

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 IP VIDEO MANAGEMENT SYSTEM

- A. EnduraXpress™ shall record video and audio streams from IP cameras and video encoders on the network.
- B. EnduraXpress shall incorporate the server functions and storage elements into a single, purpose-built chassis.
- C. EnduraXpress shall use RAID 6 parity across the storage drives to protect recorded data against a hard disk drive failure.
- D. EnduraXpress shall only use enterprise-level hard disk drives specifically rated for operation in RAID systems.
- E. EnduraXpress chassis shall be designed for video surveillance recording applications and encompass redundancy at all vital points:
 - Redundant, hot swappable power supply modules
 - Redundant, hot swappable system fans
 - Hot swappable O/S drive
 - Hot swappable rear chassis fans
- F. EnduraXpress chassis shall be designed for online service and maintenance and cannot be removed from the rack when hard disk drives, fans, power supplies, or operating system drives must be replaced.
- G. EnduraXpress shall offer an optional dual-path fibre channel card to support single and redundant connections to fibre channel-enabled external storage systems for increased retention times.

- H. EnduraXpress shall be built upon a reliable and robust Linux® operating system.
- I. EnduraXpress shall support a guaranteed recording throughput of 250 Mbps per storage device with a minimum of 64 Mbps of read throughput. This throughput shall be guaranteed under normal and error (RAID rebuild) conditions.
- J. EnduraXpress shall support up to 32 or 64 cameras or 250 Mbps of recording throughput, whichever is reached first.
- K. EnduraXpress shall support the recording of MPEG-4 and H.264 baseline, main, and high profile streams from standard resolution and megapixel cameras.
- L. EnduraXpress shall support continuous, scheduled, alarm/event (including analytics alarms), motion, and manual recording. Pre- and post-alarm periods shall be configurable up to the total capacity of the system.
- M. EnduraXpress shall support bookmarking and locking/unlocking of video content on the drives.
- N. EnduraXpress shall support privacy tools that allow administrators to establish maximum retention times for normal, alarm, and locked video.
- O. EnduraXpress shall support an intelligent video grooming protocol that can reduce the frame rate of recorded video as the video ages. Administrators shall have the flexibility to determine whether to groom alarm video or leave it at its real-time level.
- P. EnduraXpress shall have the ability to report all diagnostic events, including software status diagnostics to a centralized user interface. In addition, Simple Network Management Protocol (SNMP) traps shall be available for monitoring through a third-party SNMP management console.
- Q. EnduraXpress shall be fully managed from a remote workstation, including the ability to configure settings and update firmware and software.
- R. EnduraXpress shall be capable of interfacing with the APC® Smart-UPS® using a USB connector. The network video recorder shall receive status and control signals from the uninterruptible power supply (UPS) when it is in backup mode. This function shall inform the operator about the amount of charge remaining and trigger a controlled shutdown when the charge becomes zero.
- S. EnduraXpress shall display live and recorded video on a separate personal computer with the supplied client installed.
- T. EnduraXpress client shall provide for full administrative capability of the unit from across a network.
- U. EnduraXpress client shall display MPEG-4, H.264 baseline, main, or high-profile streams.
- V. EnduraXpress client shall support Zone of Interest to allow zooming into a specific region of a camera's field of view while maintaining a full view of the scene.

- W. EnduraXpress client shall utilize an intelligent frame rate and resolution management capability that will automatically switch to a lower resolution, lower bit-rate stream based on monitor configuration to reduce CPU processing requirements and network bandwidth consumption.
- X. EnduraXpress client shall support searching for recorded video based on time/date, camera, event, or alarm. Instant playback shall also be supported. Playback and live video can be displayed simultaneously on the same monitor.
- Y. EnduraXpress shall guarantee the evidentiary worth of video by digitally signing frames of video at the IP camera or encoder. Systems that only authenticate video at the point of export shall be prohibited.
- Z. EnduraXpress 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. Cable Type | 2 USA standard (117 VAC);
2 European (220 VAC);
2 United Kingdom (250 VAC);
2 Argentinian (250 VAC); or
2 Australian (250 VAC);
All, 3 prongs, molded connector |
| D. Power Consumption | Operating Average |
| 1. 100 VAC | 262 W, 2.65 A, 895 BTU/H |
| 2. 115 VAC | 263 W, 2.31 A, 895 BTU/H |
| 3. 220 VAC | 254 W, 1.25 A, 868 BTU/H |
| E. UPS | Compatible with APC Smart-UPS, managed through the Endura® product architecture |

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 to 200 Hz at a sweep rate of 0.5 octave/minute |

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
(62.7 x 48.26 x 13.2 cm) |

- D. Unit Weight
 - 1. Empty (no storage drives) 46 lb (21 kg)
 - 2. Fully Equipped (12 drives) 67 lb (30 kg)
- E. Mounting
 - Desktop (feet);
 - Rack, 3 RU per unit
 - (Rack rails and hardware are supplied)

2.06 SYSTEM SPECIFICATIONS

- A. System
 - 1. System Drive Linux
 - 2. RAID Level RAID 6
 - 3. Effective Capacity Up to 18.1 TB
 - 4. Drive Interface SAS/SATA
- B. Auxiliary Interfaces
 - 1. USB 2.0 2 USB 2.0 ports on rear panel;
1 USB 2.0 port on front panel
- C. Front Panel Indicators/Functions
 - 1. Power Blue Pelco badge
 - 2. Software Status Green, Amber Red (based on diagnostics)
 - 3. Ethernet Port1 Green, Red
 - 4. Ethernet Port 2 Reserved
 - 5. Hardware Status Green, amber, red
 - 6. Hard Drive Status Green, red

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

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

EnduraXpress is capable of a maximum of 250 Mbps of throughput for incoming streams while delivering 32 simultaneous playback streams when failover is not implemented. This performance is maintained whether the system is operating under normal conditions, dealing with disk drive errors, or rebuilding the RAID array. These units (depending on the model) offer 3 TB to 24 TB of storage.

A. EE532-03-US	EnduraXpress, 3 TB storage, for use in North America
B. EE532-06-US	EnduraXpress, 6 TB storage, for use in North America
C. EE532-09-US	EnduraXpress, 9 TB storage, for use in North America
D. EE532-12-US	EnduraXpress, 12 TB storage, for use in North America
E. EE532-24-US	EnduraXpress, 24 TB storage, for use in North America
F. EE532-03-EU	EnduraXpress, 3 TB storage, for use in the European Union
G. EE532-06-EU	EnduraXpress, 6 TB storage, for use in the European Union
H. EE532-09-EU	EnduraXpress, 9 TB storage, for use in the European Union
I. EE532-12-EU	EnduraXpress, 12 TB storage, for use in the European Union
J. EE532-24-EU	EnduraXpress, 24 TB storage, for use in the European Union
K. EE532-03-UK	EnduraXpress, 3 TB storage, for use in the United Kingdom
L. EE532-06-UK	EnduraXpress, 6 TB storage, for use in the United Kingdom
M. EE532-09-UK	EnduraXpress, 9 TB storage, for use in the United Kingdom
N. EE532-12-UK	EnduraXpress, 12 TB storage, for use in the United Kingdom
O. EE532-24-UK	EnduraXpress, 24 TB storage, for use in the United Kingdom
P. EE532-03-CN	EnduraXpress, 3 TB storage, for use in China
Q. EE532-06-CN	EnduraXpress, 6 TB storage, for use in China
R. EE532-09-CN	EnduraXpress, 9 TB storage, for use in China
S. EE532-12-CN	EnduraXpress, 12 TB storage, for use in China
T. EE532-24-CN	EnduraXpress, 24 TB storage, for use in China
U. EE532-03-AU	EnduraXpress, 3 TB storage, for use in Australia
V. EE532-06-AU	EnduraXpress, 6 TB storage, for use in Australia
W. EE532-09-AU	EnduraXpress, 9 TB storage, for use in Australia
X. EE532-12-AU	EnduraXpress, 12 TB storage, for use in Australia
Y. EE532-24-AU	EnduraXpress, 24 TB storage, for use in Australia
Z. EE532-03-AR	EnduraXpress, 3 TB storage, for use in Argentina

AA. EE532-06-AR	EnduraXpress, 6 TB storage, for use in Argentina
AB. EE532-09-AR	EnduraXpress, 9 TB storage, for use in Argentina
AC. EE532-12-AR	EnduraXpress, 12 TB storage, for use in Argentina
AD. EE532-24-AR	EnduraXpress, 24 TB storage, for use in Argentina
AE. EE564-03-US	EnduraXpress, 3 TB storage, for use in North America
AF. EE564-06-US	EnduraXpress, 6 TB storage, for use in North America
AG. EE564-09-US	EnduraXpress, 9 TB storage, for use in North America
AH. EE564-12-US	EnduraXpress, 12 TB storage, for use in North America
AI. EE564-24-US	EnduraXpress, 24 TB storage, for use in North America
AJ. EE564-03-EU	EnduraXpress, 3 TB storage, for use in the European Union
AK. EE564-06-EU	EnduraXpress, 6 TB storage, for use in the European Union
AL. EE564-09-EU	EnduraXpress, 9 TB storage, for use in the European Union
AM. EE564-12-EU	EnduraXpress, 12 TB storage, for use in the European Union
AN. EE564-24-EU	EnduraXpress, 24 TB storage, for use in the European Union
AO. EE564-03-UK	EnduraXpress, 3 TB storage, for use in the United Kingdom
AP. EE564-06-UK	EnduraXpress, 6 TB storage, for use in the United Kingdom
AQ. EE564-09-UK	EnduraXpress, 9 TB storage, for use in the United Kingdom
AR. EE564-12-UK	EnduraXpress, 12 TB storage, for use in the United Kingdom
AS. EE564-24-UK	EnduraXpress, 24 TB storage, for use in the United Kingdom
AT. EE564-03-CN	EnduraXpress, 3 TB storage, for use in China
AU. EE564-06-CN	EnduraXpress, 6 TB storage, for use in China
AV. EE564-09-CN	EnduraXpress, 9 TB storage, for use in China
AW. EE564-12-CN	EnduraXpress, 12 TB storage, for use in China
AX. EE564-24-CN	EnduraXpress, 24 TB storage, for use in China
AY. EE564-03-AU	EnduraXpress, 3 TB storage, for use in Australia
AZ. EE564-06-AU	EnduraXpress, 6 TB storage, for use in Australia
BA. EE564-09-AU	EnduraXpress, 9 TB storage, for use in Australia
BB. EE564-12-AU	EnduraXpress, 12 TB storage, for use in Australia
BC. EE564-24-AU	EnduraXpress, 24 TB storage, for use in Australia
BD. EE564-03-AR	EnduraXpress, 3 TB storage, for use in Argentina

BE. EE564-06-AR	EnduraXpress, 6 TB storage, for use in Argentina
BF. EE564-09-AR	EnduraXpress, 9 TB storage, for use in Argentina
BG. EE564-12-AR	EnduraXpress, 12 TB storage, for use in Argentina
BH. EE564-24-AR	EnduraXpress, 24 TB storage, for use in Argentina
BI. EE532F-03-US	EnduraXpress, 3 TB storage, for use in North America; optional fibre channel expander
BJ. EE532F-06-US	EnduraXpress, 6 TB storage, for use in North America; optional fibre channel expander
BK. EE532F-09-US	EnduraXpress, 9 TB storage, for use in North America; optional fibre channel expander
BL. EE532F-12-US	EnduraXpress, 12 TB storage, for use in North America; optional fibre channel expander
BM. EE532F-24-US	EnduraXpress, 24 TB storage, for use in North America; optional fibre channel expander
BN. EE532F-03-EU	EnduraXpress, 3 TB storage, for use in the European Union; optional fibre channel expander
BO. EE532F-06-EU	EnduraXpress, 6 TB storage, for use in the European Union; optional fibre channel expander
BP. EE532F-09-EU	EnduraXpress, 9 TB storage, for use in the European Union; optional fibre channel expander
BQ. EE532F-12-EU	EnduraXpress, 12 TB storage, for use in the European Union; optional fibre channel expander
BR. EE532F-24-EU	EnduraXpress, 24 TB storage, for use in the European Union; optional fibre channel expander
BS. EE532F-03-UK	EnduraXpress, 3 TB storage, for use in the United Kingdom; optional fibre channel expander
BT. EE532F-06-UK	EnduraXpress, 6 TB storage, for use in the United Kingdom; optional fibre channel expander
BU. EE532F-09-UK	EnduraXpress, 9 TB storage, for use in the United Kingdom; optional fibre channel expander
BV. EE532F-12-UK	EnduraXpress, 12 TB storage, for use in the United Kingdom; optional fibre channel expander
BW. EE532F-24-UK	EnduraXpress, 24 TB storage, for use in the United Kingdom; optional fibre channel expander
BX. EE532F-03-CN	EnduraXpress, 3 TB storage, for use in China; optional fibre channel expander
BY. EE532F-06-CN	EnduraXpress, 6 TB storage, for use in China; optional fibre channel expander

BZ. EE532F-09-CN	EnduraXpress, 9 TB storage, for use in China; optional fibre channel expander
CA. EE532F-12-CN	EnduraXpress, 12 TB storage, for use in China; optional fibre channel expander
CB. EE532F-24-CN	EnduraXpress, 24 TB storage, for use in China; optional fibre channel expander
CC. EE532F-03-AU	EnduraXpress, 3 TB storage, for use in Australia; optional fibre channel expander
CD. EE532F-06-AU	EnduraXpress, 6 TB storage, for use in Australia; optional fibre channel expander
CE. EE532F-09-AU	EnduraXpress, 9 TB storage, for use in Australia; optional fibre channel expander
CF. EE532F-12-AU	EnduraXpress, 12 TB storage, for use in Australia; optional fibre channel expander
CG. EE532F-24-AU	EnduraXpress, 24 TB storage, for use in Australia; optional fibre channel expander
CH. EE532F-03-AR	EnduraXpress, 3 TB storage, for use in Argentina; optional fibre channel expander
CI. EE532F-06-AR	EnduraXpress, 6 TB storage, for use in Argentina; optional fibre channel expander
CJ. EE532F-09-AR	EnduraXpress, 9 TB storage, for use in Argentina; optional fibre channel expander
CK. EE532F-12-AR	EnduraXpress, 12 TB storage, for use in Argentina; optional fibre channel expander
CL. EE532F-24-AR	EnduraXpress, 24 TB storage, for use in Argentina; optional fibre channel expander
CM. EE564F-03-US	EnduraXpress, 3 TB storage, for use in North America; optional fibre channel expander
CN. EE564F-06-US	EnduraXpress, 6 TB storage, for use in North America; optional fibre channel expander
CO. EE564F-09-US	EnduraXpress, 9 TB storage, for use in North America; optional fibre channel expander
CP. EE564F-12-US	EnduraXpress, 12 TB storage, for use in North America; optional fibre channel expander
CQ. EE564F-24-US	EnduraXpress, 24 TB storage, for use in North America; optional fibre channel expander
CR. EE564F-03-EU	EnduraXpress, 3 TB storage, for use in the European Union; fibre channel expander
CS. EE564F-06-EU	EnduraXpress, 6 TB storage, for use in the European Union; optional fibre channel expander
CT. EE564F-09-EU	EnduraXpress, 9 TB storage, for use in the European Union; optional fibre channel expander
CU. EE564F-12-EU	EnduraXpress, 12 TB storage, for use in the European Union; optional fibre channel expander
CV. EE564F-24-EU	EnduraXpress, 24 TB storage, for use in the European Union; optional fibre channel expander

CW.EE564F-03-UK	EnduraXpress, 3 TB storage, for use in the United Kingdom; optional fibre channel expander
CX.EE564F-06-UK	EnduraXpress, 6 TB storage, for use in the United Kingdom; optional fibre channel expander
CY. EE564F-09-UK	EnduraXpress, 9 TB storage, for use in the United Kingdom; optional fibre channel expander
CZ. EE564F-12-UK	EnduraXpress, 12 TB storage, for use in the United Kingdom; optional fibre channel expander
DA. EE564F-24-UK	EnduraXpress, 24 TB storage, for use in the United Kingdom; optional fibre channel expander
DB. EE564F-03-CN	EnduraXpress, 3 TB storage, for use in China; optional fibre channel expander
DC. EE564F-06-CN	EnduraXpress, 6 TB storage, for use in China; optional fibre channel expander
DD. EE564F-09-CN	EnduraXpress, 9 TB storage, for use in China; optional fibre channel expander
DE. EE564F-12-CN	EnduraXpress, 12 TB storage, for use in China; optional fibre channel expander
DF. EE564F-24-CN	EnduraXpress, 24 TB storage, for use in China; optional fibre channel expander
DG. EE564F-03-AU	EnduraXpress, 3 TB storage, for use in Australia; optional fibre channel expander
DH. EE564F-06-AU	EnduraXpress, 6 TB storage, for use in Australia; optional fibre channel expander
DI. EE564F-09-AU	EnduraXpress, 9 TB storage, for use in Australia; optional fibre channel expander
DJ. EE564F-12-AU	EnduraXpress, 12 TB storage, for use in Australia; optional fibre channel expander
DK. EE564F-24-AU	EnduraXpress, 24 TB storage, for use in Australia; optional fibre channel expander
DL. EE564F-03-AR	EnduraXpress, 3 TB storage, for use in Argentina; optional fibre channel expander
DM. EE564F-06-AR	EnduraXpress, 6 TB storage, for use in Argentina; optional fibre channel expander
DN. EE564F-09-AR	EnduraXpress, 9 TB storage, for use in Argentina; optional fibre channel expander
DO. EE564F-12-AR	EnduraXpress, 12 TB storage, for use in Argentina; optional fibre channel expander
DP. EE564F-24-AR	EnduraXpress, 24 TB storage, for use in Argentina; optional fibre channel expander

2.11 SUPPLIED ACCESSORIES

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|------------------------|---|
| A. Power Cords | 2 power cords (based on country designation)
NOTE: Units shipped to China do not include power cords. |
| 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 module |
| B. NSM5200-FAN | Replacement system fan (upper-middle) |
| C. NSM5200-FANB | Replacement rear chassis fan (rear panel) |
| D. NSM5200-FC | Fibre channel expansion |
| E. HD5200-250 | Replacement 250 GB hard drive and carrier |
| F. HD5200-500 | Replacement 500 GB hard drive and carrier |
| G. HD5200-750 | Replacement 750 GB hard drive and carrier |
| H. HD5200-1000 | Replacement 1 TB hard drive and carrier |
| I. HD5200-2000 | Replacement 2 TB hard drive and carrier |

(Revised, 03/24/10)