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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 the 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.

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**Blackjack® Ai™ Appliance**

**DIVISION 28 – ELECTRONIC SAFETY AND SECURITY (MasterFormat 2016)**

**28 05 00 Common Work Results**

**28 05 19 Storage Appliances for Electronic Safety and Security**

**28 05 19.15 Network Video Recorders**

**Notes to Specifier:**

1. Where several alternative parameters or specifications exist or where the specifier can insert 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 00- Video Surveillance

**Blackjack® Ai™ Appliance**

1. **GENERAL**
	1. **SUMMARY**
		1. The section includes a rack-mounted network appliance embedded with DW AI analytics.
		2. Product - A 17" rack-mountable 2U Chassis network appliance with Windows OS and embedded DW AI Server with 2 x 512GB M.2 with RAID1 data redundancy.
		3. Related Requirements
			1. 27 11 16 – Communications Cabinets, Racks, Frames, and Enclosures
			2. 27 15 01.13 – Video Surveillance Communications Conductors and Cables
			3. 28 05 03 - Safety and Security Network Communications Equipment
			4. 28 05 15 - Servers for Electronic Safety and Security
			5. 28 05 17 - Workstations for Electronic Safety and Security
			6. 28 06 20 - Schedules for Video Surveillance
			7. 28 20 00 - Video Surveillance
	2. **REFERENCES**
		1. Abbreviations
			1. CPU – Central Processing Unit
			2. fps - frames per second
			3. HTTP - Hypertext Transfer Protocol
			4. IP - Internet Protocol
			5. JPEG - Joint Photographic Experts Group
			6. MAC – Media Access Control
			7. MJPEG - Motion JPEG
			8. MPEG - Moving Pictures Experts Group
			9. NVR – Network Video Recorder
			10. PTZ – Pan, Tilt, and Zoom
			11. RADASS – Resolution and Algorithmic Data Adaptive Scaling System
			12. RTP - Real-Time Transport Protocol
			13. RTSP - Real-Time Streaming Protocol
			14. SSD – Solid State Drive
			15. TB - Terabyte
			16. UI –User Interface
			17. VMS - Video Management System
		2. Definitions
			1. E-mapping – Images that can be used as a background in the client software to show server and camera placement at a site.
			2. Media Server – A server/controller for cameras and network connections, including client connections and camera stream encoding to hard disks. An NVR may function as a Media Server.
			3. Motion sensitivity – Degree of pixelization change in a selected area of the video scene required to trigger a recording or alarm.
		3. Reference Standards
			1. Network
				1. IEEE - 802.3 Ethernet Standards
			2. Video
				1. ISO / IEC 14496 – MPEG-4

ISO / IEC 14496–10, MPEG-4 Part 10 ( ITU H.264)

* + - * 1. ISO / IEC 10918 – JPEG
				2. ONVIF – Profile S
	1. **SUBMITTALS**
		1. Product Data
			1. Manufacturer's printed or electronic data sheets
			2. Manufacturer's installation and operation manuals
			3. Warranty documentation
	2. **QUALIFICATIONS**
		1. The Manufacturer shall have a minimum of five years of experience producing IP video equipment and software.
		2. Installers shall be trained and authorized by the Manufacturer to install, integrate, test, and commission the video system.
	3. **LICENSE AND SUPPORT**
		1. Licenses issued by the Manufacturer for camera recording shall not expire for the camera's life.
		2. The product shall include four (4) recorder user licenses.
		3. The product shall include four (4) Ai user licenses.
	4. **WARRANTY**
		1. The product shall carry a five (5) year limited warranty.

END OF SECTION

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

 16220 Bloomfield Avenue. Cerritos,

California USA 90703 USA

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* + 1. Model: DW-BJAiAR2PA4
		2. Alternates: None
	1. **NETWORK APPLIANCE**
		1. The Network AI Appliance ("Appliance") shall be a 17" rack-mount hardware embedded with DW AI Analytics.
		2. Performance
			1. Resolution: HD 1080p
			2. Number of camera streams: Up to 64 channels
			3. Number of analytics streams: Up to 64 channels
		3. Network Connections: Dual Gigabit Ethernet (RJ-45)
		4. Operating System: Windows® 10 OS

Installed on separate 2 x 512GB RAID1 configured M.2 SSD

* + 1. Hardware
			1. Processor: Intel® Core™ i7 processor
			2. System RAM: 64 GB
			3. Power Supply: 1100 W Redundant
			4. Video: 2 x NVIDIA RTX A4000
				1. Interfaces: 1x True HD, 3x Display Port for system configuration.

Maximum one display output at a time.

* + - * 1. Preloaded analytics software: DW IVA Ai server.
				2. IVA Ai configuration tool supported OS: Windows and Linux Ubuntu.
			1. Additional Interfaces: USB
			2. Operating Temperature: 5o ~ 40o C / 5~85% RH
			3. Dimensions (L x W x H): 3.41” x 17.0” x 28.37” (86.8 x 482 x 715.5 mm)
	1. **EMBEDDED ANALYTICS**
		1. Deep Learning object tracking
		2. Zones and lines, tamper, metadata, intrusion, line crossing, counting, counting lines, appear, disappear, stopped, enter, exit, direction, tailgating, dwell, logical rules.

END OF SECTION

1. **EXECUTION**
	1. **INSTALLERS**
		1. Contractor personnel shall comply with all applicable state and local licensing requirements.
		2. Contractor personnel shall be factory-trained and certified to install, service, and maintain the system.
	2. **PREPARATION**
		1. Camera and encoder compatibility shall be verified before deployment.
		2. The network design and configuration shall be verified for compatibility and performance with the IPVMS.
		3. Network configuration shall be tested and qualified by the Contractor before camera installation.
	3. **INSTALLATION**
		1. The Contractor shall follow all Manufacturer published installation procedures and guidelines.
		2. Products shall be installed in areas consistent with Manufacturer recommendations.

END OF SECTION