DHI-NVR616R-64/128-4KS2

64/128 Channel 3U 16HDDs Ultra series Network Video Recorder

- New 4.0 user interface
- 16-channel decoding @1080p (30 fps); self-adaptive decoding capability
- Access, storage or forwarding at 384 Mbps
- Simultaneous video output for VGA and HDMI1; 4K heterogeneous output for the 2 HDMI ports
- Multiple data mode such as Raid0, Raid1, Raid5, Raid6, and Raid10
- Remote configuration and management of IPCs, such as setting parameters, acquiring information and upgrading IPCs of the same model in batches
- AI-by-camera functions such as perimeter protection, face detection and recognition, SMD Plus, video metadata, ANPR and 3D behavior analysis
- N+M cluster. When the host fails, the standby device will continue to record; once the host recovers, video recorded on the standby device will be transmitted back

Cluster	Face Detection	Motor Vehicle Attribute	Non-motor Vehicle Attribute	Perimeter Protection	IVS
Stereo Analysis	SMD Plus	RAID	HDMI		

Series Overview

Dahua's next generation network video recorder offers unparalleled recording technology for IP video surveillance applications. For applications where details are critical for identification, this enterprise-level NVR provides a powerful Intel processor with up to 4K resolution. Additionally, the NVR features a mouse shortcut operation menu, remote management and control, centre storage, edge storage, and back up storage.

This NVR is ideal for a wide range of applications such as public safety, transportation sta tions, government institutions, hotel resorts, shopping malls, city centers, and financial institutions, where demand expansion flexibility, high reliability and centralized storage management.

The NVR is compatible with numerous third-party devices making it the perfect solution for surveillance systems with or without a video management system (VMS). Its open architecture supports multi-user access and is compatible with ONVIF.

Functions

Perimeter Protection by Camera
Automatically filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improving alarm accuracy.
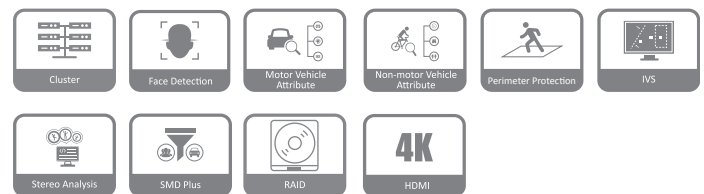
SMD Plus by Camera
With intelligent algorithm, Dahua Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

Video Metadata by Camera
With deep learning algorithm, Dahua Video Metadata technology can detect, track, capture vehicle, non-motor vehicle and people, and select the best images, and extract attributes.

ANPR by Camera
With deep learning algorithm, Dahua ANPR technology can recognize the number plate information of vehicles in the image with ANPR cameras. Support block/allowlist mode, searching target vehicles from recorded video.

Stereo Analysis by Camara
With deep learning algorithm and scene 3-dimensional information, Dahua Stereo Analysis technology can recognize people's behaviors, such as fall detection, violence detection, strand detection, and space exception, and then generates alarm signals and triggers linkage.

N+M Hot Standby
The highly reliable redundancy N+M Hot Standby design provides a secure, failover technique ensuring immediate backup. In the event of a system failure, the sub instantly takes over the main ensuring no data is lost.

RAID
Support RAID 0,RAID 1,RAID 5,RAID 6,RAID 10 (optional). It can Improve your storage speed, while ensuring data security.

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Technical Specification

System

Main Processor	Industrial embedded micro-processor
Operating System	Embedded Linux
Operation Interface	Web/local GUI

Perimeter Protection by Camera

Performance	24 channels
AI Search	Search pictures by channel, time, event type

Face Recognition by Camera

Performance	24 channels
Face Attributes	6 attributes: Gender, age, glasses, expression, mouth mask, and beard
AI Search	Search pictures by channel, time and face attributes

SMD Plus by Camera

Performance	32 channels
AI Search	Search by target classification (Human, Vehicle)

Video Metadata by Camera

Performance	12 channels
Human Body	Top, top color, bottom, bottom color, hat, bag, gender, age, umbrella
Vehicle	Plate No., type, color, vehicle type, logo, plate color, ornament, calling, seatbelt, region
Non-motor Vehicle	Type, color, number of passengers, helmet
AI Search	Support search target video by metadata

ANPR by Camera

Performance	8 channels

Stereo Analysis by Camera

Performance	32 channels
AI Search	Search by target classification (Fall Detection, People Approach Detection, People No. Exception Detection, People Staying Detection, Violence Detection)

Video

Access Channel	64/128
Network Bandwidth	384 Mbps for access, 384 Mbps for storage and 384 Mbps for forwarding
Resolution	12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/ 1080p/960p/720p/D1/CIF/QCIF
Decoding Capability	16-ch@1080p (30 fps)
Video Output	VGA: 1920 × 1080, 1280 × 1024, 1280 × 720 HDMI1/HDMI2: 3840 × 2160@30 fps, 3840 × 2160 @25 fps, 1920 × 1080, 1280 × 1024, 1280 × 720 1 channel VGA output, 2 channels HDMI output, VGA and HDMI 1 homologous output, double HDMI heterogeneous output. Support 4K display for both HDMI1 and HDMI2
Multi-screen Display	1st Screen: 1/4/8/9/16/25/36/64
	2nd Screen: 1/4/8/9/16

Third Party Camera Access

Third Party Camera Access	Panasonic, Sony, Samsung, Axis, Pelco, Arecont, Onvif, Canon and more

Compression

Video	Smart H.265+/H.265/Smart H.264+/H.264/MPEG4/ MJPEG
Audio	MP2/G726/G729/G722/G723/G711A/G711U/PCM

Network

Network Protocol	HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, SNMP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE,DDNS, FTP, Alarm Server, IP Search (Support Dahua IP camera, DVR, NVS, etc.), P2P
Mobile Phone Access	iOS, Android
Interoperability	ONVIF (profile T/S/G), CGI, SDK
Browser	Chrome, IE9 or later, Firefox

Record Playback

Multi-channel Playback	1/4/9/16
Record Mode	Manual, Schedule (General, MD (Motion Detection), Alarm, MD & Alarm, Intelligent, POS)
Storage Method	Local HDD and network
Backup	Hard drive, USB device, eSATA device
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

Storage

Disk Group	Support
Raid Support	RAID 0/1/5/6/10

Alarm

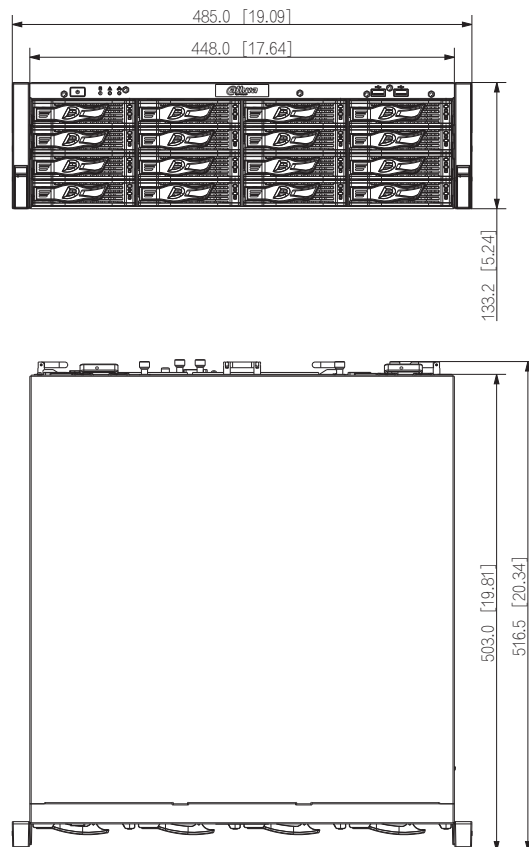|	
General Alarm	Motion detection, privacy masking, video loss, local alarm, PIR alarm, IPC alarm
Anomaly Alarm	Camera offline, storage error, full storage, IP conflict, MAC conflict, login lock, network security anomaly
Intelligent Alarm	Perimeter protection, face detection, face recognition, SMD, video metadata (human, motor-vehicle, non-motor vehicle), ANPR, people counting, stereo analysis, crowd distribution, heatmap,video quality diagnosis
Alarm Linkage	Record, snapshot, IPC external alarm output, buzzer, log, preset, email

External Port

Audio Input	1 channel, RCA connector
Audio Output	1 channel, RCA connector
HDD	16 SATA III ports, up to 10 TB for a single HDD
Alarm Input	16 channels
Alarm Output	8 channels
eSATA	1 eSATA
SAS	1 Mini SAS Port, for Storage Expansion
RS-232	1 channel, used to debug and pass through serial data

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RS-485	1 channel, used to control PTZ, and it supports multiple protocols
USB	2 front USB 2.0 ports, 2 rear USB 3.0 ports
HDMI	2
VGA	1
Network	6 in total, 4 × RJ45 10/100/1000 Mbps self-adaptive Ethernet ports and 2 × 1000 Mbps optical port

General Parameter

Power Supply	Redundant, AC100V–240V, 50–60 Hz
Power Consumption	< 51 W (Without HDD)
Net Weight	19.1 kg (42.1 lb) (Without HDD)
Gross Weight	28.5 kg (62.8 lb) (Without HDD)
Product Dimensions	485 mm × 516.5 mm × 133.2 mm (W × L × H) 19.09 inch × 20.34 inch × 5.24 inch (W × L × H)"
Package Dimensions	648 mm × 723 mm × 445 mm (W × L × H) 25.51 inch × 28.46 inch × 17.52 inch (W × L × H)
Operating Conditions	−10°C to +55°C (+14°F to +131°F), +35°C (+95°F) when raid enabled
Storage Conditions	0°C to +40°C (+32°F to +104°F)
Operating Humidity	10%–93% (RH)
Storage Humidity	30%–85% (RH)
Operating Altitude	3000 m (9843 ft)
Certifications	CE: EN55022, EN55024, EN50130-4, EN60950-1 FCC: Part 15 Subpart B, ANSI C63.4-2014 UL: UL 60950-1 and CAN/CSA C22.2 No.60950-1

Ordering Information

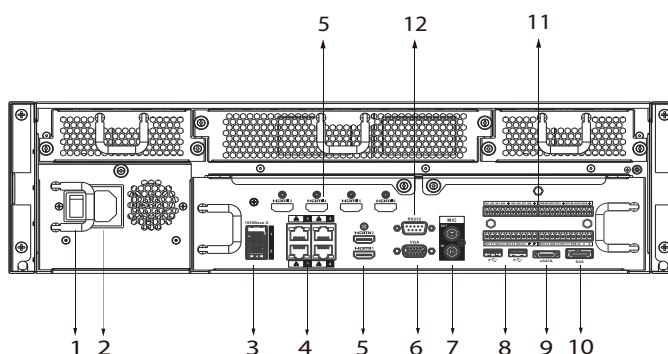| Type	Model	Description
64 Channel NVR	DHI-NVR616R-64-4KS2	64 Channel Ultra Series 4K H.265 Network Video Recorder
128 Channel NVR	DHI-NVR616R-128-4KS2	128 Channel Ultra Series 4K H.265 Network Video Recorder
Accessories	ESS3116S-J(R)	16 HDDs SAS Storage Cabinet

Accessories

ESS3116S-J(R)
16 HDDs SAS Storage Cabinet

Dimensions (mm[inch])

Panels

1	Power Switch	2	Power Input
3	Optical Fiber Ports	4	Network Ports
5	HDMI Ports	6	VGA Port
7	AUDIO IN/OUT, RCA Connector	8	USB Ports
9	eSATA Port	10	SAS Port
11	Alarm In/Out	12	RS-232 Port