****

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™ 4K UNIVERSAL HD OVER COAX®INDOOR 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 the 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™ 4K UNIVERSAL HD OVER COAX®INDOOR DOME CAMERA**

1. **GENERAL**
	1. **SUMMARY**
		1. The section includes a 4K Universal HD over Coax® analog camera with an indoor dome housing.
		2. Product - A high-definition indoor dome video camera, capable of transmitting 3864 x 2160 video with color in near-total darkness technology over analog connections, in a 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
	2. **REFERENCES**
		1. Abbreviations
			1. AGC – Automatic Gain Control
			2. ARP – Address Resolution Protocol
			3. AWB – Automatic White Balance
			4. BLC – Backlight compression
			5. DNR – Digital Noise Reduction
			6. fps – Frames Per Second
			7. WDR – Wide Dynamic Range
		2. Reference Standards
			1. Emissions
				1. FCC-47 CFR Part 15 Class B
			2. Environmental
				1. ANSI / IEC60529 – Degrees of Protection Provided by Enclosures
	3. **SUBMITTALS**
		1. Product Data
			1. Manufacturer’s printed or electronic data sheets
			2. Manufacturer’s installation and operation manuals
			3. Warranty documentation
	4. **QUALIFICATIONS**
		1. The manufacturer shall have a minimum of five years’ experience in producing IP video equipment.
		2. Installers shall be trained and authorized by the Manufacturer to install, integrate, test, and commission the system.
	5. **DELIVERY, STORAGE, AND HANDLING**
		1. Deliver the camera in the manufacturer’s original, unopened and undamaged container with identification labels intact.
		2. Store the camera in a temperature environment of -4° F to 122° F (-20° F to 50° F), protected from mechanical and environmental conditions as designated by the manufacturer.
	6. **WARRANTY AND SUPPORT**
		1. The manufacturer shall provide a 5-yearwarranty for 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-D3863WTIRW
		2. Alternates: None
	1. **GENERAL DESCRIPTION**
		1. The indoor dome camera system shall capture and transmit 4K video with color in near-total darkness technology over an analog connection, for the purpose of allowing users to integrate it with a digital video recorder or digital video encoder products.
		2. The indoordome camera system shall include color in near-total darkness technology and IR illumination with a vari-focal lens and true day/night functions.
		3. The camera shall possess the following characteristics:
			1. 4K/8MP
			2. Star-Light Plus™ color in near-total darkness technology (0.1 lux)
			3. Day/night operation with IR cut filter
			4. option for Integral IR LED illuminator providing 100-foot distance
			5. Double shutter True Wide Dynamic Range
			6. Integral motion detection
			7. 3D digital noise reduction
	2. **VIDEO**
		1. Connection
			1. The indoor dome camera shall include the following connectors:
				1. Video Output: 1 BNC (HD-Analog, HD-TVI, HD-CVI, CVBS selectable)
				2. Resolution:

4K @ 15fps

4MP/1440p @ 30fps

2.1MP/1080p @ 30fps

* + 1. Imager
			1. Sensor: 1/1.8" CMOS
			2. Pixels per sensor: 3864 (H) x 2160 (V) total
			3. Minimum illumination
				1. Color mode: 0.1 lux
				2. Black & white mode:0.0 lux
			4. Scanning - Progressive
			5. SN Ratio: 55dB
			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 the shutter speed in low light

Auto Gain Control (AGC)

Backlight compensation (BLC)

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: 3.6 ~ 10mmvari-focal p-iris lens
				2. Field of view (FOV): 100.3 - 46.4o
				3. IR Distance: 100ft
				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): 4.27W, 356mA
				2. DC12V(LED on): 6.98W, 582mA
				3. AC24V(LED off): 3.96W, 290mA
				4. AC24V(LED on): 6.38W, 440mA
		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: Plastic housing, polycarbonate dome
		2. Configuration: Dome
		3. Dimensions (D x H): 4.72 in. x 3.51 in. (120mm x 89.4 mm)
		4. Weight: 0.66lbs (0.3kg)
		5. Temperature:
			1. Operating: -4° F to 122° F (-20° C to 50° C)
		6. 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. The 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