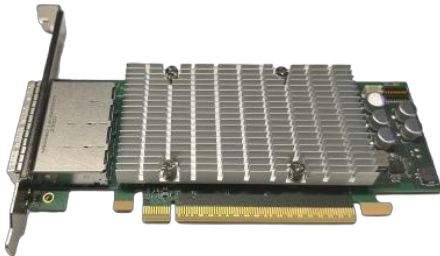


OmniBUS™ PCIe5.0 SFF-8614 NTB Adapter

GateStor's OmniBUS Features



- ✓ PCI Express 5.0 - 32.0 GT/s per lane
- ✓ Microchip Switchtec® PCIe 5.0 PFX
- ✓ Link compliant with PCIe 1.0, 2.0, 3.0, 4.0 and 5.0
- ✓ Selectable host Clock isolation support
- ✓ Automatic support for host running CFC or SSC
- ✓ Quad SFF-8614 x4 connectors
- ✓ Passive Copper cable support
- ✓ EEPROM for multiple system configurations
- ✓ RDMA support through PIO and DMA
- ✓ Link status LEDs through the face plate
- ✓ ~500ns - application to application latency
- ✓ ~100ns - Chip latency
- ✓ PCIe 16 and 32 lines Adapters
- ✓ OmniBUS™ software suite license
- ✓ Low Profile, Half Length PCIe form factor

The OmniBUS™ Gen 5.0 Host Adapter is our High-Performance networking solution. It is designed to accommodate cables compliant to the PCI-SIG External Cabling Specification 5.0 and employs the Microchip Switchtec® PCIe 5.0 PFX switch to facilitate reliable and fast host-to-host communication. This adapter serves various high-performance purposes, such as clustering and hot-add applications.

Application developers using the OmniBUS™ host adapter can harness its impressive PCIe 5.0 performance while benefiting from application-to-application latency under 500 nanoseconds. Additionally, it is fully compatible with our OmniBUS™ software suite.

Configurations

The OmniBUS™ enables the establishment of various PCIe Network topologies, including:

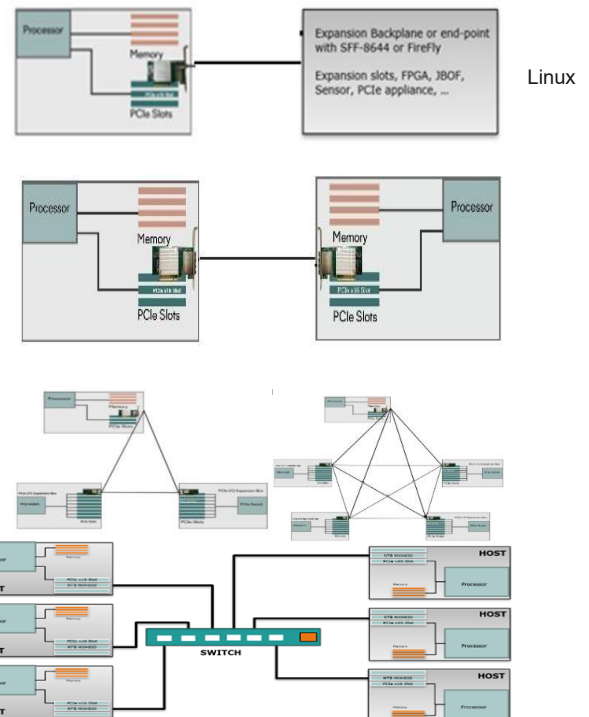
Single-Node Transparent Hot Adds: PCIe hot add support to systems. Cabled PCIe expansion systems and IO devices can dynamically be added, hot-swapped or removed from the system without rebooting the host.

2 Node NTB network: By using up to four x4 PCIe cables, you can realize a connection to another system.

3-5 Node NTB Network: A robust 3—and 5-node network can be established without an external PCIe switch by utilizing one or two x4 PCIe cables.

6-60 Node NTB Network

A more extensive configuration can be realized with one or more OmniBUS™ Gen5, 24 port PCIe 5.0 Switch.





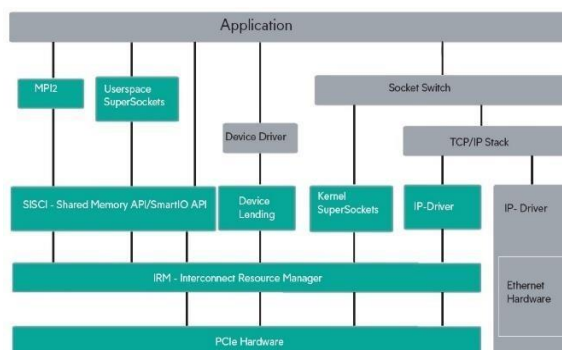
OmniBUS™ PCIe Software

The OmniBUS™ card is bundled with a full license for OmniBUS™ clustering software, which includes.

- ✓ SISI API - a robust and powerful shared memory programming environment for PCIe
- ✓ Standard TCP/IP drivers
- ✓ Omni Sockets socket accelerator software
- ✓ SmartIO - access to remote PCIe devices over PCIe
- ✓ Board management software

GateStor's software suite effectively supports large and small data transfers using DMA and PIO data transfer schemes. PIO transfers are optimized for small packet transfers, minimizing latency. DMA seamlessly moves large data packets with minimal CPU utilization.

The OmniBUS™ software is compatible with Linux and Windows. The software framework is designed to develop and deploy multi-node systems rapidly.



Specifications

PCI Express	- Base Specification 5.0 - External Cabling Specification 5.0 - Card Electromechanical Specification 5.0	Operating Environment	- Operating Temperature: 0°C - 45°C (32°F - 113°F) - Airflow: TBD - Relative Humidity: 5% -95% non-condensing
Application to Application latency	~600ns (system dependent)	Storage Environment	- Storage Temperature: -40°C to 70°C (-40°F to 158°F) - Relative Humidity 95% (non-condensing) at 35°C
Number of Boards Per System	Up to 4 (system dependent)	Mechanical Dimensions	Low profile, half-length, 167.65mm- (6.6 inches) x 68.90 mm (2.731 inches)
Active Components	Microchip Switchtec® PCIe 5.0 PFX Switch	OmniBUS™ Software	- SISI API - Omni Sockets Berkley Sockets API - Microsoft WinSock2/LSP support - TCP-IP driver - SmartIO - Board Management
Max Link Speeds	32 lines Board, 1,024Gb/s in total 16 lines Board, 512Gb/s in total	Usage Modes	Non-transparent bridging (NTB)
Configuration	DIP-switch	Operating Systems	Windows, Linux
Topologies	- Two-nodes direct cable 3-5 nodes direct cable - Multi-Node Switch	Regulatory markings	- CE - FCC Class B - KCC - Canada/IC - RCM
		Regulatory Compliant	- Reach - RoHS - UL94V-0
Cable Connections	- SFF-8614 connector for copper/fiber cables - Supports quad x4 cables. - Passive PCIe 5.0 copper, up to 3 meters	Mounting Brackets	- Full height Bracket installed. - Half-height bracket is included in the shipping box.
Maximum power rating	12V: 2.8A (no port power) 3.3A (max port power) 3.3V Not connected. 3.3V Vaux: 100mA (no port power)	Product Codes	OmniBUS™ Host NTB Adapter – Passive Heatsink
Typical power rating	12V: 2.5A (Copper Cable) 3.3V Not connected 3.3V Aux: 100mA (Copper Cables)	Regulatory Approvals	- EN 55032:2012 - EN 55035:2017 - EN 61000-3-2:2014 - EN 61000-3-3:2013 - EN 61010-1:2010 - EN 61326-1:2013 - ICES-003 - KS C 9832:2019, KS C 9835:2019 47 CFR Part 15, Subpart B (Clause 15.107 and 15.109) in conjunction with ANSI C63.4:2014 - CISPR 35:2016 Edition 1.0 (CISPR/I/412/CDV) Korean Harmonized standard, KN 35