

## Emulex Features & Benefits:

- Flexible firmware-based architecture for high availability
  - Perfect for large-scale deployments thanks to the common driver architecture and unique features including the ability to update firmware without downtime.
- Integrated into all IBM server platforms
  - Emulex is the only HBA that is available across all IBM platforms (IBM System x and IBM BladeCenter® included) enabling the customer to use a common management interface regardless of the server brand.
- Leader in Virtualisation
  - Emulex technology is integrated into IBM zSeries, VMware ESX Server 2.5.x and 3.0 and supports Microsoft Virtual Server Manager through Emulex VMPilot™ Virtual HBA Software.
- First to Market with NPIV
  - Jointly developed with IBM, Emulex is the first to market with support for industry-standard N-Port ID Virtualisation (NPIV) which will be integrated into the upcoming VMware ESX Server release.
- Simple to deploy
  - Emulex AutoPilot Installer® is integrated into IBM Remote Deployment Manager and enables the HBA, switch and storage to be set up in just seven clicks.

## Drivers, Datasheets and White Papers:

### IBM URL Links:

- HBA interoperability search tool: [www-03.ibm.com/servers/storage/support/config/hba/index.wss](http://www-03.ibm.com/servers/storage/support/config/hba/index.wss)
- Configurator Tools: [www-03.ibm.com/servers/eserver/xseries/library/configtools.html](http://www-03.ibm.com/servers/eserver/xseries/library/configtools.html)
- Server Proven - Shared Storage Adapters: [www-03.ibm.com/servers/eserver/serverproven/compat/us/xseries/sharedstorage/samatrix.html](http://www-03.ibm.com/servers/eserver/serverproven/compat/us/xseries/sharedstorage/samatrix.html)

### Emulex URL Links:

- Driver Matrix: <http://www.emulex.com/ibm/support/index.jsp>
- Firmware and Bootcode for Standard Adapters: [www.emulex.com/ibm/support/firmware.jsp](http://www.emulex.com/ibm/support/firmware.jsp)

### White Papers, news, articles and datasheets:

- OEM Site: [www.emulex.com/ibm](http://www.emulex.com/ibm)
- IBM HBA Datasheet: [www.emulex.com/ibm/ibmqualified\\_ds11.pdf](http://www.emulex.com/ibm/ibmqualified_ds11.pdf)
- IBM DS3400 Simple SAN Express Kit: [www.emulex.com/ibm/ds3400/index.jsp](http://www.emulex.com/ibm/ds3400/index.jsp)
- Whitepaper: Enabling Emulex Boot from SAN on IBM BladeCenter: [www.emulex.com/white/hba/enabling\\_boot\\_ibm.pdf](http://www.emulex.com/white/hba/enabling_boot_ibm.pdf)
- Whitepapers: [www.emulex.com/white/index.jsp](http://www.emulex.com/white/index.jsp)

## Emulex Advantages:

### Superior Performance

- 78% greater throughput than competitor (see graph below)
- 36% greater database IOPS
- Better multi-port scalability

### Simple Manageability

- HBAnyware® streamlines HBA management with a centralised, secure management solution
- HBAnyware integration with IBM Director provides efficient administration via for HBAs on local and remote SANs

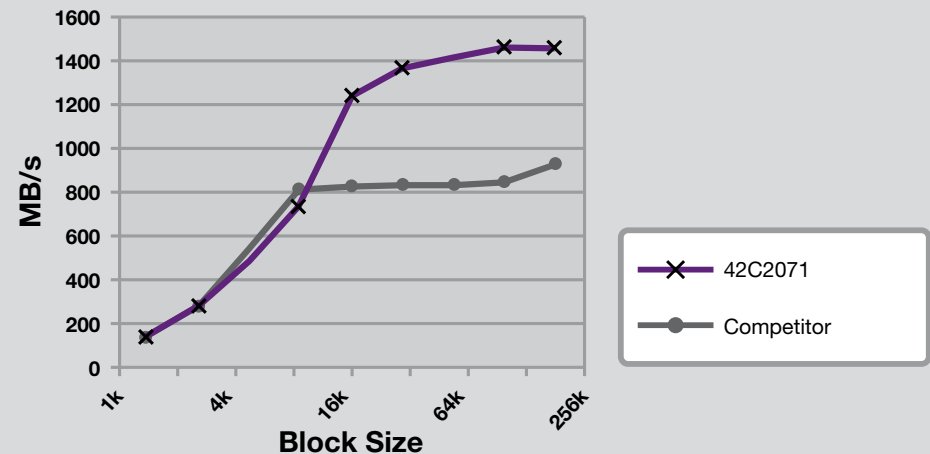
### Higher Availability

- Industry's most reliable HBA based on actual field return data
- 100% higher reliability over nearest competitor
- Emulex MTBF is 5.8 million hours

## Need More Reasons?

[www.emulex.com/white/hba/fact.pdf](http://www.emulex.com/white/hba/fact.pdf)

## Dual Port Throughput



## IBM Cross Reference Chart

IBM-branded 4Gb/s Fibre Channel Host Bus Adapters (IBM Server Proven Validation)						
IBM System x Server	Server Slot Capacity	System Bus	Number of Channels	IBM Part Number	Emulex Part Number	Operating System
x3250, x3455 <sup>A</sup>	2	PCIe	Single-Channel	42C2069	LPe11000	Windows 2003 Server, Windows NT, Linux, NetWare, VMware
			Dual-Channel	40C2071	LPe11002	
x3500	3	PCIe	Single-Channel	42C2069	LPe11000	
			Dual-Channel	42C2071	LPe11002	
	2	PCI-X	Single-Channel	42D0405	LP11000	
			Dual-Channel	42D0407	LP11002	
x3550 <sup>B</sup>	4	PCIe	Single-Channel	42C2069	LPe11000	
			Dual-Channel	42C2071	LPe11002	
	3	PCI-X	Single-Channel	42D0405	LP11000	
			Dual-Channel	42D0407	LP11002	
x3650 <sup>C</sup>	4	PCIe	Single-Channel	42C2069	LPe11000	
			Dual-Channel	42C2071	LPe11002	
x3655	3	PCIe	Single-Channel	42C2069	LPe11000	
			Dual-Channel	42C2071	LPe11002	
x3755, x3800 <sup>D</sup> , x3850	4	PCIe	Single-Channel	42C2069	LPe11000	
			Dual-Channel	42C2071	LPe11002	
	2	PCI-X	Single-Channel	42D0405	LPe11000	
			Dual-Channel	42D0407	LPe11002	
x3950	6	PCI-X	Single-Channel	42D0405	LPe11000	
			Dual-Channel	42D0407	LPe11002	
IBM BladeCenter Expansion Card: HS20 (8843/7955), HS21 (8853/7955), JS21 (8844), LS20 (8850), LS21 (7971), LS41 (7972)	1	PCI-X	Dual-Channel	39Y9186	N/A	
IBM BladeCenter CFFv expansion card HS21 (8853/7955), LS21 (7971), LS41 (7972)	1	PCI-X	Dual-Channel	43W6859	N/A	

IBM: DS3000, DS4000, DS6000, DS8000F, EMC: Symmetrix, CLARiON

### Notes

- A x3455: Only (1) PCIe HBA can be installed if the HTx card is installed
- B x3550: PCI-X slots are optional
- C x3650: This system can be configured with (4) PCIe slots or (2) Pci-X and (2) PCIe slots depending on riser card configuration.
- D x3800: If client adds optional rise carder, they will add (2) Pci-X slots and eliminate (2) of the existing PCIe slots
- E Emulex recommends checking the IBM Server Products site for the latest information on operating system support.
- F See IBM Storage interoperability guides for details
- G See EMC Support Matrix <http://www.emc.com/interoperability/matrices/EMCSupportMatrix.pdf> for details

Find your magic number



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## IBM DS3400 Simple SAN Express Kits. Install in minutes; provisions in seconds.

IBM Deploys Microsoft Designated "Simple SAN Solution" Utilising Emulex HBAs and EZPilot Software with Brocade Switches

See <http://www.emulex.com/ibm/ds3400/ds.pdf> for more details

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