

Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, based on *MasterFormat 2016* and *The Project Resource Manual—CSI Manual of Practice*. *The Manufacturer is responsible for technical accuracy.*

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. Delete all "Specifier Notes" after editing this section.

Section 28 21 00: Video Surveillance

Section 28 21 11: Analog Cameras

2 MP MOTIONEYE HDCVI PIR CAMERA

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes

1. Section 28 21 17: Video Surveillance – Surveillance Cameras – Camera Housings
2. Section 28 21 19: Video Surveillance – Surveillance Cameras – Camera Mounts
3. Section 28 27 00: Video Surveillance – Video Surveillance Sensors

B. Related Sections

1. [Section 28 33 15: Security Detection, Alarm and Monitoring – Security Monitoring and Control – Security Monitoring and Control Software].

*****Specifier's note: Include those standards referenced elsewhere in this SECTION.

1.2 REFERENCES

- A. Electromagnetic Compatibility
 - 1. FCC Part 15 Subpart B
 - 2. ANSI C63.4-2014
- B. Underwriters Laboratories, Inc. (UL) (www.ul.com)
 - 1. UL60950-1 + CAN/CSA C22.2, No.60950-1
- C. European Standards
 - 1. EN 55032
 - 2. EN 55024
 - 3. EN 50130-4
- D. HD standards
 - 1. Complies with the SMPTE 274M-2008 Standard in:
 - a. Resolution: 1920x1080
 - b. Scan: Progressive
 - c. Color representation: complies with ITU-R BT.709
 - d. Aspect ratio: 16:9
 - e. Frame rate: 25 and 30 frames/s
 - 2. Complies with the 296M-2001 Standard in:
 - a. Resolution: 1280x720
 - b. Scan: Progressive
 - c. Color representation: complies with ITU-R BT.709
 - d. Aspect ratio: 16:9
 - e. Frame rate: 25, 30, 50 and 60 frames/s
 - f. Interference-Causing Equipment Standards

1.3 SYSTEM DESCRIPTION

A. Section Includes

1. Video Surveillance – Surveillance Cameras – Analog Cameras

B. Performance Requirements

1. The 2 MP PIR camera shall be designed as an indoor motion-detection camera designed for applications that require motion detection and video verification of intrusion alarms.
2. The 2 MP PIR camera shall offer a 1/2.9-in Progressive-scan CMOS imager with an effective pixel density of 1920(H) x 1080(V), at 30 fps.
3. The 2 MP PIR camera shall offer Digital Wide Dynamic Range for clear images in extreme high-contrast environments.
4. The 2 MP PIR camera offer a 12 m x 12 m (39 ft x 39 ft) detection range with a 100° detection angle.
5. The 2 MP PIR camera shall offer two-level detection with adjustable sensitivity.
6. The 2 MP PIR camera shall produce a color image down to 0.02 lx at F2.0.
7. The 2 MP PIR camera shall simultaneously transmit and receive video, audio, and control signals over a single standard coaxial cable over a distance of 600.0 m (1968.50 ft).
8. The 2 MP PIR camera shall offer one (1) BNC video output connection to transmit an HDCVI or a CVBS signal.
9. The 2 MP PIR camera shall incorporate a built-in heater to achieve an operational temperature down to -10 °C (14 °F).

1.4 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 complete video management system.

C. Dimensional Drawings; include

1. Overall device dimensions.
2. Dimensions specific for installation.

D. Closeout Submittals

1. User manual.
2. Parts list.
3. Maintenance requirements.

1.5 QUALITY ASSURANCE

- A. Manufacturer:
 - 1. Minimum of [10] years of experience in manufacture and design Video Surveillance Devices.
- B. Video Surveillance System:
 - 1. List certifying bodies (UL, CSA, etc.)
 - 2. Provide evidence of compliance upon request.
- C. Installer:
 - 1. Minimum of [5] years of experience installing Video Surveillance System.

1.6 DELIVERY, STORAGE AND HANDLING

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

1.7 WARRANTY

- A. Provide manufacturer's warranty covering [2] years for replacement and repair of defective equipment. Warranty varies country to country.

1.8 MAINTENANCE

- A. Make ordering of new equipment for expansions, replacements, and spare parts available to dealers and end users.
- B. Provide factory direct technical support via phone and e-mail.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. [Acceptable Manufacturer:
Dahua Technology USA Inc.
23 Hubble, Irvine, CA 92618
Tel: (949) 679-7777
Fax: (949) 679-5760
Email: sales.usa@global.dahuatech.com]
- B. Substitutions: [Not permitted.] [Under provisions of Division 1.]
1. [All proposed substitutions must be approved by the Architect or Engineer professional.]
 2. [Proposed substitutions must provide a line-by-line compliance documentation.]

2.2 2 MP MOTIONEYE PIR HDCVI CAMERA [DH-HUM1220AN-PIR]

- A. General Characteristics:
1. The 2 MP PIR camera shall be designed as an indoor motion-detection camera designed for applications that require motion detection and video verification of intrusion alarms.
 2. The 2 MP PIR camera shall offer a 1/2.9-in Progressive-scan CMOS imager with an effective pixel density of 1920(H) x 1080(V), at 30 fps.
 3. The 2 MP PIR camera shall offer Digital Wide Dynamic Range for clear images in extreme high-contrast environments.
 4. The 2 MP PIR camera offer a 12 m x 12 m (39 ft x 39 ft) detection range with a 100° detection angle.
 5. The 2 MP PIR camera shall offer two-level detection with adjustable sensitivity.
 6. The 2 MP PIR camera shall produce a color image down to 0.02 lx at F2.0.
 7. The 2 MP PIR camera shall simultaneously transmit and receive video, audio, and control signals over a single standard coaxial cable over a distance of 600.0 m (1968.50 ft).
 8. The 2 MP PIR camera shall offer one (1) BNC video output connection to transmit an HDCVI or a CVBS signal.
 9. The 2 MP PIR camera shall incorporate a built-in heater to achieve an operational temperature down to -10 °C (14 °F).
- B. Imaging
1. The 2 MP PIR camera shall offer a 1/2.9-in progressive-scan CMOS imager.
 2. The 2 MP PIR camera shall offer an effective number of pixels of 1920(H) x 1080(V) (2.0 MP) effective picture elements.
 3. The 2 MP PIR camera shall offer a 2.8 mm fixed lens.
 4. The 2 MP PIR camera shall have a horizontal angle of view of 100.5°.
 5. The 2 MP PIR camera shall offer an aperture of F2.0.
 6. The 2 MP PIR camera shall produce a color image with a minimum scene illumination of 0.02 lux at F2.0 and a monochrome image, when in the night mode, with a minimum illumination of 0.002 lux at F2.0.

C. Video Characteristics

1. The 2 MP PIR camera shall offer the following resolutions:
 - a. 1080p (1920 x 1080)
 - b. 720p (1280 x 720)
2. The 2 MP PIR camera shall generate 2 MP (1920 x 1080 pixels) resolution at 30 fps.
3. The 2 MP PIR camera shall offer BLC, HLC, and DWDR modes of backlight compensation.
4. The 2 MP PIR camera shall offer 2D noise reduction.
5. The 2 MP PIR camera shall offer automatic and manual gain control settings.
6. The 2 MP PIR camera shall offer 24 privacy masking areas.

D. PIR

1. The 2 MP PIR camera shall use passive infrared to detect motion.
2. The 2 MP PIR camera shall have an effective detection area of 12 m x 12 m (39.37 ft x 39.37 ft).
3. The 2 MP PIR camera shall offer two-level (jumper) sensitivity.
4. The 2 MP PIR camera shall offer pet immunity of ≤ 18.0 kg (39.68).

E. Installation Requirements

1. The 2 MP PIR camera shall be capable of operating in an indoor environment within a temperature range of -10° C to $+50^{\circ}$ C (14° F to 122° F).
2. The 2 MP PIR camera shall require a 12 VDC \pm 25% power supply.

2.3 ACCESSORIES

A. The 2 MP PIR camera shall offer the following accessories:

1. Optional accessories:
 - a. [UTC Controller.]

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive devices and notify 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 drawings plans.
- B. Perform installation with qualified service personnel.
- C. Install devices in accordance with the National Electrical Code or applicable local codes.
- D. Ensure selected location is secure and offers protection from accidental damage.
- E. Location must provide reasonable temperature and humidity conditions, free from sources of electrical and electromagnetic interference.

3.4 FIELD QUALITY CONTROL

- A. Test snugness of mounting screws of all installed equipment.
- B. Test proper operation of all video system 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.
- B. Make any adjustment of camera settings to comply with specific customer's need.

3.6 DEMONSTRATION

- A. Demonstrate at final inspection that video management system and devices functions properly.

END OF SECTION