

# Data Sheet

## PFC EP Emulex LPe31000 / LPe31002 Fibre Channel Adapters

Dual- and single-port 16 Gbit PCIe 3.0 Host Bus Adapters by Broadcom

Fibre Channel Host Bus Adapters (HBA) enable data exchange over large distances and extend your existing server systems by including communication interfaces using high-speed communication technology. All connections are redundant and hot-pluggable.

The combination of hardware and software exemplifies the high-performance quality of communication.

The number of system restarts is reduced thanks to optimized software and extended error check functions help improve the integrity of your company's information.

Compared to the previous generation, Emulex Gen 6 HBAs deliver 2x greater bandwidth— 6,400MBps (2 ports 16G, full duplex), less than half the latency, and support an industry-leading 1.6 million IOPS on a single port, ensuring SLAs are met.



### PFC EP Emulex LPe31000 / LPe31002 Fibre Channel Adapters

The Emulex Gen 6 16 Gb Fibre Channel (FC) Host Bus Adapters (HBA) by Broadcom for PRIMERGY and PRIMEQUEST server systems are optimal Fibre Channel HBAs for virtualized, cloud and mission critical deployments. The PFC EP Emulex Gen 6 Fibre Channel HBAs LPe31000/31002 by Broadcom take performance to a new level with PCIe 3.0 support, data integrity capabilities and cloud scale reliability, and ease of use. Organizations looking to improve performance, protect against data corruption, and simplify operations of FC SANs in cloud or high performance environments can benefit from deploying the PFC EP LPe31000/31002.

The single and dual port FC HBAs feature the Emulex bullet-proof driver stack built on a heritage reaching back to the first generation Fibre Channel adapters resulting in rock-solid reliability in 16Gb/s, 8Gb/s and 4Gb/s environments. With over 1.6 million IOPS on a single port, they are ideally suited for Fibre Channel connectivity to flash storage arrays.

# Features & Benefits

Main Features	Benefits
Scalable bandwidth <ul style="list-style-type: none"><li>■ Faster Flash. Better Virtualization.</li></ul>	■ Designed to address the demanding performance of modern networked storage systems
High performance throughput <ul style="list-style-type: none"><li>■ Accelerate</li></ul>	■ Delivers unparalleled performance and more efficient port utilizationby applying all ASIC resources to any port that needs it
Reliability and guaranteed network performance <ul style="list-style-type: none"><li>■ Protect</li></ul>	■ Enhanced security via the new secure firmware update feature which protects and ensures the authenticity of device firmware
Low latency <ul style="list-style-type: none"><li>■ Reduce latency</li></ul>	■ Utilize high performance and low latency solid state storage drives for caching and persistent storage as well as hard disk drive arrays
Manage network connectivity with one tool <ul style="list-style-type: none"><li>■ Control</li></ul>	■ The flagship OneCommand® Manager enterprise-class management application features a multiprotocol, cross-platform architecture that provides centralized management of all current and previous generations of Emulex FC HBAs

# Technical details

## Technical details

Controller Silicon	Emulex XE501
Controller type	Fibre Channel Host Bus Adapter
Connector type	LC-style
Number of ports	1 2
Auto Negotiation support	Yes
Bus interface	PCIe 3.0 x8
Bus transfer rate	8GT/s
LEDs	2 LEDs per port (yellow and green)
Standards	<ul style="list-style-type: none"> <li>- Current ANSI/ITF Standards: FC-PI-4; FC-PI-5; FC-PI-6; FC-FS-3; FC-LS-2; FC-GS-6; FC-DA; FC-DA2: FCP-4; SPC-4; SBC-3; SSC-3; SSC-4</li> <li>- Legacy ANSI/ITF standards: FC-PH; FC-PH-2; FC-PH-3; FC-PI; FC-PI-2; FC-FS; FC-GS-2/3/4/5; FCP-2/3; FC-HBA; FC-TAPE; FC-MI; SPC-3; SBC-2; SSC-2; SSC-3</li> <li>- PCIe base spec 3.0</li> <li>- PCIe card electromechanical spec 3.0</li> <li>- Fibre Channel Class 3</li> <li>- PHP hot plug-hot swap</li> </ul>
Technology	Optics: 16 Gb/s short wave lasers with LC type connectors. Data rates: 14.025 Gb/s (16GFC); 8.5 Gb/s (8GFC); 4.25 Gb/s (4GFC) automatically negotiated
Supported cable length	Operating at 16Gb - OM4 (Multi-Mode 50/125µm, 4700 MHz*km) 125m - OM3 (Multi-Mode 50/125µm, 2000 MHz*km) 100m - OM2 (Multi-Mode 50/125µm, 500 MHz*km) 35m Operating at 8Gb - OM4 (Multi-Mode 50/125µm, 4700 MHz*km) 190m - OM3 (Multi-Mode 50/125µm, 2000 MHz*km) 150m - OM2 (Multi-Mode 50/125µm, 500 MHz*km) 50m
FC Controller notes	the controller is equivalent to the original Emulex HBA LPe31000-Series
Fibre Channel interface	MMF

Order code	Product name (vendor)	Height of bracket	Number of ports	Related product
S26361-F5596-E1	LPe31000-M6-F	Full Height (FH)	1	PRIMERGY Server
S26361-F5596-E201	LPe31000-M6-F	Low Profile (LP)	1	PRIMERGY Server
S26361-F5596-E202	LPe31002-M6-F	Low Profile (LP)	2	PRIMERGY Server
S26361-F5596-E2	LPe31002-M6-F	Full Height (FH)	2	PRIMERGY Server
S26361-F5596-L501	LPe31000-M6-F	Full Height / Low Profile	1	PRIMERGY Server
S26361-F5596-L502	LPe31002-M6-F	Full Height / Low Profile	2	PRIMERGY Server

## Environment

Power consumption	single: typical 9.3W; max 11.6 W dual: typical 11.1W; max 13.3 W
Temperature (operating)	0 - 55 °C
Storage temperature	-40 - 70 °C

## Compliance

Compliance notes	According to the corresponding system
Compliance link	<a href="https://sp.ts.fujitsu.com/sites/certificates">https://sp.ts.fujitsu.com/sites/certificates</a>

## Notes

Compatibility	If and to the extent a list of components or certain compatibilities are specified in the product data sheet, these component lists and compatibility specifications are exhaustive. Using deviating or other system components and applications together with the product may but does not necessarily have to lead to compatibility problems. A final statement and/or commitment on the compatibility of such deviating or other system components and applications can only be provided after a corresponding verification through a dedicated compatibility testing.
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Notes

Performance	To the extent that specific performance specifications for the product are indicated in the product data sheet, these are usually also dependent on the specific use and workload of the product and may therefore not be reached equally in all application situations. Such performance specifications thus do not represent a specifically agreed characteristic or feature of the product, but only serves as an orientation. The responsibility for a sufficient sizing of the overall system functionality lies solely with the user.
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## More information

### Fsas Technologies products, solutions & services

In addition to PFC EP Emulex LPe31000 / LPe31002 Fibre Channel Adapters, Fsas Technologies provides a range of platform solutions. They combine reliable Fsas Technologies products with the best in services, know-how and worldwide partnerships.

**Fsas Technologies Portfolio**  
Built on industry standards, Fsas Technologies offers a full portfolio of datacenter hardware, software and related services. This allows customers to select alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Data Center Solutions  
<https://www.fsastech.com/en-eu/>

### More information

Learn more about PFC EP Emulex LPe31000 / LPe31002 Fibre Channel Adapters, please contact your Fsas Technologies sales representative or Business partner, or visit our website.  
[www.fujitsu.com/primergy](http://www.fujitsu.com/primergy)

### Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.  
Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT.  
Please find further information at <http://www.fujitsu.com/global/about/environment>



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### Disclaimer

Please note that the data sheet reflects the technical specification with the maximum selection of components for the named system and not the detailed scope of delivery. The scope of delivery is defined by the selection of components at the time of ordering. The product was developed for normal business use.  
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