

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.

Video Surveillance IP Cameras

NETWORK CAMERA

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes

1. Video Surveillance – Surveillance Cameras – Camera Housings
2. Video Surveillance – Surveillance Cameras – Camera Mounts
3. Video Surveillance – Video Surveillance Sensors

B. Related Sections

1. [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

Standard	Support
CE-LVD: EN60950-1	√
CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU	√
CE-RED: Radio Equipment Directive 2014/53/EU	

FCC: 47 CFR FCC Part 15, Subpart B	✓
FCC ID: FCC PART 15C	
UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07	
EN50155	
E-MARK: ECE Regulation 10.05	

1.3 SYSTEM DESCRIPTION

A. Section Includes

1. Video Surveillance – Surveillance Cameras – IP Cameras

1.4 SUBMITTALS

A. 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.

B. Dimensional Drawings; include

1. Overall device dimensions
2. Dimensions specific for installation

C. 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 Vision Technology Co., Ltd.
Address: No.1199 Bin'an Road, Binjiang District, Hangzhou, China
Tel: +86-571-87688883
Fax: +86-571-87688815
Email:overseas@dahuasecurity.com
- B. Substitutions:
 - 1. [All proposed substitutions must be approved by the Architect or Engineer professional.]
 - 2. [Proposed substitutions must provide a line-by-line compliance documentation.]

5MP Full-color Active Deterrence Fixed-focal Bullet WizSense Network Camera-- [DH-IPC-HFW3549T1N-AS-PV]

Camera	
Image Sensor	1/2.7" 5Megapixel progressive CMOS
Max. Resolution	2592 (H) × 1944 (V)
ROM	128 MB
RAM	512 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.003 Lux @ F1.0
S/N Ratio	> 56 dB

Illumination Distance	6 mm: 40 m (131.2 ft)				
Illuminator On/Off Control	Auto/Manual				
Illuminator Number	2 (Warm light)				
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°				
Lens					
Lens Type	Fixed-focal				
Mount Type	M12				
Focal Length	2.8 mm; 3.6 mm; 6 mm				
Max. Aperture	F1.0				
Field of View	2.8 mm: Horizontal 98° × Vertical 71° × Diagonal 129° 3.6 mm: Horizontal 77° × Vertical 56° × Diagonal 101° 6 mm: Horizontal 53° × Vertical 40° × Diagonal 66°				
Iris Type	Fixed				
Close Focus Distance	2.8 mm: 1.2 m (3.9 ft) 3.6 mm: 2.1 m (6.9 ft) 6 mm: 4.5 m (14.8 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	67.4 m (221.1 ft)	27 m (88.6 ft)	13.5 m (44.3 ft)	6.7 m (22.0 ft)
	3.6 mm	80.0 m (262.5 ft)	32.0 m (105.0 ft)	16.0 m (52.5 ft)	8.0 m (26.2 ft)
	6 mm	120.0 m (393.7 ft)	48.0 m (157.5 ft)	24.0 m (78.7 ft)	12.0 m (39.4 ft)
Professional, intelligent					
IVS (Perimeter Protection)	Tripwire; intrusion (support the classification and accurate detection of vehicle and human)				
Intelligent Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos.				
Video					
Video Compression	H.265; H.264; H.264H; H.264B; MJPEG (only supported by the sub stream)				
Smart Codec	Smart H.265+/H.264+				
Video Frame Rate	Main stream: 2592 × 1944 @1-20 fps 2688 × 1520 @1-25/30 fps Sub stream: 704 × 576 @1-25 fps/704 × 480 @ 1-20fps Third stream: 1920 × 1080 @1-25/30 fps				
Stream Capability	3 streams				
Resolution	5M (2592 × 1944); 4M (2688 × 1520); 4M (2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (354 × 288/354 × 240)				
Bit Rate Control	CBR/VBR				

Video Bit Rate	H.264: 32 kbps–8192 kbps H.265: 12 kbps–8192 kbps
Day/Night	Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
Scene Self-adaptation	Yes
White Balance	Auto/natural/street lamp/outdoor/manual/regional custom
Gain Control	Auto/Manual
Noise Reduction	3D DNR
Motion Detection	OFF/ON (4 areas)
Region of Interest (RoI)	Yes (4 areas)
Smart Illumination	Yes
Image Rotation	0°/90°/180°/270° (Support with 2592×1944 resolution and lower)
Mirror	Yes
Privacy Masking	4 areas
Audio	
Built-in MIC	Yes
Audio Compression	PCM; G.711a; G.711Mu; G.726; AAC; MPEG2-Layer2; G.722.1; G.729; G.723
Alarm	
Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; scene changing; audio detection; voltage detection; external alarm; SMD; safety exception; light alarm; sound alarm (11 built-in sounds and custom voices importing)
Network	
Network	RJ-45 (10/100 Base-T)
SDK and API	Yes
Protocol	IPv4; IPv6; HTTP; HTTPS; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; 802.1x; SNMP
Interoperability	ONVIF (Profile S/Profile G/Profile T) ; CGI; Milestone; Genetec; P2P
User/Host	20 (Total bandwidth: 80 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 G); Dahua Colud; NAS
Browser	IE: IE8 and later Chrome Firefox Safari: Safari 12 and later
Management Software	Smart PSS; DSS; DMSS
Mobile Phone	IOS; Android
Certification	
Certification	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B
Port	

Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)
Alarm Input	1 channel in: 5mA 3V–5V DC
Alarm Output	1 channel out: 300mA 12V DC
Power	
Power Supply	12V DC/PoE (802.3af)
Power Consumption	Basic power consumption: 2W (12V DC); 2.6W (PoE) Max. power consumption (H.265 + warm light + IVS + sound alarm + red and blue lights flash): 7.5W (12V DC); 8.8W (PoE)
Environment	
Operating Conditions	–40°C to +60°C (–40°F to +140°F)/Less than 95% RH
Storage Conditions	–40°C to +60°C (–40°F to +140°F)
Protection Grade	IP67
Structure	
Casing	Metal + plastic
Dimensions	288.4 mm × 94.4 mm × 84.7 mm (11.4" × 3.7" × 3.3") (L × W × H)
Net Weight	1.0 kg (2.2 lb)
Gross Weight	1.23 kg (2.7 lb)

2.2 – EXECUTION

2.3 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.

2.4 PREPARATION

A. Protect devices from damage during construction.

2.5 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.

2.6 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.

2.7 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.

2.8 DEMONSTRATION

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

END OF SECTION