

# 8K 64-channel Network Video Recorder

## 2U 8HDDs WizMind





WizMind Series devices offer Dahua Analytics+ functions for comprehensive, human-oriented analytic solutions. WizMind Series products are ideal for complex applications with demanding requirements that need advanced analytic capabilities.

### System Overview

As a new generation of network video recorders, the AcuPick N98A series offers high-grade recording technology and Analytics+ capabilities that are ideal for IP video security applications. This enterprise-level NVR has a powerful processor, built-in deep learning modules, and image attribute extraction technology. It also comes with high-precision Face Detection+, Perimeter Protection, and 8K resolution support to shorten the response time to events and provide critical information to security personnel so they can take immediate action. This NVR is compatible with numerous third-party devices, making it the perfect solution for security systems with or without a video management system.

### Functions

#### AcuPick

Dahua effectively utilizes both front-end and back-end intelligence to realize AcuPick. AcuPick technology is a true video search engine that can quickly locate the information you need. Use it to find a lost individual, locate a specific vehicle, or pinpoint evidence of a suspect who's damaged another's property.

#### Perimeter Protection

Dahua Analytics+ includes Tripwire and Intrusion functions that offer custom tripwires based on object type for automation in limited access areas. Perimeter Protection requires fewer pixels to detect an object to deliver improved accuracy and decreased false alarms due to lights, weather, trees, or animals.

#### Face Detection+

Face Detection+ technology identifies, tracks, and captures a human face in a digital image and then selects the best image and outputs a snapshot of the face. This technology identifies key facial features and obtains the contours of detected faces.

- Analytics+ by Recorder: AcuPick<sup>1</sup>, 4-channel Face Detection and Face Detection+, 8-channel Metadata, 24-channel Perimeter Protection, 32-channel SMD+
- Analytics+ by Camera: AcuPick<sup>1</sup>, Face Detection, Face Detection+, Perimeter Protection, SMD+, Video Metadata, ANPR, People Counting



#### Smart Motion Detection+

Smart Motion Detection, a component of Dahua's Analytics+ technology, improves alarm accuracy and decreases the number of false alarms. The advanced SMD algorithm analyzes a scene for human or vehicle motion, while filtering out other motion due to trees, leaves, animals, weather, and triggers an alarm when detected. SMD also saves time when searching recorded video by filtering false alarms and allowing quick retrieval of an alarm due to a person or vehicle.

#### Image Attribute Extraction

With deep learning algorithm, Dahua Image Attribute Extraction technology can detect, track, capture vehicle, non-motor vehicle, and people, and select the best images, and extract attributes.

#### Intelligent Business Analysis

The built-in IVS features people counting and heat map functionality, advanced features that add business intelligence to your security system. Intelligent Analysis tracks and stores daily, weekly, monthly, and yearly people flow through a defined scene and produces a configurable report. The system uses this data to produce a Heat Map, a two-dimensional representation of data that provides an immediate visual summary of activity. People Counting and Heat Maps can identify the most active areas of a retail space providing valuable data analysis for commercial applications.

#### Automatic License Plate Recognition (ANPR) Technology

The NVR automatically captures and stores vehicle license plate images from a dedicated license plate capture camera connected to the NVR. During playback, an operator can perform a license plate search by Time and Date to view thumbnail images of all plates captured during the specified time period. License plate capture technology offers effective entrance/exit management, traffic surveillance, and parking lot monitoring.

1. AcuPick is only available when the NVR is used with an AcuPick-enabled camera. AcuPick is not supported by the NVR when used with non-AcuPick or third-party cameras.

## Technical Specification

### System

|                     |                            |
|---------------------|----------------------------|
| Main Processor      | Industrial-grade Processor |
| Operating System    | Embedded Linux             |
| Operating Interface | Web, Local GUI             |

### Analytics+ Recording<sup>2</sup>

|                    |  |
|--------------------|--|
| Recorder Functions | Face Detection, Video Analytics (Human, Vehicle, Non-motor Vehicle), Smart Motion Detection+   |
| Camera Functions   | Face Detection, Video Analytics (Human, Vehicle, Non-motor Vehicle), Smart Motion Detection+, Stereo Analysis, Crowd Distribution, People Counting, ANPR, Vehicle Density, Object Monitoring |

### Perimeter Protection Recording

|          |  |
|----------|--|
| Recorder | 24 channels (10 IVS Rules Per Channel) |
| Camera   | 64 channels                            |

### Face Detection Recording

|                   |   |
|-------------------|---|
| Face Attributes   | Gender, Age Group, Glasses, Expressions, Face Mask, Beard |
| Recorder Channels | 4 Channels (Up to 12 Face Images Per Channel)             |
| Camera Channels   | 64 channels   |

### Face Detection+ Recording

|                   |  |   |
|-------------------|--|---|
| Face Database     | Capacity   | Up to 40 Databases with 300,000 images (Max. 48 GB)   |
|                   | Analytics  | Name, Gender, Birthday, Address, Credential Type, Credential Number, Country, Region, State |
| Recorder Channels | <ol style="list-style-type: none"> <li>20 channels with an image stream of 20 images when the NVR is used for Face Detection+ functionality and the camera is used for Face Detection functionality</li> <li>4 channels with smage stream of 12 images when only the NVR is used for Face Detection and Face Detection+ functionality (No camera involvement for Face Detection or Face Detection+ functionality)</li> </ol> |   |
| Camera Channels   | 64 channels when only the camera is used for Face Detection and Face Detecion+ functionality (No NVR involvement for Face Detection or Face Detection+ functionality)  |   |

### Smart Motion Detection+ (SMD+) Recording

|                   |             |
|-------------------|-------------|
| Recorder Channels | 32 Channels |
| Camera Channels   | 64 channels |

### Video Analytics

|                              |   |
|------------------------------|---|
| Recorder Channels            | 8 Channels  |
| Camera Channels              | 32 Channels   |
| Human Attributes             | Top Color, Top Type, Hat, Bag, Age, Gender, Umbrella                                    |
| Motor Vehicle Attributes     | License Plate, Plate Color, Vehicle Model, Vehicle Logo, Plate Color, Ornament, Calling |
| Non-motor Vehicle Attributes | Vehicle Model, Vehicle Color, Number Of Persons, Helmet                                 |

### Vehicle License Plate Comparison

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| ANPR by Camera (Number of Channels) | 32 Channels                       |
| License Plate Database Capacity     | 20,000 (Blocklist and Allow List) |

## Audio and Video

|                           |   |   |
|---------------------------|---|---|
| Access Channel            | 32 Channels   |   |
| Network Bandwidth         | Incoming  | Analytics+ Disabled: 1024 Mbps<br>Analytics+ Enabled: 512 Mbps  |
|                           | Recording   | Analytics+ Disabled: 1024 Mbps<br>Analytics+ Enabled: 512 Mbps  |
|                           | Outgoing  | Analytics+ Disabled: 800 Mbps<br>Analytics+ Enabled: 400 Mbps   |
| Resolution                | 32MP, 24MP, 16MP, 12MP, 8MP, 5MP, 4MP, 1080p, 720p, D1  |   |
| Decoding Capability       | 2 Channel: 32MP at 30 fps or 24 MP at 30 fps<br>4 Channel: 16MP at 30 fps<br>8 Channel: 8MP at 30 fps<br>16 Channel: 4MP at 30 fps<br>32 Channel: 1080p at 30 fps<br>64 Channel: 1080p at 15 fp or 720p at 30 fps |   |
| HDMI                      | 2.1   | Input 3   |
|                           | 2.0   | Input 1<br>Input 2  |
|                           | 1.4   | Input 4   |
| Video Output              | Simultaneous Mode   | 2-channel VGA, 4-channel HDMI Video Output<br><br><b>Maximum Resolution</b><br>VGA1 and VGA2: 1080p<br>HDMI1 and HDMI2: 4K<br>HDMI3: 8K<br>HDMI4:1080p  |
|                           | Heterogeneous Mode  | 2-channel VGA, 4-channel HDMI Video Output<br><br>Simultaneous video source output for VGA1 and HDMI1 or VGA2 and HDMI2<br><br><b>Maximum Resolution</b><br>VGA1 and VGA2: 1080p,<br>HDMI1, HDMI2 and HDMI3: 4K<br>HDMI4: 1080p |
| Multi-screen Display      | Main Screen: 1/4/8/9/16/25/36<br>Sub Screen: 1/4/8/9/16/25/36   |   |
| Third-party Camera Access | ONVIF, RTSP, Sony, Axis, Arecont, Pelco, Canon, Samsung   |   |

## Compression Standard

|                   |   |
|-------------------|---|
| Video Compression | Smart H.265+, H.265, Smart H.264+, H.264, MJPEG (Sub Stream Only) |
| Audio Compression | G.711a, G.711Mu, PCM, G726, AAC, G.723                            |

## Network

|                     |  |
|---------------------|--|
| Network Protocol    | HTTP, HTTPS, TCP/IP, IPv4, RTSP, UDP, NTP, DHCP, DNS, SMTP, UPnP, DDNS, Alarm Server, IP Search (Supports Dahua IP camera, DVR, NVS, etc.), Multicast, P2P, Auto Registration, iSCSI |
| Mobile Phone Access | iOS, Android   |
| Interoperability    | ONVIF (Profile S/profile T/Profile G), CGI, SDK  |
| Browser             | Chrome, Edge, Firefox  |
| Network Mode        | Multi-address Mode, Load Balance, Fault Tolerances   |

## Recording Playback

|                        |  |
|------------------------|--|
| Multi-channel Playback | Up to 16 channels  |
| Record Mode            | Manual, Alarm, Motion Detection, Scheduled   |
| Backup Method          | Portable Hard Drive, eSATA, Disk Burner, USB Device, Network   |
| Playback Mode          | <ol style="list-style-type: none"> <li>Play, Pause, Stop, Fast Forward, Fast Backward, Rewind, Play by Frame</li> <li>Full Screen, Backup (Cut/File), Partially Enlarge, Audio On/Off</li> </ol> |

## Storage

|              |                 |
|--------------|-----------------|
| Disk Group   | Yes             |
| RAID         | RAID 0/1/5/6/10 |
| Hot Swapping | Yes             |

<sup>2</sup> The recorder's Analytics+ functions are available only when connected to a Dahua network camera with Analytics+ functionality.

Alarm

|                   |   |
|-------------------|---|
| General Alarm     | Motion Detection, Video Tampering, Video Loss, Scene Changing, PIR Alarm, IPC External Alarm  |
| Anomaly Alarm     | Camera Offline, Storage Error, Disk Full, IP Conflict, Mac Conflict, Login Lock, Abnormal Fan Behavior  |
| Intelligent Alarm | Face Detection, Face Detection+, Perimeter Protection (Intrusion And Tripwire), SMD+ Alarms, ANPR, People Counting, Stereo Analysis, Crowd Distribution, Heat Map |
| Alarm Linkage     | Record, Snapshot, IPC External Alarm Output, Buzzer, Log, Preset, Email   |

Auxiliary Interface

|               |  |
|---------------|--|
| Audio Input   | 1-channel RCA  |
| Audio Output  | 2-channel RCA  |
| Alarm Input   | 16 channels  |
| Alarm Output  | 8 channels   |
| HDD Interface | 8 SATA ports, up to 16 TB. The maximum HDD capacity varies with environment temperature. |
| eSATA         | 1  |
| RS-232        | 1  |
| RS-485        | 1 x A/B  |
| USB           | 4 (2 front USB 2.0 ports, 2 rear USB 3.0 ports)  |
| HDMI          | 4  |
| VGA           | 2  |
| Network Port  | 2 (10/100/1000/2500 Mbps Ethernet port, RJ-45)   |

Electrical

|                   |                       |
|-------------------|-----------------------|
| Power Supply      | 100–240 VAC, 50/60 Hz |
| Power Consumption | <18 W (without HDD)   |

Environmental

|                       |                                     |
|-----------------------|-------------------------------------|
| Operating Temperature | –10 °C to +55 °C (14 °F to +131 °F) |
| Operating Humidity    | 10%–93% (RH)                        |

Certifications

|                               |  |
|-------------------------------|--|
| Safety                        | UL 62368-1<br>CAN/CSA C22.2 No.62368-1-14  |
| Electromagnetic Compatibility | FCC: 47 CFR FCC Part15, SubpartB, Class A<br>EN 55032:2020, Class A<br>EN IEC 61000-3-2:2019<br>EN 61000-3-3:2013+A1:2019<br>EN 55024:2010+A1:2015<br>EN 55035:2020<br>EN 50130-4:2011+A1:2014 |

Electrical

|                                  |  |
|----------------------------------|--|
| Net Weight                       | 6.4 kg (14.11 lb) (without HDD)                                      |
| Gross Weight                     | 10.35 kg (22.82 lb) (without HDD)                                    |
| Product Dimensions (W x D x H)   | 444.0 mm x 456.6 mm x 95.0 mm<br>(17.48 in. x 17.98 in. x 3.74 in.)  |
| Packaging Dimensions (W x D x H) | 570.0 mm x 570.0 mm x 226.0 mm<br>(22.44 in. x 22.44 in. x 8.90 in.) |
| Installation                     | Rack or Desktop  |

Ordering Information

| Type                   | Part Number | Description   |
|------------------------|-------------|---|
| 64-Channel WizMind NVR | N9A85N      | 64-channel 2U 8HDDs WizMind AcuPick NVR (No Built-in HDD)   |
|                        | N98A6N4     | 64-channel 2U 8HDDs WizMind AcuPick NVR (4 TB Built-in HDD) |
|                        | N98A6N8     | 64-channel 2U 8HDDs WizMind AcuPick NVR (8 TB Built-in HDD) |
|                        | N98A6N10    | 64-channel 2U 8HDDsWizMind AcuPick NVR (10 TB Built-in HDD) |
| Accessories (Optional) | ESS1504C    | 4 HDDs eSATA Storage  |

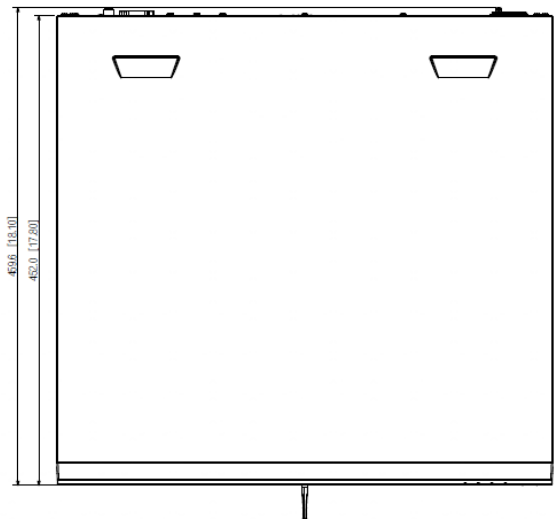
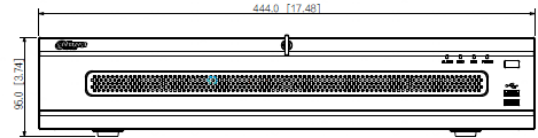
Accessories (Optional)



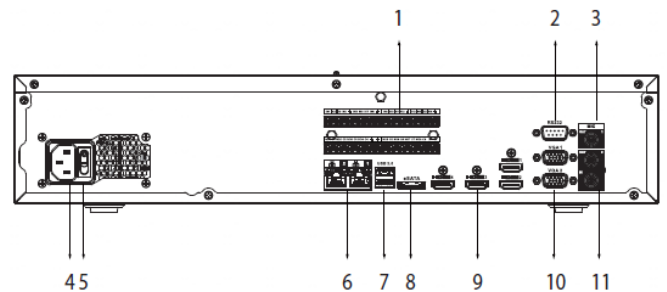
ESS1504C  
4 HDDs eSATA Storage

Dimensions

mm [in.]



Rear Panel



- 1 Alarm In/Out
- 2 RS-232 Port
- 3 AUDIO OUT, RCA Connector
- 4 Power Input
- 5 Power Switch
- 6 Network Ports
- 7 USB Ports
- 8 eSATA Port
- 9 HDMI Ports
- 10 VGA Ports
- 11 AUDIO IN, RCA Connector