps
Compression Deflate		100Gbps	40Gbps	20Gbps
Decompression Deflate		100Gbps	100Gbps	100Gbps
RSA Decrypt 1k-bit		550K Ops/sec	550K Ops/sec	550K Ops/sec
RSA Decrypt 2k-bit	25K Ops/Sec	100K Ops/Sec	40 Ops/Sec	20 Ops/Sec
TLS Handshakes ECDH_RSA2K		44K Ops/Sec		
TLS Handshakes EDHE+ECDSA		51K Ops/Sec		
SSL/IPSec + Compression + PKE		Total 120 Gbps + 100K Ops/sec		

Technical Specifications

General Technical Specifications:	
Interface Standard:	PCI-Express Base Specification Revision 4.0 (16 GTs)
Board Size:	Low profile short add-in card: 215.90 mm X 64.389mm (8.500"X 2.535")
PCI Express Card Type:	X16 Lane
PCI Express Voltage	<ul style="list-style-type: none"> • +12V +- 8% from external 3x2 connector. • +12V +- 8% from PCIe Edge Connector. • +3.3V AUX ± 9%
PCI Connector:	Gold Finger: X16
Controllers:	Intel® C629 Chipset Intel® C628 Chipset
Power Consumption:	105W max
Holder:	Metal Bracket: Full Height and Low Height
Operating Humidity:	0%–90%, non-condensing
Operating Temperature:	0°C – 40°C (32°F – 104°F) Air flow requirement for this adapter is 200 LFM
Cooling	Passive Heatsink
Storage:	-40°C–65°C (-40°F–149°F)
Regulation:	Card shall meet CE, FCC Class B, ROHS requirements.
LEDs on Board:	<ul style="list-style-type: none"> • 1x Red Color active on PEX system error (D3) • 1x Green Color, active when LBG1 out of reset (D7) • 1x Green Color, active when LBG2 out of reset (D4) • 1x Green Color, active when BMC turn on (D5) • 1x Yellow Color, active when fault occurs on BMC (D6) • 1x Green Color, active when power sequence finished (D8) <p>The LEDs will be located on top edge of the board.</p>
Other Hardware Devices and Interfaces:	<ul style="list-style-type: none"> • Power sequencer device • I2C Current sense Device
Debug Connectors:	<ul style="list-style-type: none"> • JTAG Headers for SoC • Header Programming and UART debug interface for BMC • Header for DediProg programmer • I2C Header

Operating Systems Support:	
Operating system support:	Linux

Order Information

P/N	Description	Notes
PE416IS2LBCL	Dual Crypto / Compression LBG PCIe Server Adapter	Based on Intel® C629 Chipset Gen 4.0 x16
PE416IS2LBLL	Dual Crypto / Compression LBG PCIe Server Adapter	Based on Intel® C628 Chipset Gen 4.0 x16

Model P/N -LP

1V0