

# EMC Symmetrix DMX2000

## Open Systems and Mainframe Specifications

### Sample Configuration Data

#### 73GB Drives

Addressable Drives	SRDF Usable Capacity (GB)*		Addressable Drives	Mirrored Usable Capacity (GB)*		Maximum Global Memory (GB)**
	Open	Mainframe		Open	Mainframe	
96	7,017	6,928	48	3,508	3,464	128
128	9,356	9,237	64	4,678	4,618	128
144	10,562	10,392	72	5,263	5,196	128
192	14,035	13,856	96	7,017	6,928	128
288	21,052	20,784	144	10,526	10,392	128

Addressable Drives	Parity RAID (3+1) Usable Capacity (GB)*		Addressable Drives	Parity RAID (7+1) Usable Capacity (GB)*		Maximum Global Memory (GB)**
	Open	Mainframe		Open	Mainframe	
72	5,263	5,196	84	6,140	6,062	128
96	7,017	6,928	112	8,187	8,083	128
108	7,894	7,794	126	9,210	9,093	128
144	10,526	10,392	168	12,280	12,124	128
216	15,789	15,588	252	18,421	18,186	128

#### 146GB Drives

Addressable Drives	SRDF Usable Capacity (GB)*		Addressable Drives	Mirrored Usable Capacity (GB)*		Maximum Global Memory (GB)**
	Open	Mainframe		Open	Mainframe	
96	14,016	13,881	48	7,008	6,941	128
128	18,688	18,508	64	9,344	9,254	128
144	21,024	20,822	72	10,512	10,411	128
192	28,032	27,763	96	14,016	13,881	128
288	42,048	41,644	144	21,024	20,822	128

Addressable Drives	Parity RAID (3+1) Usable Capacity (GB)*		Addressable Drives	Parity RAID (7+1) Usable Capacity (GB)*		Maximum Global Memory (GB)**
	Open	Mainframe		Open	Mainframe	
72	10,512	10,411	84	12,264	12,146	128
96	14,016	13,881	112	16,352	16,195	128
108	15,768	15,616	126	18,396	18,219	128
144	21,024	20,822	168	24,528	24,292	128
216	31,536	31,233	252	36,792	36,439	128

Configurations of mixed 73GB and 146GB disks are allowed.  
 Parity RAID 3+1 or 7+1 and RAID 1 (Mirroring) can coexist in the same system.  
 Parity RAID 3+1 and Parity 7+1 cannot coexist in the same system.  
 12GB of the total raw capacity will be reserved for internal Symmetrix File System use.  
 \*All capacities are based on 1GB=1,000,000,000 bytes.  
 \*\*Individual system global memory sizes are based upon specific configurations and customer requirements.

### Disk Drive Connectivity

Disk Directors	4
Total number of 2Gb Fibre Channel ports	32
Number of redundant 2Gb Fibre Channel loops	16
Disk Drives per redundant Fibre Channel loop	up to 18

### Host Connectivity

DMX2000	Open Systems		Mainframe	
	Min	Max	Min	Max
Fibre Channel Ports	16	96	-	-
Gigabit Ethernet Ports	4	48	-	-
iSCSI Ports	4	48	-	-
ESCON Ports	-	-	16	96
FICON Ports	-	-	8	48

Note: Mixed combinations of the above port types are supported.  
 Maximum supported ports and combinations are dependent upon application, host, and protocol configuration.  
 ESP software is required to run mainframe with open systems interfaces.

### Disk Emulation

DMX2000	Open Systems	3380K	3390-1	3390-2	3390-3	3390-9	3390-27
MB/Volume	30,720	1,891	946	1,892	2,838	8,514	27,845
Bytes/Track	32,768	47,476	56,66 4	56,66 4	56,66 4	56,66 4	56,664
Bytes/Cylinder	491,520	712,140	849,960	849,960	849,960	849,960	849,960
Cylinders/Volume	65,536	2,655	1,113	2,226	3,339	10,017	32,760



## Hyper-Volume Extension (HVE)

	Open Systems			Mainframe					
	2GB*	4GB*	9GB*	3380K*	3390-1	3390-2*	3390-3*	3390-9*	3390-27*
Emulation Mode*									
73GB Drives									
Maximum Complete Logical Volumes	36	18	8	36	75	37	25	8	2
146GB Drives									
Maximum Complete Logical Volumes	73	36	16	73	128	75	50	16	5

Hyper-Volume Extension provides the ability to configure a single physical disk device as multiple logical volumes in logical-to-physical relationships ranging from 1:1 to 128:1.

\* A single physical disk device can support multiple model types within a single data format emulation mode.

## Available Software\*

<b>Platform Software</b>	Double Checksum InfoMover SRDF/Data Mobility TimeFinder	SRDF/A EMC Snap ECRC	Enterprise Storage Platform (ESP) Symmetrix Remote Data Facility (SRDF) Symmetrix Data Migration Services (SDMS)
<b>Intelligent Supervision</b>	ControlCenter Automated Resource Manager ControlCenter StorageScope ControlCenter Symmetrix Manager ControlCenter Symmetrix Optimizer ControlCenter SAN Manager	ControlCenter SAN Architect ControlCenter AutoAdvice ControlCenter Common Array Manager ControlCenter Workload Analyzer ControlCenter Database Tuner	
<b>Information Safety</b>	EMC Data Manager (EDM) ControlCenter Symmetrix Data Mobility Manager CopyCross	EMC Replication Manager ControlCenter SRDF/TimeFinder Manager	
<b>Infrastructure Services</b>	GeoSpan Family ResourcePak for Windows	COMPAV/MA PowerPath	ResourcePak Base for OS/390 and z/OS ResourcePak Extended for OS/390 and z/OS

\* Contact your EMC sales representative for software license model numbers, prerequisites, and additional information.

## Interoperability Support

Symmetrix systems support all popular hardware and operating system platforms, storage area networks (SANs), and high-availability cluster environments. Refer to the EMC Support Matrix on EMC.com or contact your local EMC sales representative for specific configuration support.

## Physical Specifications\*

Height** (in/cm)	Width (in/cm)	Depth (in/cm)	Front Service Area (in/cm)	Rear Service Area (in/cm)
75.43/191.59	54.33/137.99	37.37/94.86	36.0/91.44	36.0/91.44

\*Values represent maximum figures for each configuration.

\*\*An additional 18 inches (45.7cm) is required for ceiling/top clearance.

## Weight\*

Physical Drives	96	128	144	192	288
Weight (lb/kg)	2,674/1,215	2,754/1,252	2,794/1,270	2,914/1,325	3,154/1,433

\*Values represent maximum figures for each configuration.

## Power and Cooling Data\*

Physical Drives	96	128	144	192	288
Power Consumption (kVA)	4.3	4.9	5.3	6.3	8.24
Heat Dissipation (Btu/hr)	15,964	18,332	19,523	23,075	30,201

\*Values represent maximum figures for each configuration.

## Power Specifications

	North America and International single-phase	North America and International 3-phase (Delta - 4 Wire)	International* 3-phase (Wye - 5 Wire)
Input Voltage (VAC)	200-240	200-240	200-240
Frequency (Hz)	47-63	47-63	47-63
Circuit Breaker (Amps), recommended	60	50	32
Power Drops	4	4	4
Power Connector	(4) 9P63U2T	(4) 9P54U2T	Country Specific
User Connector	(4) 9C63U2T	(4) 9C54U2T	Country Specific
Auto-Call Modem Requirements	North American installations require connection to a 110VAC power source at 60Hz through a NEMA 5-15R receptacle. International installations are country specific. * For higher voltage installations (380-415 VAC line to line) a 32 amp rated breaker is recommended.		

## Environmental Specifications (operating)

Temperature (°F/°C)	50-90°F/10-32°C
Altitude (ft/m), max.	8,000/2,500
Humidity (%), non-condensing	20-80
Raised Floor	Required

www.EMC.com



**EMC Corporation**  
Hopkinton  
Massachusetts  
01748-9103  
1-508-435-1000  
In North America 1-866-464-7381

EMC<sup>2</sup>, EMC, PowerPath, ResourcePak, and Symmetrix are registered trademarks and where information lives, EMC ControlCenter, AutoAdvice, Automated Resource Manager, GeoSpan, CopyCross, EDM, SAN Architect, SAN Manager, StorageScope, InfoMover, PowerPath, SDMS, SRDF, Symmetrix DMX, and TimeFinder are trademarks of EMC Corporation. Other trademarks are the property of their respective owners.

© 2002, 2003 EMC Corporation. All rights reserved. Produced in the USA. 9/03

Specification Sheet

C1004.3