

## 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 13: IP Cameras

#### MEGAPIXEL PINHOLE – 2MP INDOOR NETWORK CAMERA LENS UNIT

#### 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. Federal Communications Commission (FCC) ([www.fcc.gov](http://www.fcc.gov))
  - 1. (SEFD1509190-B)
- B. Underwriters Laboratories, Inc. (UL) ([www.ul.com](http://www.ul.com))
  - 1. E234884-A60-UL
- C. CONFORMITE EUROPEENNE
  - 1. EN60950:2000
- D. Bureauveritas([www.bureauveritas.com](http://www.bureauveritas.com))
  - 1. EN50155:2007
- E. E-mark([www.tuv.com](http://www.tuv.com))
  - 1. ECE-Regulation NO.10
- F. 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 – IP Cameras
- B. Performance Requirements
  - 1. The Pinhole camera lens unit shall be a modular unit of a full-featured 2MP camera designed for discrete video surveillance applications in indoor and indoor environments.
  - 2. The Pinhole camera lens unit shall offer a high performance 1/2.8-inch progressive-scan CMOS sensor with 2MP resolution.
  - 3. The Pinhole camera lens unit shall conform to the ONVIF profile S&G and CGI standards to provide interoperability with other conformant systems.

#### 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, 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 [3] 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:  
Zhejiang Dahua Technology Co.,Ltd  
No.1199,Bin'an Road,Binjiang District, Hangzhou  
Tel: +86 571 8768-8883  
Fax: +86 571 8768-8815  
Email: overseas@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 MEGAPIXEL PINHOLE - 2MP INDOOR NETWORK CAMERA LENS UNIT – [IPC-HUM8231-L4]**

- A. General Characteristics:
  - 1. The Pinhole camera lens unit shall be a modular unit of a full-featured 2MP camera designed for discrete video surveillance applications in indoor environments.
  - 2. The Pinhole camera lens unit shall offer a high performance 1/2.8-inch progressive-scan CMOS sensor with 2MP resolution.
  - 3. The Pinhole camera lens unit shall conform to the ONVIF Profile S&G and CGI standards to provide interoperability with other conformant systems.
- B. Imaging
  - 1. The Pinhole camera lens unit shall offer a 1/2.8-inch type CMOS progressive-scan imager.
  - 2. The Pinhole camera lens unit shall offer an effective number of pixels of 1920 x 1080 effective picture elements.
  - 3. The Pinhole camera lens unit shall offer 16:9 aspect ratio.
  - 4. The Pinhole camera lens unit shall offer a fixed focal length of 2.8mm.
  - 5. The Pinhole camera lens unit shall have a [103°] horizon field of view.
  - 6. The Pinhole camera lens unit shall offer a fixed aperture of F2.4.
  - 7. The Pinhole camera lens unit shall produce a color image with a minimum scene illumination of 0.02 lux at F2.4 (Color, 1/3s, 30IRE), 0.08 lux at F2.4 (Color, 1/30s, 30IRE), and a monochrome image, when in the night mode, with a minimum illumination of 0.01 lux at F2.4 (B/W, 1/3s, 30IRE), 0.04 lux at F2.4 (B/W, 1/30s, 30IRE) under black & white mode.

## 2.3 ACCESSORIES

- A. The Pinhole camera lens unit shall require the following accessories:
  - 1. Included mounting hardware:
    - a. [Ceiling/Wall mount bracket]
  - 2. Required main box:
    - a. [Pinhole camera main box]

## **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**