DAHUA TECHNOLOGY

8K 128-channel Network Video Recorder
2U 8HDDs WizMind

- Maximum Bandwidth of 1024 Mbps Incoming, 1024 Mbps Recording, 800Mbps Outgoing
- Support HDMI 2.1 Interface
- Supports N+M cluster
- Support RAID 0/1/5/6/10
- Drawer-like chassis design allows for HDD hot swapping
- Analytics+ by Recorder: 4-channel Face Detection and Face Detection+; 24-channel Perimeter Protection; 32-channel Smart Motion Detection+
- Analytics+ by Camera: Face Detection, Face Detection+, Perimeter Protection, SMD Plus, ANPR, and People Counting

Perimeter Protection | Face Detection | SMD Plus | Search by Image | Heat Map | ANPR | People Counting

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 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 4K 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

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.

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.

Technical Specification

System

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

Analytics+ Recording[1]

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	Capactiy	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		1. 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 2. 4 channels with smage stream of 12 images when only the NVR is used for Face Detection and Face Detection+ functionality (No camera involvment for Face Detection or Face Detection+ functionality)
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 Metadata

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		128 Channels
Network Bandwidth	Incoming	Analytics+ Disabled: 1024 Mbps Analytics+ Enabled: 512 Mbps
	Recording	Analytics+ Disabled: 1024 Mbps Analytics+ Enabled: 512 Mbps
	Outgoing	Analytics+ Disabled: 800 Mbps 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 4 Channel: 16MP at 30 fps 8 Channel: 8MP at 30 fps 16 Channel: 4MP at 30 fps 32 Channel: 1080p at 30 fps 64 Channel: 1080p at 15 fps or720p at 30 fps 128 Channel: D1 at 30 fps
HDMI	2.1	Input 3
	2.0	Input 1 Input 2
	1.4	Input 4
Video Output	Simultaneous Mode	2-channel VGA, 4-channel HDMI Video Output Maximum Resolution VGA1 and VGA2: 1080p HDMI1 and HDMI2: 4K HDMI3: 8K HDMI4:1080p
	Heterogeneous Mode	2-channel VGA, 4-channel HDMI Video Output Simultaneous video source output for VGA1 and HDMI1 or VGA2 and HDMI2 Maximum Resolution VGA1 and VGA2: 1080p, HDMI1, HDMI2 and HDMI3: 4K HDMI4: 1080p
Multi-screen Display		Main Screen: 1/4/8/9/16/25/36 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	1. Play, Pause, Stop, Fast Forward, Fast Backward, Rewind, Play by Frame 2. Full Screen, Backup (Cut/File), Partially Enlarge, Audio On/Off

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1. The recorder's Analytics+ functions are available only when connected to a Dahua network camera with Analytics+ functionality.

Storage

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

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 CAN/CSA C22.2 No.62368-1-14
Electromagnetic Compatibility	FCC: 47 CFR FCC Part15, SubpartB, Class A EN 55032:2020, Class A EN IEC 61000-3-2:2019 EN 61000-3-3:2013+A1:2019 EN 55024:2010+A1:2015 EN 55035:2020 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 × 456.6 mm x 95.0 mm (17.48 in. × 17.98 in. × 3.74 in.)
Packaging Dimensions (W x D x H)	570.0 mm × 570.0 mm × 226.0 mm (22.44 in. × 22.44 in. × 8.90 in.)
Installation	Rack or Desktop

Ordering Information

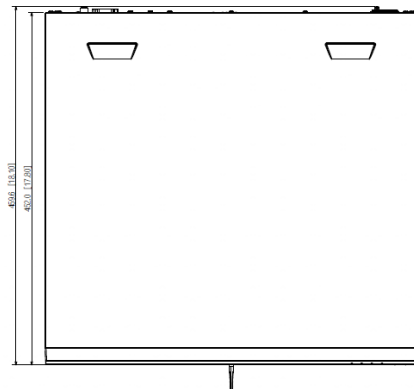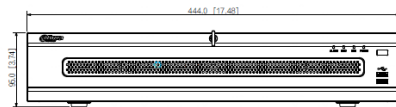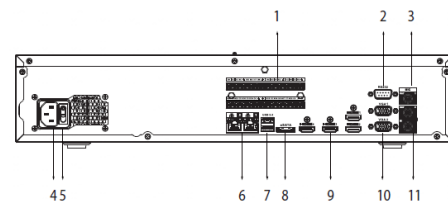| Type	Part Number	Description
128 Channels WizMind NVR	N98A7N	128-channel 2U 8HDDs WizMind Network Video Recorder (No Built-in HDD)
	N98A7N4	128-channel 2U 8HDDs WizMind Network Video Recorder (4 TB Built-in HDD)
	N98A7N8	128-channel 2U 8HDDs WizMind Network Video Recorder (8 TB Built-in HDD)
	N98A7N10	128-channel 2U 8HDDs WizMind Network Video Recorder (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		