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Digital Watchdog® is a leading manufacturer of security and surveillance solutions, offering stunning image quality, advanced hardware capabilities, reliable customer support and lowest total cost of deployment to the analog & IP megapixel surveillance markets. Located in Cerritos, CA with manufacturing facilities in Seoul, Korea, Digital Watchdog® is committed to delivering powerful security solutions to its customers worldwide.

For additional information, contact:

 Digital Watchdog®
 16220 Bloomfield Avenue,

Cerritos, California 90703 USA

 Phone: +1 888 446-3593

 Web: www.digital-watchdog.com

 E-mail: dw-tech@digital-watchdog.com

**STAR-LIGHT PLUS™ 5MP UNIVERSAL HD OVER COAX® MICRO DOME CAMERA**

**DIVISION 28 – ELECTRONIC SAFETY AND SECURITY**

**28 20 00 Electronic Surveillance**

**28 23 00 Video Surveillance**

 **28 23 29 Video Surveillance Remote Devices and Sensors**

**Notes to Specifier:**

1. Where several alternative parameters or specifications exist, or where, the specifier has the option of inserting text, such choices are presented in **<bold text>.**

2. Explanatory notes and comments are presented in **colored**text.

3. CSI MasterFormat 2016 incorporates numerous significant changes affecting electronic safety and security. This document is written to provide flexibility in using either format, although adoption of MasterFormat 2016 is encouraged. The following is a guide to the MasterFormat numbers relevant to the product referenced in this specification.

4. MasterFormat 2014 Specification Category:

28 23 29 - Video Surveillance Remote Devices and Sensors

**STAR-LIGHT PLUS™ 5MP UNIVERSAL HD OVER COAX® MICRO DOME CAMERA**

1. **GENERAL**
	1. **SUMMARY**
		1. Section includes a 5MP Universal HD over Coax® analog camera with outdoor rated micro dome housing.
		2. Product - A high-definition indoor/outdoor vandal micro dome video camera, capable of transmitting 2608 x 1960 video with color in darkness technology over analog connections, in a vandal resistant IP66 environmental-rated water and dust-resistant and IK09-rated impact resistant dome housing.
		3. Related Requirements
			1. 27 20 00 Data Communications
			2. 28 23 13 Video Surveillance Control and Management Systems
			3. 28 23 16 Video Surveillance Monitoring and Supervisory Interfaces
			4. 28 23 19 Digital Video Recorders and Analog Recording Devices
			5. 28 23 23 Video Surveillance Systems Infrastructure
		4. **REFERENCES**
		5. Abbreviations
			1. AGC – Automatic Gain Control
			2. ARP – Address Resolution Protocol
			3. AWB – Automatic White Balance
			4. BLC – Back light compression
			5. DNR – Digital Noise Reduction
			6. FPS – frames per second
			7. HLC – Highlight Compensation
			8. VMS – Video Management System
			9. WDR – Wide Dynamic Range
		6. Reference Standards
			1. Emissions
				1. FCC-47 CFR Part 15 Class B
			2. Environmental
				1. ANSI / IEC60529 – Degrees of Protection Provided by Enclosures
				2. International Electrotechnical Commission (IEC) – Ingress Protection Rating IP66
	2. **SUBMITTALS**
		1. Product Data
			1. Manufacturer’s printed or electronic data sheets
			2. Manufacturer’s installation and operation manuals
			3. Warranty documentation
	3. **QUALIFICATIONS**
		1. Manufacturershall have a minimum of five years’ experience inproducing analog and IP video equipment.
		2. Installers shall be trained and authorized by the Manufacturer to install, integrate, test, and commission the system.
	4. **DELIVERY, STORAGE, AND HANDLING**
		1. Deliver the camera in the manufacturer’s original, unopened, undamaged container with identification labels intact.
		2. Store the camera in a temperature environment of -4° F to 122° F (-20° C to 50° C), protected from mechanical and environmental conditions as designated by the manufacturer.
	5. **WARRANTY AND SUPPORT**
		1. Manufacturer shall provide a 5-yearwarrantyfor the product to be free of defects in material and workmanship.

END OF SECTION

1. **PRODUCTS**
	1. **EQUIPMENT**
		1. Manufacturer: Digital Watchdog, Inc.

 16220 Bloomfield Avenue. Cerritos,

California USA 90703 USA

 Phone: (866) 446-3595

 Web: www.digital-watchdog.com

 E-mail: dw-tech@digital-watchdog.com

* + 1. Models DWC-MC553WTIR
		2. Alternates: None
	1. **GENERAL DESCRIPTION**
		1. The indoor/outdoor vandal micro dome camera system shall capture and transmit 5MP, 4MP, 2.1MP/1080p and 960H video with color in darkness technology over an analog connection, for the purpose of allowing users to integrate it with digital video recorder or digital video encoder products.
		2. The indoor/outdoor vandal micro dome camera system shall include color in darkness technology and IR illumination with a fixed or varifocal lens and true day/night functions.
		3. The camera shall possess the following characteristics:
			1. 5 megapixels
			2. Color in darkness technology (0.16 lux)
			3. Day/night operation with IR cut filter
			4. Option for Integral IR LED illuminator providing 50-foot distance
			5. Double shutter true Wide Dynamic Range
			6. Integral motion detection
			7. 3D digital noise reduction
			8. IP66 environmental-rated water and dust-resistant
			9. IK09-rated impact resistant
	2. **VIDEO**
		1. Connection
			1. The indoor/outdoor vandal bullet camera shall include the following connectors:
				1. Video Output: 1 BNC (HD-Analog, HD-TVI, HD-CVI, CVBS selectable)
				2. Resolution:

HD-Analog and HD-TVI: 5MP/1944p @ 20fps and 12.5fps

HD-Analog, HD-TVI and HD-CVI: 4MP/1440p @ 30fps

HD-Analog, HD-TVI and HD-CVI: 2.1MP/1080p @ 30fps

HD-Analog, HD-TVI and HD-CVI: 720p @ 30fps

Analog CVBS: Up to 960H @ 30fps

* + - * 1. Maximum Framerate: 5MP at 20fps,4MP at 30fps
		1. Imager
			1. Sensor: 1/2.8" CMOS
			2. Pixels per sensor: 2592 (H) x 1994 (V) total
			3. Minimum illumination
				1. Color mode: 0.16 lux
				2. Black & white mode: 0.0 lux
			4. Scanning - Progressive
			5. SN Ratio: 52dB
			6. Image Control Settings shall be available for:
				1. On Screen Display;
				2. Camera Title:
				3. Gain control
				4. Automatic white balance (AWB)
				5. Exposure modes: automatic or manual

In manual exposure mode, configurable settings for:

brightness

shutter mode: automatic or manual - 1/30 to 1/30000

digital slow shutter up to 8x to decrease shutter speed in low light

Backlight compensation (BLC)

Auto gain control(AGC)

WDR level: 120 dB minimum

* + - * 1. Day and night settings, to allow configuration for Day (color), Night (Black and White), or Automatic.
				2. Frequency
				3. Image sharpness
				4. Chroma
				5. Image mirror or flip
				6. Digital noise reduction
				7. Privacy zone definition
			1. Lens:
				1. Lens type: 4.0mm Fixed lens
				2. Field of view (FOV): 82o
				3. IR Distance: 50ft
				4. Double shutter Wide Dynamic Range
				5. Shutter speed: 1/30 sec to 1/30000
	1. **PROTOCOL**
		1. Remote control interface: Coaxial control (UTC)
		2. Protocols: COAX: NTSC / PAL
	2. **ELECTRICAL**
		1. Power
			1. Sources
				1. Dual 24 VAC & 12 VDC
			2. Power Consumption
				1. DC12V (LED off): 1.98W, 165mA
				2. DC12V (LED on): 2.62W, 218mA
		2. Connectors
			+ 1. Power Connector 2-pin terminal block with screw terminals
				2. Video Connector BNC
				3. Audio:
	3. **MECHANICAL AND ENVIRONMENTAL**
		1. Housing Material: Die cast Aluminum, polycarbonate dome
		2. Configuration: Micro Dome
		3. Environmental Rating: IP66 environmental-rated water and dust-resistant

IK09-rated impact resistant

* + 1. Dimensions (D x H): 3.14 in. x 2.34 in. (80mm x 59.5 mm)
		2. Temperature:
			1. Operating: -4° F to 122° F (-20° C to 50° C)
		3. Humidity: 10 - 90% RH, non-condensing

END OF SECTION

1. **EXECUTION**
	1. **INSTALLERS**
		1. Contractor personnel shall comply with all applicable state and local licensing requirements.
	2. **PREPARATION**
		1. The network design and configuration shall be verified for compatibility and performance with the camera(s).
		2. Network configuration shall be tested and qualified by the Contractor prior to camera installation.
	3. **INSTALLATION**
		1. Contractor shall follow all Manufacturer published installation procedures and guidelines.
		2. Before permanent installation of the system, the system shall be factory tested in conditions simulating the final installed environment
			1. A report indicating successful test results shall be produced.
	4. **STORAGE**
		1. The IP camerahardwareshall be stored in an environment where temperature and humidity are in the range specified by the Manufacturer.

END OF SECTION