

DAS5200 SERIES DIRECT ATTACHED STORAGE

TECHNICAL SPECIFICATIONS

SECURITY SYSTEM

DIVISION – 28 ELECTRONIC SAFETY AND SECURITY

LEVEL 1__28 20 00 ELECTRONIC SURVEILLANCE

LEVEL 2__28 23 00 VIDEO SURVEILLANCE

LEVEL 3__28 23 19 DIGITAL VIDEO RECORDERS AND ANALOG RECORDING DEVICES

PART 2 – PRODUCTS

2.01 GENERAL

- A. All equipment and materials used shall be standard components that are regularly manufactured and used in the manufacturer's system.
- B. All systems and components shall have been thoroughly tested and proven in actual use.
- C. All systems and components shall be provided with the availability of a toll-free (U.S. and Canada), 24-hour technical assistance program (TAP) from the manufacturer. The TAP shall allow for immediate technical assistance for either the dealer/installer or the end user at no charge for as long as the product is installed.
- D. All systems and components shall be provided with a one-day turnaround repair express and 24-hour parts replacement. The repair and parts express shall be guaranteed by the manufacturer on warranty and nonwarranty items.

2.02 DIRECT ATTACHED STORAGE

- A. The direct attached storage shall utilize the SAS[®] standard to attach to a Pelco server. The direct attached storage shall support the same RAID level and performance as its host recorder.
- B. The direct attached storage shall offer up to 12 TB of raw storage capacity. Actual storage is based on the RAID level utilized and the characteristics of the server to which the direct attached storage is connected. Based on the host server's capability, up to seven direct attached storage units can be connected to the host recorder.
- C. The direct attached storage shall support the RAID level supported by the host server across 12 hard disk drives to eliminate downtime caused hard disk drive failures. The system shall be capable of supporting up to RAID 6, which can protect the data if up to 2 individual hard disk drives fail. In addition, during an error condition or array rebuild, it shall support the same recording, playback, and query performance as the recorder to which it is connected. It shall feature a hot drive swap that automatically rebuilds the RAID array when a new drive is installed.
- D. The direct attached storage shall use redundant power supplies to eliminate the power supply as a single point of failure. It shall also utilize redundant, hot-swappable fans to eliminate cooling fans as a single point of failure. All maintenance, including replacing failed hard disk drives, fans, or power supplies, shall be accomplished without the need to remove the unit from the rack or take it off line.
- E. The direct attached storage shall be capable of supporting a graceful shutdown if its host server supports the APC SmartUPS system.
- F. Diagnostics shall be systemized with the host recorder and reported to diagnostic monitoring consoles supported by the host server.

- G. The direct attached storage shall meet or exceed the following design and performance specifications.

2.03 POWER SPECIFICATIONS

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| A. Power Input | 100 to 240 VAC, 50/60 Hz, autoranging |
| B. Power Supply | Internal, dual-redundant, hot-swappable |
| C. Cord Type | 2 USA standard (117 VAC), 2 European standard (220 VAC), 2 UK standard (250 VAC), 2 Australian standard (250 VAC), or 2 Argentinian standard (250 VAC)
All, 3 prongs, molded connector
Note: Units shipped to China do not include power cords. |
| D. Power Consumption | <u>Operating Average</u>
1. 100 VAC 188 W, 1.91 A, 643 BTU/H
2. 115 VAC 191 W, 1.62 A, 653 BTU/H
3. 220 VAC 185 W, 0.94 A, 632 BTU/H |
| E. UPS | Compatible with APC Smart-UPS, managed through the host server |

2.04 ENVIRONMENTAL SPECIFICATIONS

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| A. Operating Temperature | 50° to 95°F (10° to 35°C) at unit air intake |
| B. Operating Humidity | 20% to 80%, noncondensing |
| C. Maximum Humidity Gradient | 10% per hour |
| D. Operating Altitude | -50 to 10,000 ft (-16 to 3,048 m) |
| E. Operating Vibration | 0.25 G at 3 Hz to 200 Hz at a sweep rate of 0.5 octave/minute |

Note: The temperature at the unit air intake can be significantly higher than room temperature. Temperature is affected by rack configuration, floor layout, air conditioning strategy, and other issues. To prevent hard disk drive failure and unit damage, make sure the temperature at the air intake of the unit is continuously within the operating temperature range.

2.05 PHYSICAL SPECIFICATIONS

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| A. Construction | Steel cabinet |
| B. Finish | |
| 1. Front Panel | Gray metallic with black end caps |
| 2. Chassis | Black matte finish |
| C. Dimensions | |
| 1. Without Rails | 24.3" D x 17.0" W x 5.2" H
(61.8 x 43.2 x 13.2 cm) |
| 2. With Rails | 24.7" D x 19.0" W x 5.2" H
(62.70 x 48.26 x 13.20 cm) |
| D. Unit Weight | |
| 1. Empty (no storage drives) | 42.8 lb (19 kg) |
| 2. Fully Equipped (12 drives) | 63.2 lb (29 kg) |
| E. Mounting | Desktop (feet);
Rack, 3 RU per unit (Rack rails and hardware provided) |

2.06 SYSTEM SPECIFICATIONS

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| A. Storage | |
| 1. Raw Storage | Up to 12 TB |
| 2. Total Capacity | Depending on the capability of the server, up to seven DAS5200s can be added to a Pelco recorder for up to an additional 84 TB of storage expansion. |
| 2. Interface | SAS/SATA II hot-swappable |
| 3. RAID Level | JBOD, RAID 5, or RAID 6 (dependent upon host server) |
| B. Direct Attach Connection | |
| 1. Interface | 1 Mini-SAS cable (1 m) |
| C. Front Panel Indicators/Functions | |
| 1. Power | Blue Pelco badge |
| 2. Software Status | Green, amber, red |
| 3. Unit Status | Green, amber, red |
| 4. Individual Drive Status | Green, red |
| 5. Power Button | On, Off |

2.07 CERTIFICATIONS

- A. CE, Class A
- B. FCC, Class A
- C. UL/cUL Listed
- D. C-Tick
- E. S Mark for Argentina*
- F. CCC*

* At the time of this printing, these certifications are pending. Please consult the factory, our Web site (www.pelco.com), or the most recent B.O.S.S.® update for certification status.

2.08 STANDARDS/ORGANIZATIONS

- A. Pelco is a member of the MPEG-4 Industry Forum
- B. Pelco is a member of the Universal Plug and Play (UPnP) Forum
- C. Pelco is a member of the Universal Serial Bus (USB) Implementers Forum
- D. Pelco is a contributor to the International Standards for Organization/Electrotechnical Commission (ISO/IEC) Joint Technical Committee 1 (JTC1), "Information Technology," Subcommittee 29, Working Group 11
- E. Compliance with ISO/IEC 14496 standard (also known as MPEG-4)
- F. Compliant with International Telecommunication Union (ITU) Recommendation G.711, "Pulse Code Modulation (PCM) of Voice Frequencies"

2.09 WARRANTY

- A. 3 years, parts and labor

2.10 PELCO MODEL NUMBERS

The DAS5200 Series provides for direct attached storage expansion for a variety of servers developed by Pelco. Utilizing enterprise-class SAS technology, up to seven DAS5200s can be added to a given server to suit the retention requirements of the application (based on the capability of the host server). These units (depending on model) offer 3 TB to 12 TB of raw storage capacity. Consult the appropriate server's specification for the raw storage utilization.

A. DAS5200-03-US	Direct attached storage module, 3 TB storage, for use in North America
B. DAS 5200-06-US	Direct attached storage module, 6 TB storage, for use in North America
C. DAS5200-09-US	Direct attached storage module, 9 TB storage, for use in North America
D. DAS5200-12-US	Direct attached storage module, 12 TB storage, for us in North America
E. DAS5200-03-EU	Direct attached storage module, 3 TB storage, for use in the European Union
F. DAS5200-06-EU	Direct attached storage module, 6 TB storage, for use in the European Union
G. DAS5200-09-EU	Direct attached storage module, 9 TB storage, for use in the European Union
H. DAS5200-12-EU	Direct attached storage module, 12 TB storage, for use in the European Union
I. DAS5200-03-UK	Direct attached storage module, 3 TB storage, for use in the United Kingdom
J. DAS5200-06-UK	Direct attached storage module, 6 TB storage, for use in the United Kingdom
K. DAS5200-09-UK	Direct attached storage module, 9 TB storage, for use in the United Kingdom
L. DAS5200-12-UK	Direct attached storage module, 12 TB storage, for use in the United Kingdom
M. DAS5200-03-CN	Direct attached storage module, 3 TB storage, for use in China
N. DAS5200-06-CN	Direct attached storage module, 6 TB storage, for use in China
O. DAS5200-09-CN	Direct attached storage module, 9 TB storage, for use in China
P. DAS5200-12-CN	Direct attached storage module, 12 TB storage, for use in China
Q. DAS5200-03-AU	Direct attached storage module, 3 TB storage, for use in Australia
R. DAS5200-06-AU	Direct attached storage module r, 6 TB storage, for use in Australia
S. DAS5200-09-AU	Direct attached storage module, 9 TB storage, for use in Australia
T. DAS5200-12-AU	Direct attached storage module, 12 TB storage, for use in Australia
U. DAS5200-03-AR	Direct attached storage module, 3 TB storage, for use in Argentina
V. DAS5200-06-AR	Direct attached storage module, 6 TB storage, for use in Argentina
W. DAS5200-09-AR	Direct attached storage module, 9 TB storage, for use in Argentina
X. DAS5200-12-AR	Direct attached storage module, 12 TB storage, for use in Argentina

2.11 SUPPLIED ACCESSORIES

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| A. Power Cords | 2 power cords (based on country designation) |
| B. Rack Mount Kit | Brackets, rails, and hardware |
| C. Hard Drive Carriers | 12 (all filled) |

2.12 OPTIONAL PELCO MODELS

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| A. NSM5200-PS | Replacement power supply for NSM5200 and DAS5200 Series units |
| B. DAS5200-FAN | Replacement system fan |
| C. HD5200-250 | Replacement 250 GB drive and carrier |
| D. HD5200-500 | Replacement 500 GB drive and carrier |
| E. HD5200-750 | Replacement 750 GB drive and carrier |
| F. HD5200-1TB | Replacement 1 TB drive and carrier |

(Revised, 5/29/09)