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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 EN50130-4 FCC: 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-NVR4116HS-4KS2/L

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| Alarm | General Alarm | Motion detection, privacy masking, video loss, PIR alarm, IPC alarm |
| Alarm | Anomaly Alarm | Front-end device going offline, storage error, full storage, IP conflict, MAC conflict, login lock, network security anomaly |
| Alarm | Alarm Linkage | Record, snapshot, IPC external alarm output, buzzer, log, preset, email |
| General | Operating Humidity | 10℅–90℅ |
| General | Certifications | CE: CE-LVD: IEC 62368-1/EN 62368-1 CE-EMC: EN 61000-3-2, EN 61000-3-3, EN 55032, EN 55035, EN 50130-4, EN 55024 FCC: Part 15 Subpart B |
| General | Operating Altitude | 3000m (9843 ft) |
| General | Storage Temperature | 0℃ to 40℃ (+32°F to +104°F) |
| General | Installation | Desktop mounting |
| General | Power Consumption | Lower than 10W |
| General | Product Dimensions | Case: 260mm × 225mm × 47.6mm (W × L × H) 10.24 inch × 8.86 inch × 1.87 inch (W × L × H) |
| General | Net Weight | 0.81kg (1.79 lb) |
| General | Power Supply | DC12V, 2A |
| General | Operating Temperature | -10℃ to +55℃ (+14°F to +131°F) |
| General | Gross Weight | 1.41kg (3.97 lb) |
| General | Packaging Dimensions | Single unit with packaging: 89mm × 333mm × 315mm (W × L × H) 3.50 inch × 13.11 inch × 12.40 inch (W × L × H) |
| General | Storage Humidity | 30%–85% |
| IVS Analytics | IVS | AI by camera functions such as tripwire, intrusion, abandoned object, missing object, people gathering, fast moving, loitering detection, crossing fence. All channels support IVS camera, 1–2 rules for each channel and about 8 events/s. |
| Record Playback | Playback Function | 1. Play, pause, stop, fast forward, fast backward, rewind, play by frame 2. Full screen, backup (cut/file), partially enlarge, audio on/off |
| Recording Playback | Multi-channel Playback | 16 channels |
| Record Playback | Backup | USB device |
| Record Playback | Storage | Local HDD, network |
| Record Playback | Record Mode | Manual, Alarm, MD (Video Detection: Motion Detection, Video Loss, Tampering), Schedule (General, Continuous). |
| Ports | Disk Interface | 1 SATA ports, up to 16 TB.The maximum HDD capacity varies with environment temperature. |
| Ports | VGA | 1 |
| Ports | USB | 1 front USB 2.0 port, 1 rear USB 2.0 port |
| Ports | HDMI | 1 |
| Ports | Audio Input | 1, RCA input |
| Ports | Network | 1 RJ-45, 10/100/1000Mbps (1 gigabit Ethernet port) |
| Ports | PoE Port | None |
| Ports | Alarm Output | None |
| Ports | RS-485 | None |
| Ports | RS-232 | None |
| Ports | Alarm Input | None |
| Ports | Audio Output | 1, RCA output |
| Network | Mobile Phone Access | iDMSS |
| Network | Network Protocol | HTTP, HTTPS, TCP/IP, IPv4, RTSP, UDP, SMTP, NTP, DHCP, DNS, DDNS, P2P |
| Network | Interoperability | ONVIF, CGI, SDK |
| Network | Browser | Chrome, IE9 or above, Firefox |
| System | Main Processor | Industrial-grade embedded microcontroller |
| System | Operating Interface | Web, Local GUI |
| System | Operating System | Embedded Linux |
| Compression | Audio | G.711A/G.711U/PCM/G726 |
| Compression Standard | Video Compression | Smart H.265+/Smart H.264+/H.265/H.264/MJPEG |
| Audio and Video Parameters | Decoding Capability | 2ch@8MP@30fps/4ch@4MP@30fps/8ch@1080P@30fps |
| Audio and Video Parameters | Network Bandwidth | 80 Mbps incoming, 80 Mbps recording and 80 Mbps outgoing |
| Audio and Video Parameters | Third-party Camera Access | Onvif, RTSP, Panasonic, Sony, Axis, Arecont, Pelco, Canon, Samsung |
| Audio and Video Parameters | Video Compression | Smart H.265/H.265/Smart H.264/H.264 |
| Audio and Video Parameters | Access Channel | 16 channels |
| Audio and Video Parameters | Multi-screen Display | 1/4/8/9/16 |
| Audio and Video Parameters | Resolution | 8 MP; 5 MP; 4 MP; 3 MP; 2MP; 720p; D1; |
| Audio and Video Parameters | Video Output | 1 VGA/1 HDMI simultaneous video output, and the maximum resolution 4K |

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