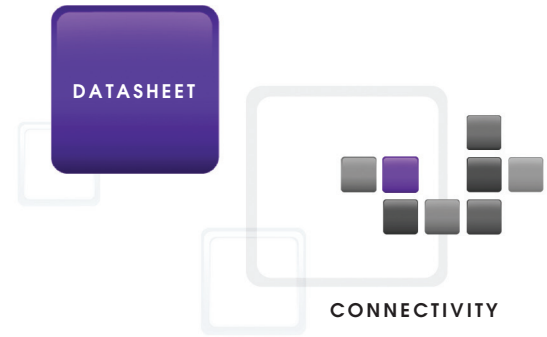




LightPulse® HBA Product Line

16G, 8G and 4G Fibre Channel HBAs

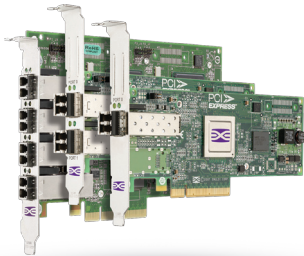


**UNPARALLELED
MANAGEABILITY,
RELIABILITY,
PERFORMANCE
AND EASE OF
DEPLOYMENT**

Streamlined installation and management, unrivaled scalability, and industry-leading virtualization support make the Emulex LightPulse Host Bus Adapter (HBA) product line ideal for small to large enterprises with mixed-OS Storage Area Network (SAN) and virtual server environments. With powerful management tools and broad platform support, the LightPulse family of HBAs delivers maximum performance in the broadest range of applications and environments.

Proven design, architecture and interface

LightPulse HBAs' highly integrated design minimizes onboard components, while advanced error-checking and correcting methods assure robust data integrity. Emulex's independent firmware and driver architecture enables feature and performance upgrades without server re-boot and deployment of a common driver across all models of LightPulse HBAs. Emulex server connectivity solutions are designed to streamline administrative processes and increase management efficiency in the data center.



Key benefits

- Provides superior performance for the enterprise—powers the #1 fastest database system in TPC-C benchmark reports*
- Highly efficient management provides 2x the functionality, and takes one half the time to deploy and manage compared to other manufacturers' HBAs
- Integrates seamlessly into existing SANs
- Supports IT server consolidation and energy conservation initiatives
- Allows application of SAN best practices, tools and processes with virtual server deployments
- Protects sensitive data from unauthorized access
- Assures data availability and data integrity
- Improves IT staff productivity through simplified deployment and management

Key features

- Support for Message Signaled Interrupts eXtended (MSI-X) improves host utilization and enhances application performance
- Support for 8Gbps, 4Gbps and 2Gbps Fibre Channel devices
- Comprehensive virtualization capabilities with support for N-Port ID Virtualization (NPIV) and Virtual Fabric
- Host to Fabric FC-SP authentication
- BlockGuard® ready—ensures end-to-end data integrity with exclusive support of T10-PI standard
- Common driver model allows a single driver to support all Emulex HBAs on a given OS
- Easy deployment of new firmware with no server reboot
- Efficient centralized administration of Emulex HBAs via powerful management tools

* Published by the Transaction Processing Performance Council (TPC), 12-2-2010

Maximum Performance and Superior Management Efficiency for the Broadest Range of Data Center Environments

Feature	Description	PCI Express 2.0 HBAs						PCI Express 1.0a HBAs					PCI-X 2.0 HBAs			
		LPe16000	LPe16002	LPe12000	LPe12002	LPe12002-X8	LPe12004	LPe1250	LPe11000	LPe11002	LPe11004	LPe1150	LPe111	LP11000	LP11002	LP1150
Link Speed Support	2Gbps			•	•	•	•	•	•	•	•	•	•	•	•	•
	4Gbps	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	8Gbps	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	16Gbps	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Single Channel	Single Fibre Channel connection on one HBA	•		•				•	•			•	•	•	•	
Dual Channel	Two Fibre Channel connections on one HBA		•		•	•				•				•		
Quad Channel	Four Fibre Channel connections on one HBA						•			•						
PCI Express Support	Bus Architecture	•	•	•	•		•	•	•	•	•	•	•			
Long Wave Optics	With long wave optical transceivers					•										
PCI-X Support	PCI-X Compliance													2.0	2.0	2.0
	66MHz/64-Bit													•	•	•
	100MHz/64-Bit													•	•	•
	133MHz/64-Bit													•	•	•
PCI Support	PCI Compliance													3.0	3.0	3.0
	33MHz/32-Bit													•	•	•
	33MHz/64-Bit													•	•	•
	66MHz/64-bit													•	•	•
Operating System	Windows	•	•	•	•		•	•	•	•	•	•	•	•	•	•
	Linux	•	•	•	•		•	•	•	•	•	•	•	•	•	•
	VMware	•	•	•	•		•	•	•	•	•	•	•	•	•	•
	Solaris	•	•	•	•		•	•	•	•	•	•	•	•	•	•
	NetWare			•	•		•	•	•	•	•	•	•	•	•	•
	HP-LUX						•	•	•	•	•	•	•	•	•	•
Custom Drivers			•	•		•	•	•	•	•	•	•	•	•	•	
FC-Tape	FCP-2 Support	•	•	•	•		•	•	•	•	•	•	•	•	•	•
All Topologies	Auto Detect - P To P; FC-AL; Fabric	•	•	•	•		•	•	•	•	•	•	•	•	•	•
Fibre Channel Fabric Boot	X86 BootBIOS	•	•	•	•		•	•	•	•	•	•	•	•	•	•
	UEFI	•	•	•	•		•	•	•	•	•	•	•	•	•	•
	OpenBoot	•	•	•	•		•	•	•	•	•	•	•	•	•	•
HBA Port Virtualization	N_Port IS Virtualization (NPIV)	•	•	•	•		•	•	•	•	•	•	•	•	•	•
MSI Support	Message Signal Interrupt	•	•	•	•		•	•	•	•	•	•	•	•	•	•
MSI-X Support	Message Signal Interrupt eXtended	•	•	•	•		•	•	•	•	•	•	•	•	•	•
FC-SP Compliance	Fibre Channel Security Protocol with DH-CHAP Authentication (Host to Switch)	•	•	•	•		•	•	•	•	•	•	•	•	•	•
Common Management Interface (FDMI)	Industry-standard interface across all operating system environments	•	•	•	•		•	•	•	•	•	•	•	•	•	•
Firmware Upgrade	Upgradeable features on installed base	•	•	•	•		•	•	•	•	•	•	•	•	•	•
Firmware Independent Drivers	Update F/W or drivers separately simplifies SAN Management	•	•	•	•		•	•	•	•	•	•	•	•	•	•
End-to-end Parity/CRC	Data Protection	•	•	•	•		•	•	•	•	•	•	•	•	•	•
BlockGuard™ Ready	End-to-End Data Integrity Support	•	•	•	•		•	•	•	•	•	•	•	•	•	•
BlockGuard with Offload	End-to-end data integrity support with hardware offload	•	•	•	•		•	•	•	•	•	•	•	•	•	•
HBA Power Voltage Required	+3.3v DC	•	•	•	•		•	•	•	•	•	•	•	•	•	•
	+5v DC	•	•	•	•		•	•	•	•	•	•	•	•	•	•
	+12v DC	•	•	•	•		•	•	•	•	•	•	•	•	•	•
Host PCI Slot Compatibility	Short Length (Standard Height)	•	•	•	•		•	•	•	•	•	•	•	•	•	•
	Low Profile Compatible	•	•	•	•		•	•	•	•	•	•	•	•	•	•
Media Interface	LC Multi-Mode/Short Wave	•	•	•	•		•	•	•	•	•	•	•	•	•	•
	Digital Diagnostics	•	•	•	•		•	•	•	•	•	•	•	•	•	•

For further information please visit www.emulex.com.

Options

Part Number	Description
LPe12100-OPT	8Gb/s Spare Optic (short wave laser with LC connector SFP+ optic) - 1 pack



World Headquarters 3333 Susan Street, Costa Mesa, CA 92626 +1 714 662 5600
Wokingham, UK +44 (0) 118 977 2929 | **Munich, Germany** +49 (0) 89 97007 177
Paris, France +33 (0) 158 580 022 | **Beijing, China** +86 10 68499547
Tokyo, Japan +81 3 5325 3261 | **Bangalore, India** +91 80 40156789

www.emulex.com

Emulex Connects™ Servers, Storage and People

twitter.com/emulex [friendfeed.com/emulex](https://www.facebook.com/emulex) [bit.ly/emulexlinks](https://www.linkedin.com/company/emulex) [bit.ly/emulexfb](https://www.youtube.com/channel/UC...)

©2012 Emulex, Inc. All rights reserved. This document refers to various companies and products by their trade names. In most, if not all cases, their respective companies claim these designations as trademarks or registered trademarks. This information is provided for reference only. Although this information is believed to be accurate and reliable at the time of publication, Emulex assumes no responsibility for errors or omissions. Emulex reserves the right to make changes or corrections without notice. This report is the property of Emulex and may not be duplicated without permission from the Company.