



### M20E3ISLB Crypto Compression Module

#### Crypto / Compression LBG U.2 Server Module / LBG-xLBG

##### Product Description

Silicom's LBG-x NS Crypto / Compression U.2 server Modules are 3rd generation of Silicom adapters which are based Intel 3rd generation chipset to integrate Intel® QuickAssit Technology.

Silicom's LBG-x NS Crypto / Compression U.2 server Modules are optimized to Intel Architecture (IA) provide Data Centers and Cloud applications benefit greatly from the high performance security and compression capabilities, enabling more efficient network and storage architectures.

Servers with Intel® QuickAssit 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 define network elements run on standard server

Silicom's LBG-x NS Crypto / Compression U.2 server Modules Optimized to IA (Intel Architecture). Simplest and highly mature architecture leading to highest reliability.

Silicom's LBG-x NS Crypto / Compression U.2 server Modules uses Intel solution and drivers: Seamless integration with the customer's OS and application.

The Silicom U.2 Server Modules are targeted for systems that support 2.5" PCI Express Enterprise SSD Form Factor.

Silicom U.2 Server Modules are based on PCI Express U.2 specifications.

Silicom U.2 Server Modules solution designed for the enterprise market of Servers, Network appliances and storage systems.

Silicom U.2 Server Modules supports hot plug and removal, both with and without prior system notification (surprise removal).



## Key Features

### Host Interface

- Host interface support PCI EXPRESS U.2 MODULE SPECIFICATION, REV. 0.5
- Host Interface Support PCI Express 3.0 (8Gb/s) and 2.1 (5Gb/s)
- PCI Express Card Electromechanical Specification, revision 2.0.
- 2.5" modules width same as 2.5" drive (SFF-8223, 2007) specification
- PCI Express X4 lanes.
- 25W connector limit, with 12V only delivery.
- Supports Hot swap
- Supports PCI Express power management features
- **Intel® QuickAssit 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-Feflate
  - RDMA (iWARP) support per link

### System Acceleration Throughput

	<b>LBG-L / LBG-T</b>	<b>LBG-M</b>	<b>LBG-E</b>
SSL/IPSec	27Gbps (PCIe BW)	27Gbps (PCIe BW)	20Gbps
Compression Deflate	27Gbps (PCIe BW)	27Gbps (PCIe BW)	20Gbps
Decompression Deflate	27Gbps (PCIe BW)	27Gbps (PCIe BW)	27Gbps (PCIe BW)
RSA Decrypt 1k-bit	550K Ops/sec	550K Ops/sec	550K Ops/sec
RSA Decrypt 2k-bit	100 Ops/Sec	40 Ops/Sec	20 Ops/Sec
TLS Handshakes ECDH_RSA2K:	440K Ops/sec		
TLS Handshakes EDHE+ECDSA	51K Ops/sec		
SSL/IPSec + Compression + PKE	Total 120 Gbps + 100K Ops/sec		

## Technical Specifications

General Technical Specifications	
<b>Interface Standard:</b>	PCI-Express Base Specification Revision 3.1a (8GT/s) Enterprise SSD Form Factor Revision 1.0A PCI Express U.2 Module Specification Revision 0.9
<b>Board Size:</b>	100.2mm X 69.85mm (3.945"X 2.750")
<b>PCI Express Card Type:</b>	X4 Lane
<b>PCI Express Voltage</b>	+12V ± 15%
<b>PCI Connector:</b>	Multifunction 12 Gb/s 6X Unshielded Connector (SFF-8639)
<b>Controllers:</b>	LBG-T B0 LBG-L B0 LBG-M B0 LBG-E B0
<b>Operating Humidity:</b>	0%–90%, non-condensing
<b>Operating Temperature:</b>	0°C – 45°C (32°F – 113°F) Air flow requirement for this adapter is 200 LFM
<b>Cooling</b>	Fanless Heatsink / TBD LFM
<b>Storage:</b>	-40°C–65°C (-40°F–149°F)
<b>Regulation:</b>	Card shall meet CE, FCC Class B, ROHS requirements.
Operating Systems Support:	
<b>Operating system support:</b>	Linux

## Order Information

P/N	Description	Notes
<b>M20E3iSLBT</b>	Crypto / Compression LBG U.2 Server Module	X4 G3, Based on Intel LBG-T, U.2 Module, RoHS compliant
<b>M20E3iSLBL</b>	Crypto / Compression LBG U.2 Server Module	X4 G3, Based on Intel LBG-L, U.2 Module, RoHS compliant
<b>M20E3iSLBM</b>	Crypto / Compression LBG U.2 Server Module	X4 G3, , Based on Intel LBG-M, U.2 Module, RoHS compliant
<b>M20E3iSLBE</b>	Crypto / Compression LBG U.2 Server Module	X4 G3, , Based on Intel LBG-E, U.2 Module, RoHS compliant

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