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Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, based on *MasterFormat 2004* and *The Project Resource Manual—CSI Manual of Practice*. *The Manufacturer is responsible for technical accuracy. By removing the references to specific Salient Systems product names or part numbers, the text may also be used also in performance-based specifications.*

The section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the project and local building code. *Italicized Words and sentences within brackets [] are choices to include or exclude a particular item or statement.* Coordinate this section with other specification sections and the Drawings.

Section 28 23 23 Video Surveillance Systems Infrastructure

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Video surveillance servers.
- B. Related Sections
 - 1. Section 28 23 13 – Video Surveillance Control and Management Systems.
 - 2. Section 28 23 16 – Video Surveillance Monitoring and Supervisory Interfaces.
 - 3. Section 28 23 19 – Digital Video Recorders and Analog Recording Devices.
 - 4. Section 28 23 29 – Video Surveillance Remote Devices and Sensors

1.2 REFERENCES

- A. Underwriters Laboratories, Inc. (UL) (www.ul.com)
 - 1. UL 50 Enclosures for Electrical Equipment.
 - 2. UL 60950-1 Information Technology Equipment - Safety.

1.3 SUBMITTALS

- A. Submit under provisions of Section [01 33 00].
- B. Product Data:
 - 1. Manufacturer's data, user and installation manuals for all equipment and software programs including computer equipment and other equipment required for a complete VMS.
- C. Shop Drawings
 - 1. System device locations on architectural floor plans.
 - 2. Full Schematic of system including wiring information for all devices.
- D. Closeout Submittals
 - 1. User Manuals
 - 2. Parts list.
 - 3. System device locations on architectural floor plans.
 - 4. Wiring and connection diagrams.
 - 5. Maintenance requirements.

1.4 QUALITY ASSURANCE

- A. Manufacturer shall have a minimum of 10 years experience in the manufacture and design of VMS products.
- B. Installer:
 - 1. Minimum of 5 years experience installing VMS products.
 - 2. All installation, configuration, setup, program and related work shall be performed by technicians thoroughly trained by the manufacturer in the installation and service of the equipment provided.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Comply with requirements of Section [01 60 00].
- B. Deliver materials in manufacture's original, unopened, undamaged containers with original identification labels.
- C. Protect stored materials from environmental and temperature conditions following the manufacturer's instructions.
- D. Handle and operate products and systems according to manufacturer's instructions.

1.6 WARRANTY

- A. Provide manufacturer's warranty covering three (3) years for replacement and repair of defective equipment.

1.7 MAINTENANCE

- A. Make ordering of new equipment for expansions, replacements and spare parts available.
- B. Provide factory direct technical support to the installing firm.

PART 2 – PRODUCTS

2.1 VIDEO SERVER

A. Manufacturer:

The Video Server shall be the RM3000 as supplied by:

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B. Substitutions:

Under the provisions of Division 1:

1. All proposed substitutions must be approved by the Consultant or Architect/Engineer professional.

2. Proposed substitutions must provide a line-by-line compliance document.

C. General Server Features:

1. The video server shall be integrated into a server-class computing platform ('PC'). The PC shall be available in a rack-mount chassis and shall fit in an EIA-standard 19" equipment rack utilizing no more than two units (2U) of rack space.
2. The server Operating System shall be Microsoft Windows Web Server 2008 R2.
3. Server shall have front accessible, hot-swap hard-disk trays.

D. Server System Components:

1. The server shall meet or exceed the following system component specifications:
 - a. Server shall utilize dual (two) Intel Xeon Quad Core CPU, 2.4GHz
 - b. Server shall utilize Intel 5500 series chipset
 - c. Server shall have at least 6GB of DDR3 system memory
 - d. Server Storage Controller shall be a PERC H700i.
 - e. All hard disk components used by the system shall be designed specifically for enterprise storage applications in disk dense environments.
 - f. Server hard drives shall be SATA
 - g. Server shall provide between 4TB and 20TB RAID5 of internal storage for video event data
 - h. Server shall have two Gigabit network controller ports.
 - i. Server shall have RS-232C serial port, for communications with pan-tilt-zoom cameras and other auxiliary devices.
 - j. Server shall have High-Speed USB 2.0 serial ports, for the attachment of external storage, digital I/O and archive devices.
2. The server shall provide the following optional components:
 - a. Using digital video capture technology, the DVMS shall be capable of supporting between one (1) and seventy five (75) IP-based video sources, in increments of one (1) video source.
 - b. The server shall optionally provide support for between sixteen (16) and one-hundred (100) digital input and output points for wired integration with access control, building automation equipment, sensors, monitors, or other application requirements that may be determined at a later time. The server shall support any combination of the following digital input and output devices that are physically connected to the server via the PC's USB bus:
 1. 8in + 8 out – 8 optically isolated digital inputs and 8 reed-relay outputs.

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2. 16 in – 16 optically isolated digital inputs.
 3. 16 out – 16 reed-relay outputs.
 4. 48 TTL – 48 TTL points defined as inputs or outputs in blocks of 8.
 5. 96 TTL – 96 TTL points defined as inputs or outputs in blocks of 8.
3. The server shall support capture of video from cameras:
 - a. Server shall support IP cameras from leading camera manufacturers, with these video feeds connected through the server network controller without the need for encoders or other devices:
 1. ACTi
 2. American Dynamics
 3. Appro
 4. Arecont Vision
 5. Axis
 6. Basler
 7. Bosch
 8. Canon
 9. IQinVision
 10. Lumenera
 11. Panasonic
 12. Pelco
 13. Samsung
 14. SmarterCam
 15. Sony
 16. Toshiba
 - b. Server shall support control of PTZ camera from leading camera manufacturers:
 1. ACTi
 2. Axis
 3. Bosch
 4. Canon VCC-4
 5. Panasonic IP
 6. Pelco IP
 7. Sony EVI –D30/D31
 8. Sony P5 IP
 9. Sony Visca IP
 10. Toshiba IK-WB IP
 11. Toshiba IK-WB21A IP

E. Chassis Features:

1. The Form Factor shall be 2U.
2. The dimensions shall be 17.53” x 26.17” x 3.42”
3. Front ports shall be 2x USB.
4. Cooling shall be 5x 80mm Internal Fans

5. Drive Bays shall be 16x 3.5" SATA hot-swap

F. Electrical:

1. Input Voltage: AC 110-230V 50-60Hz.
2. Power Supply: 750W AC-DC, redundant (1+1), hot-swap

G. Environmental:

1. Temperature Range:
 - a. Operating: 50 to 95 degrees F (10 to 35 degrees C)
 - b. Non-Operating: 22 to 140 degrees F (-5 to 60 C)
2. Relative Humidity Range:
 - a. Operating 10 – 90% (non condensing at ambient)
 - b. Non-operating 5-95% (non-condensing at ambient)

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine area to receive devices and notify any adverse conditions affecting installation or subsequent operation.

B. Do not begin installation until unacceptable conditions are corrected.

3.2 PREPARATION

A. Protect devices from damage during construction.

3.3 INSTALLATION

A. Install devices in accordance with manufacturer's instruction at locations indicated on the floor drawing plans.

B. Perform installation with qualified service personnel.

C. Install devices in accordance with the National Electrical Code or applicable local codes.

C. Ensure selected location is secure and offers protection from accidental damage.

3.4 FIELD QUALITY CONTROL

A. Test snugness of mounting screws of all installed equipment.

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- B. Test proper operation of all VMS devices.
- C. Determine and report all problems to the manufacturer's customer service department.

3.5 ADJUSTING

- A. Make proper adjustment to video system devices for correct operation in accordance with manufacturer's instructions.

3.6 DEMONSTRATION

- A. Demonstrate at final inspection that the VMS is functioning properly.

END OF SECTION