ZNR-429-32ch

Deep Learning AI 32-Channel 8-Bay RAID 2U Rackmount Standalone NVR



- 32 channels, 32 Free Licenses
- 8 Storage Bay(s)
- Hardware RAID (on Board) 0, 1, 5, 6, 10
- Rack Space: 2U, Rackmount Standalone NVR
- Embedded Linux
- ARM-based embedded SoC
- Audio, Digital Input/Output, HDMI x 2, VGA x 2
- Built-in Core Analytics, Object Metadata, Deep Learning AI
- Forensic Search, Event Search, Smart Search, Metadata Search
- Object Visual Tracking
- Multi-Browser Support

Specifications

Product Profile

Product Type	Standalone NVR
Maximum Resolution	32MP
Maximum Number of Video Devices	32
Maximum Number of Clients	Local: 1, Remote: 128
Supported Screen Resolution	HDMI: 3840x2160 (60Hz/30Hz), 1920x1080 (60Hz/50Hz), 1600x1200 (60Hz), 1280x1024 (60Hz), 1280x720 (60Hz), 1024x768 (60Hz)

Hardware

System Architecture	Embedded SoC-based (ARM platform)
CPU	ARM-based embedded SoC

License

License required	No
Free License	32

Live View

Display Layout Mode	1, 4, 6, 8, 9, 16, 25, 32
Fisheye Dewarping	Yes (Live View, Playback)
Local Live View performance	[Smart IVA Off] 32ch (up to 30 fps at 1080p) 20ch (up to 30 fps at 3MP) 16ch (up to 30 fps at 4MP) 12ch (up to 30 fps at 5MP) 10ch (up to 30 fps at 2MP 1920 x 1080) 8ch (up to 30 fps at 4K) 5ch (up to 30 fps at 12MP) 4ch (up to 30 fps at 16MP) 2ch (up to 30 fps at 32MP)
Digital Zoom	Yes
Event Status	Display event status upon alarm or upon connection loss or recovery between server and client
Instant Playback	Instant Playback in live view window

PTZ

PTZ Control	PTZ Control, Speed Control

Video

Compression	H.265 Adaptive Stream, H.264 Adaptive Stream

Analytics

NVR Built-in Analytics	Smart Intrusion Protection (detect people, vehicles entering/ exiting area or crossing the line), Smart Motion Detection (detect when the people, vehicles or other objects move in the predefined area), Face Recognition, Face Detection, Object Metadata
NVR Analytics Maximum Channels	Smart Intrusion Protection: 2 channels Smart Motion Detection: 4 channels
NVR Object Metadata	Gender, Age, Glasses, Mask, Vehicle type, Vehicle color, Vehicle brand, Vehicle driving direction, License plate type, License plate color, License plate number
Deep Learning AI	2.0
Object Recognition Database	Face Picture Capacity: 40,000 Vehicle Picture Capacity: 25,000
Maximum Snapshot Capacity	Captured Face Snapshots: 3,000,000 Captured Vehicle Snapshots: 2,000,000 Captured Object Snapshots via Smart Intrusion Protection: 2,000,000 Object Metadata Snapshots: 2,000,000
Analytics from Camera	Receive analytics based events from the cameras and respond to the events: Face Detection; Smart Motion Detection (People Detection, Vehicle Detection); Smart Intrusion Protection (Intrusion Detection, Line Crossing Detection, Enter Area Detection, Exit Area Detection); People Counting (People Line Counting, People Area Counting, People Flow Counting, Crowd Detection); Object Metadata; Object Recognition; Temperature Detection (Fire Detection, Smoking Detection, Smoke Detection, Temperature Measurement); Traffic Monitoring

Audio

Audio Type	2-way, Line-in, Line-out
Audio Compression	G.711 A-law, G.711 u-law, AAC

Network

Network Protocol & Service	IPv4, IPv6, TCP, UDP, DHCP, PPPoE, HTTP, HTTPS, DNS, DDNS, NTP, RTSP, SMTP, TLS 1.2, TLS 1.3, SNMP, IEEE 802.1X, NFS
Ethernet Port	2 x Ethernet (10/100/1000 Base-T), RJ-45 connector
Maximum Outgoing Throughput	384 Mbps

Security	TLS v1.2, TLS v1.3 encrypted communication

Recording

Scheduled Recording	Yes
Event Recording	Yes
Manual Recording	Yes
Maximum Recording Throughput	384 Mbps

Search & Playback

Playback Control	Continuous forward and backward playback with speeds 0.125x/0.25x/0.5x/1x/2x/4x/8x/16x, play, pause, stop
Synchronized Playback	16 channels (Local), 32 channels (Remote)
Event Search	Search within previously recorded AI events
Smart Search	Set ROI and look for the people and vehicles appearing in the ROI in the past recordings (requires cameras with Smart Motion Detection feature)
Forensic Search	Select target object (people, vehicle) and search for the similar object through all the channels, with the eMap popping up to display event locations.
Metadata Search	Select attribute filters (color, gender, age, etc) and find thumbnails matching the criteria
Object Visual Tracking	View thumbnails generated by Forensic Search and playback by time sequence

Event

Event Trigger	[NVR]: IP address conflict, Disk full, Disk not found, Disk abnormal, Low disk space, Illegal access, Recording or Snapshot abnormal, Crowd detection with three different concurrent thresholds with priority, Smart Intrusion Protection, Smart Motion Detection, Face Recognition [Video Device]: Video motion detection, Tampering detection, Defocus detection, External device through digital input, Sound detection, Video loss, Smart Intrusion Protection, Smart Motion Detection, Face Recognition, Face Detection, People Detection, Vehicle Detection, People Line Crossing Detection, People Enter Area Detection, People Exit Area Detection, Vehicle Line Crossing Detection, Vehicle Enter Area Detection, Vehicle Exit Area Detection, Temperature Detection, Fire Detection, Smoke Detection, Missing Object Detection, Unattended Object Detection, PTZ Auto Tracking, People Counting, Crowd Detection, Automatic License Plate Recognition, Traffic Monitoring
Event Response	E-mail notification with snapshots, Play alert sound, Pop-up window, Activate external device through digital output

System

Server Operating System	Embedded Linux
USB	2-Port USB 2.0, 2-Port USB 3.0

Integration

ONVIF Compliant	Yes, Profile S, Profile G, Profile T
Web Browser	IE 10 or newer, Google Chrome, Microsoft Edge, Firefox

Storage

Storage Bay	SATA, Max. 8 Disk(s) (without storage disks)
Maximum Recording Capacity	24TB x8

RAID Level	Hardware RAID (on Board) 0, 1, 5, 6, 10

Interface

Serial Port	1 x RS-485, 1 x RS-232
Audio Interface	1/2, RCA Jack
Digital Input/Output	16/10
External Storage Interface	eSATA
Local Display Interface	HDMI x 2, VGA x 2

General

Power Source	AC 100-240V
Power Consumption	20 W (AC, without HDD)
Dimensions	(W x H x D): 442mm x 86mm x 432mm (17.4" x 3.4" x 17.0") Rack Space: 2U
Bundled Accessories	Rack Bracket
Fan	Yes, 1 fan(s)
Operating Temperature	-10°C ~ 60°C (14°F ~ 140°F)
Operating Humidity	≤90% RH, non-condensing
Approvals	CE Class B, FCC Class B, UL Listed, BSMI
Color	Black
Warranty	2 Year(s). For extended warranty offering, see http://www.acti.com/support/warranty

Related Products

Network & Storage Peripherals - Hard Disk

PHDD-2200		WD WD1005FBYZ 1TB 3.5" Hard Disk Drive, 7200 RPM 128 MB Cache (for ENR-0x0P, ENR-110, ENR-120, ENR-130, ENR-22x, ENR-22xP, GNR-310, GNR-320, INR-100, INR-340, INR-430, INR-440, INR-450, INR-460)
PHDD-2301		HGST ULTRASTAR 7K6000 2TB 3.5" Hard Disk Drive, 7200 RPM 128MB Cache (for ENR-1xx,ENR- 0x0P, ENR-22x, ENR-22xP)
PHDD-2303		WD Purple 2TB 3.5" SATA Hard Disk Drive, 5400 RPM 64 MB Cache (for ZNR-126, ZNR-127, ZNR-129, ZNR-221P, ZNR-222P, ZNR-224, ZNR-423, ZNR-424, ZNR-425, ZNR-429, ZNR-431, KNR-120, KNR-121, KNR-220P, KNR-420, KNR-421)
PHDD-2504		WD Purple 4TB 3.5" SATA Hard Disk Drive, 5400 RPM 128 MB Cache (for ZNR-126, ZNR-127, ZNR-129, ZNR-221P, ZNR-222P, ZNR-224, ZNR-423, ZNR-424, ZNR-425, ZNR-429, ZNR-431, KNR-120, KNR-121, KNR-220P, KNR-420, KNR-421)
PHDD-2703		WD Purple 6TB 3.5" SATA Hard Disk Drive, 5400 RPM 256 MB Cache (for ZNR-126, ZNR-127, ZNR-129, ZNR-221P, ZNR-222P, ZNR-224, ZNR-423, ZNR-424, ZNR-425, ZNR-429, ZNR-431, KNR-120, KNR-121, KNR-220P, KNR-420, KNR-421)
PHDD-2M00		WD Ultrastar 24TB 3.5" Hard Disk Drive, 7200 RPM 512MB Cache

Controllers - Joystick

PJSK-0102		Joystick for PTZ Control (for ZNR Series, YVR Series, KNR Series)