Honeywell

Honeywell 35 Series IP Camera

A&E Specifications

GENERAL

SECTION INCLUDES

Provide a high definition camera system for video surveillance, including design, supply, installation, and commissioning.

RELATED SECTIONS

NOTE TO SPECIFIER: Include related sections as appropriate if video surveillance system is integrated to other systems.

- Section 26 05 00: Common Work Results for Electrical, for interface and coordination with building electrical systems and distribution.
- Section 28 05 13: Conductors and Cables for Electronic Safety and Security, for cabling between system servers, panels, and remote devices.
- Section 28 05 28: Pathways for Electronic Safety and Security, for conduit and raceway requirements.
- Section 28 23 00: Video Surveillance Equipment, for interface with, and administration of video recording equipment.
- Section 28 23 23: Video Surveillance Systems Infrastructure.
- Section 28 23 29: Video Surveillance Remote Devices and Sensors.

REFERENCES

Reference Standards: Provide systems that meet or exceed the requirements of the following publications and organizations as applicable to the work of this Section.

- Canadian ICES-003.
- Canadian Standards Association (CSA).
- Conformity for Europe (CE).
- Electronic Industry Association (EIA).
- Federal Communications Commission (FCC).

- Institute of Electronic and Electrical Engineers (IEEE).
- Joint Photographic Experts Group (JPEG).
- National Television Systems Committee (NTSC).
- Phase Alternating Line (PAL).
- Underwriters Laboratories Inc. (UL).
- IP Code (Ingress Protection Rating) per IEC 60529.

SUBMITTALS

General: Submittals shall be made in accordance with the Conditions of the Contract and Submittal Procedure Section.
Manufacturer's Product Data: Submit manufacturer's data sheets indicating systems and components proposed for use, including instruction manuals.
Shop Drawings: Submit installation drawings, including connection diagrams for interfacing equipment, list of connected equipment, and locations for major equipment components. Shop drawings shall indicate surrounding construction as provided for the Project.
Project Record Drawings: Indicate location of equipment and wiring on project record drawings. Submit an electronic version of the project record drawings not later than Substantial Completion of the Project.
Operation and Maintenance Data: Submit manufacturer's operation and maintenance data customized to the system installed. Include operator manuals.
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.
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.

DELIVERY, STORAGE, AND HANDLING

Packing and Shipping: Deliver products in manufacturer's labeled packages.
Storage and Protection: Store and handle products in accordance with manufacturer's requirements, in a facility where environmental conditions are within recommended limits.

WARRANTY

Manufacturer's Guarantee: Five (5) years from the manufacture date code under normal use and service for the video surveillance system.

QUALITY ASSURANCE

- Manufacturer: Minimum 10 years experience in manufacturing and maintaining video surveillance systems. Manufacturer shall provide toll-free technical assistance and support available 24/7.
- Installer: Minimum 2 years experience installing similar systems and shall be acceptable to the manufacturer of the video surveillance system.

MANUFACTURER SUPPORT

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

EXECUTION

EXAMINATION

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.

INSTALLATION

- All components of the camera system shall be thoroughly tested before shipping to the project location.
- Camera system shall be installed, programmed, and tested in accordance with manufacturer's instructions and recommendations.
  - Coordinate interfaces with other products with Owner's representative where appropriate.
  - Provide conduit, cable, and wire for complete and reliable installation. Obtain Owner's approval for exact location of cameras, boxes, conduit, cable, and wiring runs prior to installation.
  - Install conduit, cable, and wire parallel and square with building lines, including raised floor areas. Do not exceed 40 percent fill in conduits. Gather and tie wires for orderly installation.
  - Coordinate with other trades to provide proper sequencing of installation.

FIELD COMMISSIONING AND CERTIFICATION

Field Commissioning: Test camera system as recommended by manufacturer, including the following:

- Conduct complete inspection and testing of equipment, including verification of operation with connected equipment.
- Test devices and demonstrate operational features for Owner's representative and authorities having jurisdiction, as applicable.
- Correct deficiencies until satisfactory results are obtained.
- Submit written copies of test results.

TRAINING

Conduct on-site system administrator and security/surveillance operator training in accordance with the manufacturer's instructions and recommendations. Training shall include, but not be limited to: camera administration, provisioning, configuration, operation, and diagnostics.

SYSTEM DESCRIPTION

The 5 MP WDR IR HDMI Micro Dome Camera, HC35W25R3-H shall provide:

A. Superior Image Quality
   1. 5 MP (2592x1944) resolution, 1~25/30fps image with a 1/2.8" progressive scan CMOS sensor.

2. WDR, ensuring glare-free images. WDR range: 120dB
3. True day/night functionality providing vivid color images by day and clear black-and-white images at night with ICR.
4. Excellent low-light performance with 2D/3D noise reduction, and together with H.265 Profile codec saving storage and bandwidth.

B. Flexible Surveillance Solution
1. 2.8mm, F2.0, fixed lens.
2. H.265, H.264 and MJPEG codec with triple streams support.
3. Working temperature:
-40°C ~ 60°C (-40°F ~ 140°F)
4. ONVIF™ Profile G/S/T/M support.
5. Security features include self-signed certificates and data encryption.
6. Cameras can be retrofitted on many existing NVR installations without requiring additional storage.

C. Easy to Install and Use
1. Built-in PoE (Power over Ethernet) eliminates separate power supply and associated wiring; 12V DC inputs where PoE power is unavailable.
2. Remote configuration through web client or from the NVR.

D. Onboard Video Storage
Supports up to 1 TB (Micro SD) card for local video storage when event triggered.

E. Cyber Security
User account and password protection, HTTPS, IP Filter, Digest authentication, TLS1.2&1.3, Stream encryption, AES128 / 256, SSH / Telnet closed, PCI-DSS compliance, Built-In encryption chipset

PRODUCTS

MANUFACTURERS

A. Specified Manufacturer: Honeywell 5 MP WDR IR HDMI Micro Dome Camera, https://myhoneywellbuildingsuniversity.com.

B. Accepted Part Numbers:

HC35W25R3-H: 5 MP WDR IR HDMI Micro Dome, 1/2.8" CMOS, 2.8mm, 12 IR LEDs, H.265, PoE, IP66/IP67/IK10, HDMI.

SYSTEM COMPONENTS

5 MP WDR IR HDMI Micro Dome Camera, camera housing, cabling, and a web based GUI that provides complete control of camera settings and live video access.

OPERATIONAL REQUIREMENTS

A. 5 MP WDR IR HDMI Micro Dome Camera system shall meet or exceed the following camera specifications:
1 Image Sensor: 1 / 2.8" CMOS progressive scan CMOS
2 Total Pixels: 2592x1944 (5 MP)

3 Minimum Illumination: Color: 0.007 Lux @(F2.0, 30 IRE), B/W: 0 Lux/F2.0 (IR ON)
4 WDR, ensuring glare-free images. WDR range up to 120dB
5 IR Distance up to 30 m
6 Backlight Compensation: WDR, BLC, HLC
7 Day/Night: Auto/Day/Night/Time
8 Gain Control: 0-100%.
9 Noise Reduction: 2D/3D DNR.
10 Privacy Masking: Off / On (4 Areas).
11 Electronic Shutter Speed: 1/8 ~ 1/100,000s.
12 Video Standard: NTSC/PAL.
13 Audio Interface: Built-in Mic
14 Audio Compression: G.711a/ G.711Mu
15 White Balance: Auto / Tungsten / Fluorescent / Daylight / Shadow / Manual
16 Signal-to-Noise Ratio: 50 dB
17 Lens: 2.8mm, F2.0, fixed lens.
18 Angle of View: H:91°, V:67°
19 Communication: ONVIF Profile G/S/T/M support.

B. 5 MP WDR IR HDMI Micro Dome Camera system shall provide true day/night functionality with an infrared (IR) cut filter for day mode.
C. 5 MP WDR IR HDMI Micro Dome Camera system shall provide, in high contrast lighting conditions, higher quality images and significantly better dynamic range.
D. 5 MP WDR IR HDMI Micro Dome Camera system shall provide up to 4 fully configurable privacy zones to mask sensitive areas of a video image.
E. 5 MP WDR IR HDMI Micro Dome Camera system shall support the ONVIF Profile G/S/T/M specification for interoperability between network video products.
F. 5 MP WDR IR HDMI Micro Dome Camera system shall include, as standard, a web based GUI that provides complete control of the camera settings. The web based GUI shall:
    1 Provide role-based access control with password protection.
    2 Be easily discovered through Honeywell Unified Tool or other appropriate device search tools.
    3 Be available to record streaming video or snapshot images to a PC hard disk. The administrators have the ability turning the recording function on or off through the web based GUI.
    4 Require the following hardware as a minimum for the web browser:
        a. Operating system: Microsoft Windows 10 / 11
        b. Processor: Intel Core i5 2.9 GHz or above, such as Intel Core i5-4590 Quad Core 3.3Ghz.
        c. System memory (RAM): 8GB, DDR3-1600
        d. Graphics card: 1 GB dedicated video memory, such as NVIDIA GeForce GTX 750 1 GB.
        e. Network card: 10 Base-T/100 Base-TX Ethernet (RJ-45)
        f. Web browser: Chrome/Edge
G. Viewer: No ActiveX control plug-in for Chrome / Edge
H. 5 MP WDR IR HDMI Micro Dome Camera system shall support IPv4, IPv6, TCP / IP, HTTP, HTTPS, RTSP / RTP / RTCP, IGMP / Multicast, SMTP, DHCP, NTP, DNS, QoS, SNMP, 802.1X, UDP, ICMP, ARP, TLS, FTP/SFTP, DDNS protocols.

NOTE TO SPECIFIER: Some development may be required in specific user cases to support some of these protocols in the field as naturally the protocols will mature over time.

I. 5 MP WDR IR HDMI Micro Dome Camera system shall provide H.265 HEVC, H.264,

MJPEG, Smart Codec triple video streams simultaneously. The streams shall have the following functions:

1 Main Stream:
Support for 5 MP resolution (2592x1944) at 30/25 frames per second (NTSC/PAL). The camera can also support lower resolutions (2592x1520/1920x1080/1280x720) at 1-30/25 frames per second.
Note: It is only support MAX 15fps for encryption under HTTPS.

2 Sub Stream:
Support 704x576(PAL)/704x480(NTSC)/640x480/352x288(PAL)/352x240(NTSC) at 1 ~ 25/30fps.
Note: It is only support MAX 15fps for encryption under HTTPS

3 Third Stream:
Support 1920x1080/640x480/352x288(PAL)/352x240(NTSC)/320x240 at 1 ~ 25/30fps
Note: It is not available for encryption.

J. 5 MP WDR IR HDMI Micro Dome Camera shall transmit additional H.265, H.264 or MJPEG video streams simultaneously with the primary H.265, H.264 or MJPEG stream (up to triple streams).
The bit rate for the H.265, H.264 and MJPEG streams can be set to Constrained bit rate or Fixed quality. The resolutions and frame rates for all streams are adjustable by the administrator.

K. 5 MP WDR IR HDMI Micro Dome Camera system shall feature web GUI menus for programming camera parameters. A minimum of the following menus must be available:

1 Live View

2 Setup

a. Camera Setup
1) General setting
2) Video
3) Audio
4) Image setting
5) OSD
6) Privacy mask

b. Network Setup
1) General settings
2) Streaming protocols
3) SMTP
4) SNMP
5) QoS
6) HTTPS
7) 802.1x
8) FTP
9) DDNS
10) Port Mapping
11) System Log
12) Network Discovery Protocols

c. Built-in Video Analytics
1) Motion detection
2) Smart motion
3) Scene change
4) Intrusion
5) Multi loitering
6) People counter
7) Face detection
8) Line crossing detection

9) Event & Metadata Scheme
d. Alarm & Event
1) SD Card Alarm
2) Audio Detection
e. Storage Setup
1) SD card management
2) Content management
3) Recording settings
f. System Setup
1) General settings
2) Maintenance
3) User accounts
4) Access list
3 Information
a. Log
b. Version
c. Privacy Policy

K. 5 MP WDR IR HDMI Micro Dome Camera system must provide the option of restoring all displays, alarms, camera settings, and diagnostic settings to factory default with a Web GUI command. In addition, the unit shall offer a simple “reboot” with a Web GUI command.

L. 5 MP WDR IR HDMI Micro Dome Camera system should provide a warning message through Email, upload an image through Email or record video to a micro SD card upon Motion detection, Smart motion, Scene change, Intrusion, Multi loitering, People counter, Face detection, Line crossing detection. The administrators have the ability turning these video analysis on or off through the web GUI.

NOTE TO SPECIFIER: IMPORTANT! Any damaged files on an installed micro SD card incurred by malfunction or error in files saved on the micro SD card, regardless of the cause, are not guaranteed by Honeywell.

M. 5 MP WDR IR HDMI Micro Dome Camera system shall provide event analytics capability. It shall detect the event of video motion detection, Alarm input, Recording notification, Tampering detection. Once an event is detected, it shall trigger one of following linkages in camera.
1 Event notification on camera web GUI.
2 Snapshot to Email
3 Recording to SD card
4 System log store in camera (can search from web)

N. 5 MP WDR IR HDMI Micro Dome Camera housing shall include one (1) on-board alarm dry contact output.

O. 5 MP WDR IR HDMI Micro Dome Camera housing shall have embedded microphone input.

P. 5 MP WDR IR HDMI Micro Dome Camera housing shall consist of Metal + Plastic housing with coating RAL9003, Pantone Black and shall be waterproof, rated to IP66/IP67.

Q. 5 MP WDR IR HDMI Micro Dome Camera housing shall be vandal resistant camera housing, rated to IK10.

SERIES INTEGRATIONS

A. The following accessories are compatible with 5 MP WDR IR HDMI Micro Dome Camera:
1 HA35PCM04B: 35S cap for pendent mount, 1.5NPT male
2 HA35CLM01: 35S ceiling mount base with adapter

3 HA35CLM02: 35S ceiling mount pendent extension, 252 mm
4 HA60WLMB1: 60S wall mount bracket, 1.5NPT female
5 HA35PLM01: 35S pole mount
6 HA35CNM01: 35S corner mount
7 HA35JCBM01: 35S junction box

B. The following NVRs are compatible with 5 MP WDR IR HDMI Micro Dome Camera:
1 MAXPRO NVR HE: Up to 256 IP channels RAID5/6 enterprise NVR
2 MAXPRO NVR PE: Up to 192 IP channels RAID5/6 enterprise NVR
3 MAXPRO NVR SE: Up to 96 IP channels system NVR
4 MAXPRO NVR XE: Up to 24 IP channels system NVR
5 MAXPRO NVR Software: Up to 256 IP channels recording software
6 ADPRO NVR IFT-E: Up to 32 IP channels with up to 32 VA channels NVRs
7 ADPRO NVR IFT: Up to 32 IP channels or 16 IP channels with up to 16 VA channels NVRs
8 ADPRO NVR EFT-S: Up to 16 IP channels or 8 IP channels with up to 8 VA channels NVRs
9 ADPRO NVR iFT Gateway: 4 IP channels + 4 VA channels
10 Honeywell DVM: Supported with Honeywell DVM 800
11 35 Series NVR: 4/8/16/32/64-channel 35 series NVRs

NOTE TO SPECIFIER: Some development may be required in specific user cases to support some of these protocols in the field as they mature over time.

SYSTEM HARDWARE

A. 5 MP WDR IR HDMI Micro Dome Camera system shall have the following mechanical specifications:
1. Unit Dimensions: 104.9 × 104.9 × 63.3 mm (4.13“ × 4.13” × 2.49“)
HDMI cable length: 390±30mm (15.35“±1.18“)
Dome diameter: Φ56.4(2.22")
2. Product Weight: 0.526 kg (1.160 lb.)
3. Material: Metal + Plastic

B. 5 MP WDR IR HDMI Micro Dome Camera system shall have the following electrical specifications:
1. Input Voltage: DC12 V, 1 A; or PoE 44-57 V, MAX 4.2 W
2. Power Consumption: MAX 4.2W

C. 5 MP WDR IR HDMI Micro Dome Camera system shall be designed to meet the following environmental conditions and regulatory:
1. Operating temperature:
Starting Temperature: -40°C (-40°F)
Working Temperature: -40°C ~ 60°C (-40°F ~ 140°F)
2. Relative Humidity: Less than 95%, non-condensing.
3. Certification: CE/IK10/IP66/IP67 (EU only)
4. Country or Region of Origin: Vietnam.

END OF SECTION