

A&E Specifications

Feel free to consult with Protection Level Excellence (PLE)-Communication's regarding specific project requirements. For information and assistance contact:

PLE-Communications, LLC
1900 E. Ridge Road
West Entrance Rochester, NY
14622 USA
877-609-0845
www.ple-communications.com

Product Guide Specification AVT234© Video Motion Detection (VMD) Fence Sensor (Reconisense, Event Guard)

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) Master Format 2012 and The Project Resource Manual—CSI Manual of Practice. The Manufacturer is responsible for technical accuracy. By removing the references to specific AVT234© product names or part numbers, the text may 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. 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.

NOTE TO SPECIFIER: Include related sections as appropriate if VMD fence sensor is integrated to other systems.

- A. Section 260500 – Common Work Results for Electrical, for interface and coordination with building electrical systems and distribution.
- B. Section 280513 – Conductors and Cables for Electronic Safety and Security, for cabling between system servers, panels, and remote devices.
- C. Section 280528 – Pathways for Electronic Safety and Security, for conduit and raceway requirements.
- D. Section 282323 – Video Surveillance Systems Infrastructure.
- E. Section 282329 – Video Surveillance Remote Devices and Sensors.

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Tested, ruggedized, 2U secured black box appliance to provide Video Motion Detection (VMD) fence sensor appliance that works with any camera inputs and supplies alarms to any DVR, NVR, VMS, or Command & Control Display Equipment (CCDE) for unattended, persistent video surveillance.

1.3 REFERENCES

- A. Reference Standards: Provide systems that meet or exceed the requirements of the following publications, certifications, and organizations as applicable to the Work of this Section:
1. SEIWG-ICD-0101B - Command and Control Display Equipment (CCDE) Information Interchange using XML
 2. IBDSS CDD - Integrated Base Defense Security Systems (IBDSS) Capability Development Document (CDD)
 3. Automated Linux Hardening for Cyber Security per NSA Guidance
 4. Included on FPS2 Approved Equipment List
 5. NERC/CIP 006-1 R.4.2 –Cyber Security – Physical Security of Critical Cyber-Assets

1.4 SYSTEM DESCRIPTION

- A. The indoor/outdoor VMD Fence Sensor appliance is an open source, eight video channel device, that is camera and display system agnostic to be easily integrated into new or existing perimeter sensor solutions. Mobile trailer solutions for quickly deployable video fence sensor options shall also be available.
- B. Basis-of-design is the PLE-Communications Target Motion Cueing (TMC) algorithm delivered on a Linux device with advanced interoperability using an advanced video toolkit (AVT234) with easy integration kits.

1.5 SUBMITTALS

- A. Manufacturer's Product Data: Submit manufacturer's data sheets indicating systems and components proposed for use, including instruction manuals.
- B. Shop Drawings: Submit complete drawings including connection block diagrams for interfacing equipment, list of connected equipment, and locations for major equipment components.
- C. Record Drawings: During construction maintain record drawings indicating location of equipment and wiring. Submit an electronic version of record drawings not later than Substantial Completion of the project.
- D. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, customized to the system installed. Include system and operator manuals.

- E. Field Tests: Submit results of field testing of every device including date, testing personnel, retesting date if applicable, and confirmation that every device passed field testing.
- F. Maintenance Service Agreement: Submit a sample copy of the manufacturer's maintenance service agreement, including cost and services for a one year period for Owner's review. Maintenance shall include, but not be limited to, labor and materials to repair the system, tests and adjustments, and regular inspections.

1.6 QUALITY ASSURANCE

- A. Manufacturer: Minimum five years' experience in manufacturing and maintaining VMD sensor appliances that offer new perimeter and critical area VMD fence sensor capabilities as a new build or incremental upgrade that meets or exceeds the requirements identified in the Integrated Base Defense Security System (IBDSS) Capability Development Document (CDD) Annex B, Intrusion Detection and Annex C, Assessment/Surveillance. Manufacturer shall provide toll-free technical assistance and support available 24/7.
- B. Installer: Minimum two years' experience installing similar systems, and certified for use by completion of a PLE installer training course within 6 months of the installation.
- C. Environmental Requirements:
 - 1. Operating temperatures shall be between -10 degrees C (14 degrees F) and 50 degrees C (122 degrees F).
 - 2. Storage temperatures shall be between -20 degrees C (-4 degrees F) and 60 degrees C (140 degrees F).
- E. Power Requirements: Input voltage shall be 115 V AC., INTERNAL POWER: 400W PSU

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's labeled packages via Anixter. Store and handle in accordance with manufacturer's requirements, in a facility with environmental conditions within recommended limits.

1.8 WARRANTY

- A. Manufacturer's Warranty: Submit manufacturer's standard three-year warranty.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Indoor/outdoor VMD Fence Sensor appliance open source, eight video channel video motion detection device, that is camera and monitor display system agnostic.
Manufacturer: PLE-Communications, LLC, AVT-2U-8CH-APP, VMD Fence Sensor for perimeter fence line security, www.ple-communications.com.
- B. Accepted Part Numbers:
 - 1. AVT-2U-8CH-APP
 - 2. AVT-2U-4CH-APP

2.2 SYSTEM COMPONENTS

- A. 8 Channel Signal Distribution Amp
- B. 8 Channel Form "C" Relay Board
- C. Optional Analog to Fiber Network RCVR/XMTR pairs for Video and Tamper alarms (optional)
- D. Battery backup and power monitoring (optional)

2.3 OPERATIONAL REQUIREMENTS

- A. Indoor/outdoor VMD Fence Sensor appliance shall meet or exceed the following specifications:
 - 1. Video Input: Shall work with any NTSC video camera via BNC coaxial .
 - 2. Shall operate with Fixed and PTZ autotrack cameras without the need for camera calibration.
 - 3. Shall work with any NTSC thermal camera input.
 - 4. Shall work with any NTSC Day/Night camera input.
 - 5. May work with IP cameras on a case by case basis. (AVT234 Fence Sensor may be used in place of generic motion detection that is built into these which suffer very high false alarm rates if there is a way to obtain uncompressed video from the IP camera).
 - 6. Shall start positively alarming human and vehicle intruders in seconds without calibration.
 - 7. Shall provide accurate detections in any weather where the human eye can discern intruders.
 - 8. Shall operate with minimal false alarms without the use of No zones/triplines (inclusion and exclusion zoning available if zones are desired).
 - 9. Shall provide accurate detections across all camera fields of view (FOV).
- B. Indoor/outdoor VMD Fence Sensor appliance shall provide a fixed or mobile solution.
- C. Indoor/outdoor VMD Fence Sensor appliance shall provide an optional software add-on to perform pipeline damage prevention.

- D. Indoor/outdoor VMD Fence Sensor appliance shall provide intrusion, power failure, and tamper alerts back to video monitoring solution (DVR, NVR, VMS, and CDDE).

2.4 MANUFACTURER SUPPORT

- A. Manufacturer shall provide customer service, pre-sales applications assistance, after-sales technical assistance, access to online technical support, and installation training.
- B. Manufacturer shall provide 24/7 technical assistance and support by means of a toll-free telephone number at no extra charge.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine site conditions prior to installation. Notify Architect and Owner in writing if unsuitable conditions are encountered. Do not start installation until site conditions are acceptable.

3.2 INSTALLATION

- A. Test all VMD and peripheral components before shipping to the project location.
- B. Indoor/outdoor VMD Fence Sensor appliance shall be installed, programmed, and tested in accordance with manufacturer's installation instructions.
 - 1. Coordinate network interfaces and IP address availability with Owner's representative where appropriate to provide network alerts and remote login for maintenance and test.
 - 2. Provide cable and wire for a complete and reliable installation. Obtain Owner's approval for exact location of all boxes, conduit, cable, and wiring runs prior to installation.
 - 3. Install conduit, cable, and wire parallel and square with building lines, including raised floors areas. Do not exceed 40 percent fill in conduits. Gather wires and tie to create an orderly installation.
 - 4. Coordinate with other trades to provide proper sequencing of installation.

3.3 FIELD COMMISSIONING AND CERTIFICATION

- A. Field Commissioning: Test Indoor/outdoor VMD Fence Sensor appliance as recommended by manufacturer, including the following:
 - 1. Conduct complete inspection and testing of equipment, including verification of operation with connected cameras.
 - 2. Test devices and demonstrate operational features for Owner's representative and authorities having jurisdiction, as applicable.
 - 3. Correct deficiencies until satisfactory results are obtained.
 - 4. Submit written copies of test results.

3.4 TRAINING

- A. Conduct on-site system administrator and security/surveillance operator training, with the number of sessions and length of sessions as recommended by the video surveillance system manufacturer. Training shall include administration, configuration, operation, and diagnostics.

END OF SECTION

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