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**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.

**Electronic Safety and Security**

**Common Work Results for Electronic Safety and Security**

**Network Video Recorders**

**NETWORK VIDEO RECORDER**

1. **– GENERAL**
	1. SUMMARY
		1. Section Includes
			1. Storage Area Network Electronic Safety and Security
			2. Cloud Based Storage for Electronic Safety and Security
			3. Storage Management Software for Electronic Safety and Security
			4. Communications Equipment for Electronic Safety and Security
		2. 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. REFERENCES

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| STANDARD | CE: EN62368-1; EN55032; EN55024; EN55035; EN61000-3-2; EN61000-3-3; EN50130-4FCC: Part 15 Subpart B |

* 1. SYSTEM DESCRIPTION
		1. Section Includes
			1. NETWORK VIDEO RECORDER
	2. SUBMITTALS

* + 1. 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.
		2. Dimensional Drawings; include
			1. Overall device dimensions.
			2. Dimensions specific for installation.
		3. Closeout Submittals
			1. User manual.
			2. Parts list.
			3. Maintenance requirements.
	1. QUALITY ASSURANCE
		1. Manufacturer:
			1. Minimum of [10] years of experience in manufacture and design Video Surveillance Devices.
		2. Video Surveillance System:
			1. List certifying bodies (FCC,CE, etc.)
			2. Provide evidence of compliance upon request.
		3. Installer:
			1. Minimum of [5] years of experience installing Video Surveillance System.
	2. DELIVERY, STORAGE AND HANDLING
		1. Comply with requirements.
		2. Deliver materials in manufacture’s original, unopened, undamaged containers; and unharmed original identification labels.
		3. Protect store materials from environmental and temperature conditions following manufacturer’s instructions.
		4. Handle and operate products and systems according to manufacturer’s instructions.
	3. WARRANTY
		1. Provide manufacturer’s warranty covering [3] years for replacement and repair of defective equipment. Warranty varies country to country.
	4. MAINTENANCE
		1. Make ordering of new equipment for expansions, replacements, and spare parts available to dealers and end users.
		2. Provide factory direct technical support via phone and e-mail.
1. **– PRODUCTS**
	1. MANUFACTURERS
		1. Acceptable Manufacturer:

ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD.

Address: No.1399, Binxing Road, Binjiang District, Hangzhou, P.R. China

Postcode: 310053

Tel: +86-571-87688888 28933188

Email: dhoverseas@dhvisiontech.com

Website: www.dahuasecurity.com

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.]
	1. NETWORK VIDEO RECORDER | DHI-NVR2104-P-S3

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| --- | --- | --- |
| System | Main Processor | Industrial-grade embedded processor |
| System | Operating System | Embedded Linux |
| System | Operating Interface | Web, Local GUI |
| AI | AI by Camera | Perimeter protection; SMD Plus |
| Perimeter Protection | Perimeter Performance of AI by Camera (Number of Channels) | 4 |
| Audio and Video | Access Channel | 4 channels |
| Audio and Video | Network Bandwidth | Access: 80 Mbps; Storage: 80 Mbps; Forward: 60 Mbps |
| Audio and Video | Resolution | 12 MP; 8 MP; 5 MP; 4 MP; 3 MP; 2 MP; 720p; D1 |
| Audio and Video | Decoding Capability | 1-channel 12MP@30 fps; 1-channel 8MP@30 fps; 2-channel 5MP@30 fps; 3-channel 4MP@30 fps; 6-channel 1080p@30 fps |
| Audio and Video | Video Output | 1 × VGA, 1 × HDMI (simultaneous) |
| Audio and Video | Multi-screen Display | 1, 4 views |
| Audio and Video | Third-party Camera Access | Onvif |
| Compression Standard | Video Compression | Smart H.265; H.265; Smart H.264; H.264 |
| Compression Standard | Audio Compression | PCM; G711A; G711U; G726 |
| Network | Network Protocol | HTTP; HTTPS; TCP/IP; IPv4; RTSP; UDP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; DDNS; Alarm Server; IP Search (Supports Dahua IP camera, DVR, NVS, etc.); P2P |
| Network | Mobile Phone Access | Android; iOS |
| Network | Interoperability | ONVIF (profile T/S/G); CGI; SDK |
| Network | Browser | Chrome; IE9 or later; Firefox |
| Recording Playback | Multi-channel Playback | Up to 4 channels |
| Recording Playback | Record Mode | Manual record; alarm record; motion detection record; schedule record |
| Recording Playback | Backup Method | USB device |
| Alarm | General Alarm | Motion detection; privacy masking; video loss; PIR alarm |
| Alarm | Anomaly Alarm | Camera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exception |
| Alarm | Intelligent Alarm | Perimeter protection; SMD Plus |
| Alarm | Alarm Linkage | Recording; snapshot; buzzer; log; preset; email; tour |
| Port | Audio Input | 1 |
| Port | Audio Output | 1 |
| Port | HDD Interface | 1 SATA port, up to 16 TB. The maximum HDD capacity varies with environment temperature |
| Port | USB | 2 (2 rear USB 2.0 ports) |
| Port | HDMI | 1 |
| Port | VGA | 1 |
| Port | Network Port | 1 (10/100 Mbps Ethernet port, RJ-45) |
| Port | PoE Port | 4 × PoE ports, 10/100 Mbps |
| General | Power Supply | 48/53 VDC, 1.25/1.13 A |
| General | Power Consumption | Total output of NVR is ≤ 10 W (without HDD)
Total output power of PoE is 36 W, the maximum output power of a single port is 25.5 W |
| General | Net Weight | 0.48 kg (1.06 lb) |
| General | Gross Weight | 1.37 kg (3.02 lb) |
| General | Product Dimensions | 204.6 mm × 206.4 mm × 45.6 mm (8.06" × 8.13" × 1.80") (W × L × H) |
| General | Packaging Dimensions | 96 mm × 364 mm × 261 mm (3.78" × 14.33" × 10.28") (W × L × H) |
| General | Operating Temperature | –10 °C to +55 °C (14 °F to +131 °F) |
| General | Storage Temperature | 0 °C to +40 °C (+32 °F to +104 °F) |
| General | Operating Humidity | 10%–93% (RH), non-condensing |
| General | Installation | Rack or desktop |

1. **– EXECUTION**
	1. EXAMINATION
		1. Examine areas to receive devices and notify adverse conditions affecting installation or subsequent operation.
		2. Do not begin installation until unacceptable conditions are corrected.
	2. PREPARATION
		1. Protect devices from damage during construction.
	3. INSTALLATION
		1. Install devices in accordance with manufacturer’s instruction at locations indicated on the floor drawings plans.
		2. Perform installation with qualified service personnel.
		3. Install devices in accordance with the National Electrical Code or applicable local codes.
		4. Ensure selected location is secure and offers protection from accidental damage.
		5. Location must provide reasonable temperature and humidity conditions, free from sources of electrical and electromagnetic interference.
	4. FIELD QUALITY CONTROL
		1. Test snugness of mounting screws of all installed equipment.
		2. Test proper operation of all video system devices.
		3. Determine and report all problems to the manufacturer’s customer service department.
	5. ADJUSTING
		1. Make proper adjustment to video system devices for correct operation in accordance with manufacturer’s instructions.
		2. Make any adjustment of camera settings to comply with specific customer’s need.
	6. DEMOSTRATION
		1. Demonstrate at final inspection that video management system and devices functions properly.

END OF SECTION