



# 2330

## SPECIFICATION SHEET

Leading the way: Next-generation connectivity and flexibility.



spec

#### Built in Redundancy

- RAID 0, 1, 3, 5, 6, 10, 50
- Redundant, hot swap components
- AssuredSnap™ - Built-in snapshot capability
- AssuredCopy™ - Additional data protection with full volume copies
- Built-in schedule capability

#### Scalability and Performance

- Dual or single RAID controller or JBOD
- Utilizes existing Ethernet network infrastructures
- 1.7TB base capacity that scales to 112TB (utilizing 2TB SATA drives)
- OS Support - Windows, Linux, SuSE, Solaris
- Modular design protects your investment
- Enterprise-class features and functionality without the enterprise price

#### Environmentally Responsible / Lower TCO

- EcoStor™ - Economically and environmentally sound technologies
  - SimulCache™ - Low latency cache mirroring
  - Battery-free cache backup
  - DC power option
  - 1 terabyte energy saving drives
- RoHS-5 and WEEE compliant

The 2330 features a 12-drive array housed in a 2 rack-unit (2U) enclosure providing four 1Gb iSCSI interfaces to internal SAS or SATA-II disk drives. An internal SAS interface allows up to five disk enclosures (including the RAID enclosure) delivering a total of 56 drives. The 2330 adapts to a broad range of applications, and the capability to mix both SATA and SAS technology within a single disk enclosure provides an optimum tiered storage environment for Information Lifecycle Management.

#### Revolutionary connectivity, availability, quality and value

The 2330 uses revolutionary new SimulCache™ technology that instantly and simultaneously mirrors cache between RAID controllers, leading to significant performance improvements over traditional implementations. The use of RAID cache batteries has been completely eliminated with the introduction of super capacitors, providing infinite cache backup during a power loss while being environmentally friendly. AssuredSnap™ provides the 2330 with built-in volume snapshot capability allowing point-in-time copies that can be used to maximize business continuity. AssuredCopy™ creates a full volume copy (vs. a logical volume copy with AssuredSnap) providing additional protection against disk failure and eliminating application I/O contention when accessing the same data blocks.

#### Storage made easy

Easily configure and manage the 2330 with RAIDar, the intuitive Web Based Interface (WBI) which provides storage setup and monitoring without the need for host based software.

# 2330 iSCSI



# 2330 Specifications

## ■ GENERAL

|                                |                                   |
|--------------------------------|-----------------------------------|
| Product Family                 | 2000 Series                       |
| Product Type                   | RAID, JBOD                        |
| Chassis Configuration          | 2U                                |
| Disk Architecture              | 3Gb SAS/3Gb SATA-II               |
| Max Drives per Chassis         | 12 drives                         |
| Total Capacity                 | 1.7TB/56TB (with expansion trays) |
| Total Disks                    | 56                                |
| Mounting Options               | 19" Rack, Telco Rack, Rack tray   |
| Max Number of Chassis          | 5 (1 RAID and 4 JBOD)             |
| Max Capacity per Chassis       | 24TB (2TB SATA-II drives)         |
| Data Management Services (DMS) | AssuredSnap™, AssuredCopy™        |

## ■ PROTOCOLS AND STANDARDS

|                     |                           |
|---------------------|---------------------------|
| iSCSI (IETF)        | ICMP (RFC 792, 950, 1256) |
| IP (RFC, 894, 1092) | SCSI-2 and SCSI-3         |
| TCP (RFC 793)       | FC Channel                |

## ■ HOSTS

|                |  |
|----------------|--|
| Initiators     | All iSCSI compliant initiators                         |
| Interface Type | RJ-45  |
| External Ports | 2/4 iSCSI (Gigabit Ethernet)<br>Single/Dual Controller |

## ■ DRIVES

|                      |   |
|----------------------|---|
| Max Number of Drives | 56  |
| Drive Options        | 3Gb SAS 146GB 15K RPM<br>3Gb SAS 300GB 15K RPM<br>3Gb SAS 450GB 15K RPM<br>3Gb SATA-II 500GB 7200 RPM<br>3Gb SATA-II 750GB 7200 RPM<br>3Gb SATA-II 1TB 7200 RPM<br>3Gb SATA-II 1TB 5400 RPM<br>3Gb SATA-II 2TB 5400 RPM |

## ■ RAID

|                              |   |
|------------------------------|---|
| Levels Supported             | Non-RAID, 0,1,3,5,6,10, and 50                |
| RAID Type                    | Hardware                                      |
| Cache Memory                 | 512MB per controller                          |
| Cache Backup                 | Battery-free protection with super capacitors |
| Virtual disks per System     | 32  |
| Volumes per virtual disk     | 128   |
| Volumes per System           | 256   |
| Mirrored Cache               | Yes - SimulCache™                             |
| Super Capacitor Cache Backup | Yes   |
| Cache Backup to Flash        | Yes - Non-volatile                            |

## ■ MANAGEMENT

|                     |                                 |
|---------------------|---------------------------------|
| Interface Types     | Mini DB9 RS232, 10/100 Ethernet |
| Protocols Supported | SNMP, SSL, SSH, SMTP            |
| Management Consoles | WEB GUI, CLI                    |
| Management Software | RAIDar                          |

## ■ POWER REQUIREMENTS - AC

|                          |                                |
|--------------------------|--------------------------------|
| Input Power Requirements | 100-240VAC, 50/60 Hz, 4.5-1.9A |
| Max Input Power          | 475W maximum continuous        |
| Heat Dissipation         | 1622 BTU/hour                  |

## ■ POWER REQUIREMENTS - DC

|                  |                                 |
|------------------|---------------------------------|
| Voltage          | -39 to -72VDC, -48/-60V nominal |
| Max Input Power  | 500W maximum continuous         |
| Heat Dissipation | 1706 BTU/hour                   |

## ■ TEMPERATURE AND HUMIDITY RANGES

|                        |  |
|------------------------|--|
| Operating Temperature  | 41°F to 104°F (5°C to 40°C)  |
| Shipping Temperature   | -40°F to 158°F (-40°C to 70°C)<br>Note: Derate 2°C for every km, up to 3000 meters |
| Operating Humidity     | 10% to 90% RH @ 104°F (40°C), non-condensing                                       |
| Non-Operating Humidity | Up to 93% RH @ 104°F (40°C) non-condensing   |

## ■ DECLARED ACOUSTIC NOISE LEVELS

|                |                       |
|----------------|-----------------------|
| Sound Power    | <6.03B Sound Power    |
| Sound Pressure | <55dBA Sound Pressure |

## ■ SHOCK AND VIBRATION

|                            |   |
|----------------------------|---|
| Shock, Operational         | 5.0G, 10ms, half sine   |
| Shock, Non-Operational     | 15G 11ms, half sine   |
| Vibration, Operational     | 0.21Grms Random 5Hz to 500Hz<br>flat spectrum/feed forward  |
| Vibration, Non-Operational | 0.5G 1 octave/minute 5Hz to 500Hz to 5 Hz sine sweep<br>0.5Grms Random 20Hz to-1000Hz flat spectrum |

## ■ HIGH-AVAILABILITY FEATURES

|                                |     |
|--------------------------------|-----|
| Redundant Hot-Swap Controllers | Yes |
| Redundant Hot-Swap Disk        | Yes |
| Redundant Hot-Swap Fans        | Yes |
| Redundant Hot-Swap Power       | Yes |
| Dual Power Cords               | Yes |
| Hot Standby Spare              | Yes |
| Automatic Failover             | Yes |
| Multi-Path Support             | Yes |
| Snapshot w/AssuredSnap         | Yes |
| Volume Copy with AssuredCopy   | Yes |

## ■ REGULATORY

|                               |  |
|-------------------------------|--|
| Safety                        | UL 60950-1:2003 (USA)<br>CAN/CSA-C22.2 No.60950-1-03 (Canada)<br>EN 60950-1 :2001 + A11 (EU)<br>IEC 60950-1 :2001 (International)  |
| Electromagnetic Compatibility | CFR 47 Part 15 Subpart B (U.S.A., Class A)<br>ICES-003 Issue 4 (Canada, Class A)<br>EN 55022 :98 +A1 +A2 (EU, Class A)<br>EN61000-3-2:2000+A1,+A2,+A14 (Harmonics)<br>EN 61000-3-3 :2001 (Flicker)<br>EN 55024 :1998 +A1 (EU, Immunity)<br>CISPR 22 :2005 (International, Class A)<br>CISPR 24 :97 (International, Immunity) |
| RoHS and WEEE                 | RoHS-5 Compliance , China RoHS, WEEE   |
| Country Approvals             | Australia/New Zealand, Canada, China (PRC), European Union (EU), Germany (GS Mark), Japan, South Korea, Taiwan, United States  |

## ■ SUPPORT

|                                 |  |
|---------------------------------|--|
| Software Warranty               | 90 days                                      |
| Standard Hardware Warranty      | 3 years                                      |
| Environmental Monitoring        | SNMP, CLI, RAIDar, SMTP                      |
| Phone-home Capability           | Yes  |
| Remote Diagnostics              | Yes  |
| Non-disruptive Updates          | Yes  |
| Non-disruptive Volume Expansion | Yes for primary volumes and snapshot volumes |

## ■ PHYSICAL

|                                 |                      |
|---------------------------------|----------------------|
| Height                          | 3.5 Inches / 8.9cm   |
| Depth (excluding cables)        | 23.7 Inches / 60.2cm |
| Width                           | 17.6 Inches / 44.7cm |
| Chassis Weight                  | 44lbs. / 19.96kg     |
| Chassis (w/250GB drives) Weight | 65lbs. / 29.48kg     |