ND9322P-v2
ND9424P-v2

H.265 8-CH/16-CH
Embedded Plug & Play NVR

core+ 3.0

H.265/H.264 • 4K Display • 8/16 x PoE Port • RAID 0, 1 •
Fisheye Dewarp • Web Plugin Free • Cybersecurity

VIVOTEK's ND9322P-v2/ND9424P-v2 is a new generation H.265 Linux-based standalone NVR that supports up to 4K IP camera video decoding and local 4K video display. With advanced H.265 compression technology, users are able to experience Full HD quality video while expending less HDD capacity than H.264.

The NVR features embedded 8/16x 802.3 at/af PoE ports to provide users easy and convenient IP camera installation, and also supports remote and mobile access via VIVOCloud and iViewer apps for both iOS and Android devices. The VIVOCloud app provides instant push notification and direct video playback

functions when triggered by an alarm notification and provides users a flexible and intelligent NVR for seamless use in small to medium sized video surveillance applications.

Users of the NVR will also benefit from VIVOTEK's cooperation with world-renowned cybersecurity company, Trend Micro. Through network cameras armed with Trend Micro's anti-intrusion software, VIVOTEK unites high security and robust network surveillance to secure lives and protect data across diverse applications.

Key Features

· H.265/H.264 Compression Technology
· 4K Display for Clear Monitoring
· Live and Playback Fisheye Dewarp
· Smart Search II
· Deep Learning VCA Event Search
· Cybersecurity Management
· Trend Micro IoT Security
· VIVOTEK's Smart Stream II to Optimize Bandwidth Efficiency
· 802.3at/af Compliant PoE port x 8/16
· RAID 0, 1 Supported to Prevent from Recording Data Loss
· Multiple Browsers Supported: IE, Chrome, and Firefox on both Windows & macOS
· Supports VCA Counting Solution

Highlight Features

Core+ 3.0

VIVOTEK Core+ 3.0 is the new generation ND series network video recorder firmware, embedded with VIVOTEK's latest technology including features such as cybersecurity management, Deep Learning VCA event search, Smart Search II functions, and counting solutions. Upgrade your network video recorder's ability to Core+ 3.0 for a smarter, safer and smoother user experience.

Trend Micro IoT Security & Cybersecurity Management

In collaboration with Trend Micro, VIVOTEK's video recorder is embedded with anti-intrusion software with multi-layer protection, including brute force attack detection, intrusion detection & prevention, and instant damage control. Furthermore, VIVOTEK's video recorder provides cybersecurity management solution. Once event notifications in video recorders have been set up, it will be immediately alerted when cyber attacks occur. Allowing users to receive notifications either automatically or manually, and real-time Cyber Risk Dashboard (VAST 2) to easily identify common types of cyber attacks.

1 Brute Force / Attack Detection

2 Intrusion Detection and Prevention

**3** Instant Damage Control

VIVOTEK NVRs

Smart Search II

Based on the camera metadata recorded in the Hard Disk Drive, the Network Video Recorder is able to carry out a video analysis search on playback. Users can quickly sort through large amounts of evidence to find precisely what is needed.
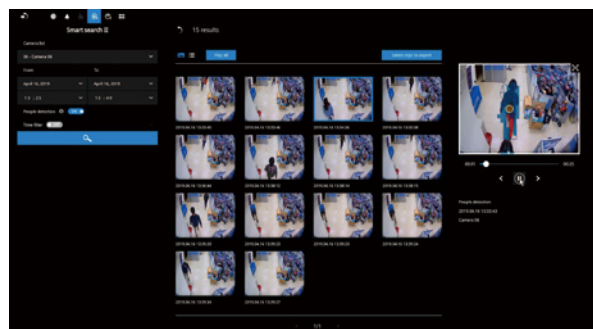
Deep Learning VCA Event Search

The Core+ 3.0 NVRs support alarm management and event search of VIVOTEK's deep-learning video analytics technology, Smart VCA and Smart 360 VCA. VCA rules and information such as people-tracking frames and motion-detection frames can be shown on live or playback video display. The user can search by single or multiple event types, playback triggered events and then export these search results to video clips.
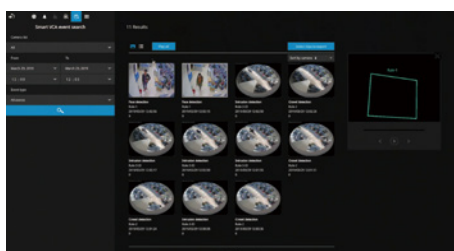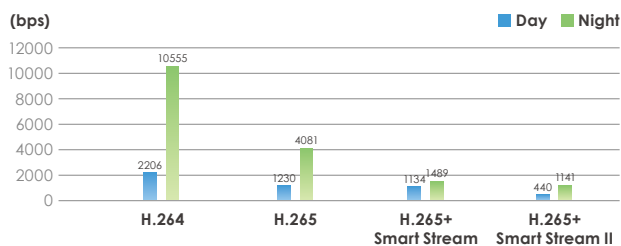

VCA Counting Solution

The NVR supports VIVOTEK's counting cameras and counting data storage. In local display mode, it can display the counting rule and the detected object information, as well as send that data to VIVOTEK's backend system for counting results analysis.

Highlight Features

Better Video Quality with Lower Bandwidth

With H.265 standard and VIVOTEK's Smart Stream technology, VI-VOTEK NVR is not only able to provide the high quality video, also save the usage of network bandwidth and recording capacity more than regular H.264 standard.

Bar chart: (bps), Day (blue) and Night (green)
- H.264: 2206 (Day), 10555 (Night)
- H.265: 1230 (Day), 4081 (Night)
- H.265+ Smart Stream: 1134 (Day), 1489 (Night)
- H.265+ Smart Stream II: 440 (Day), 1141 (Night)

## 4K IP Camera Video Input and 4K Local Video Output

Supporting 4K IP camera video input and 4K local video output, VIVOTEK's NVR can provide users extra high definition video resolution ensuring they will never miss a single detail in both video monitoring and recording.

4K Resolution

Fisheye Dewarp

VIVOTEK's NVR offers both LiveView and Playback modes for one fisheye network camera simultaneously. They also provide multiple fisheye de-warp display modes, including 1O, 1P, 1R, 1O3R, 1O8R, allowing users to monitor any angle, or to enjoy precise detailed images for a total surveillance experience.
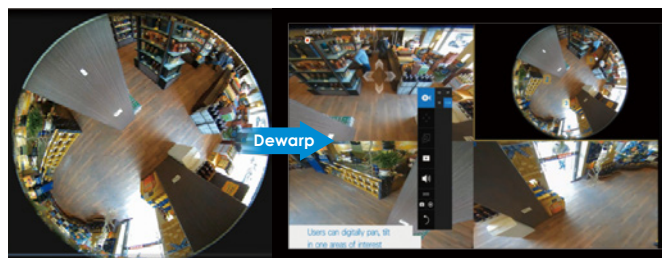
Chrome & Firefox Now Supported

Support for plug-in free web browsers enables users with direct web viewing/setting on IE, and now also on Chrome and Firefox web browsers, for both Windows and macOS.
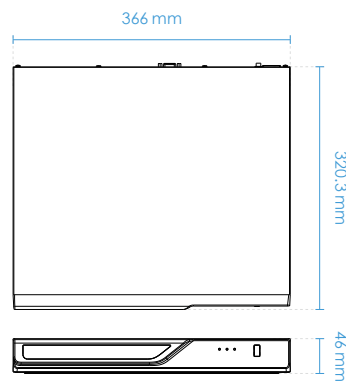
Technical Specifications

Model	ND9322P-v2	ND9424P-v2
Form Factor	H.265 8-CH Embedded Plug & Play NVR	H.265 16-CH Embedded Plug & Play NVR

System

OS	Embedded Linux	
CPU	ARM processor	
Flash	256MB	
RAM	1GB	1GB
Watchdog	Hardware + Software	
Power Restoration	System restart automatically after power recovery	

Local Display

Live View Display	8 Channels Multi-layout display: 1x1, 3V, 2x2, 3x3, 1P+3, 1M+5, 1P+6	16 Channels Multi-layout display: 1x1, 3V, 2x2, 3x3, 1P+3, 1M+5, 1P+6 , 1M+12, 4x4
Video Output	HDMI x1, VGA x1	
Display Resolution	3840x2160, 1920x1080, 1280x720	
Camera Position	Change the viewcell position on the Live View screens	
Stream Application	Constant/Auto adaptive stream	
Monitor Enhancement	OSD display (NVR), OSD display (camera), camera information, remote I/O control, event notification, aspect ratio	
Fisheye Dewarp	1O, 1P, 1R, 1O3R, 1O8R	
PTZ Operation	Direction control, home, iris, preset, patrol (group), PiP control	

Video

Video Format	H.265, H.264, MJPEG	
Graphics Decoder	Hardware decoding	
Decoding Resolution	Up to 3840x2160	
Decoding Capability	3840x2160 @ 30 fps (1-CH) 1920x1080 @ 120 fps (4-CH) 1280x720 @ 240 fps (8-CH)	3840x2160 @ 30 fps (1-CH) 1920x1080 @ 120 fps (4-CH) 1280x720 @ 240 fps (8-CH) 720x240 @ 480 fps (16-CH)

Audio

Audio Format	G.711, G.726	
Audio In/Out	3.5 phone jack audio output x1 3.5 phone jack audio input (reserved) x1	

Record

Recording Time (sec.)	Pre-Record: 5 (Max. 10) Post-Record: 20 (Max. 300)	
Recording Stream	Single	
Recording Throughput	64 Mbps	96 Mbps
Recording Mode	Continuous, schedule, manual, event, activity adaptive streaming	
Recording Setting	Recycle (unit: day)	
Watermark	Supported	

Storage & Backup

HDD Devices	Internal x2 (3.5" HDD)	

Technical Specifications

Model	ND9322P-v2	ND9424P-v2
Form Factor	H.265 8-CH Embedded Plug & Play NVR	H.265 16-CH Embedded Plug & Play NVR
HDD Max. Capacity	8TB	
RAID	RAID 0, 1 (single volume up to 16TB)	
External Storage	USB Storage (USB 3.0)	
Video Clip Export	USB dongle (FAT format)	
Schedule Backup	FTP	

Playback

Playback Display	4 Channels Multi-layout display: 1x1, 2x2, 1P+3, 1V+3
Playback Control	Regular (play, pause, stop), rewind, next /previous frame, speed control, calendar, event, timeline, timeline scale, thumbnail (storyboard)
Video Search	by calendar, date/time, alarm
Thumbnail Explorer (Storyboard)	Listing the thumbnail of recorded video (Max. 2-CH)
Snapshot	JPEG
Video Clip Export	EXE

Network

Ethernet	10/100/1000Mbps Ethernet (RJ-45) x1	
Video Throughput for Remote Client	24 Mbps	
PoE*	802.3at/af compliant PoE ports x8 (total Max. 120W)	802.3at/af compliant PoE ports x16 (total Max. 200W)

*DO NOT suggest connecting any non-PD device with this NVR PoE port in order to avoid potential risk.

Protocols	IPv4, TCP/IP, HTTP, HTTPS, UPnP, RTSP/RTP/RTCP, SMTP, FTP, DHCP, NTP, DNS, DDNS, IP Filter

External Interface

USB	Front x1 (USB 2.0) Back x1 (USB 3.0)
Alarm In	4
Alarm Out	1
Audio	3.5 phone jack audio output x1 3.5 phone jack audio input (reserved) x1

System

POS Integration	Supported (request by project)
UPS Integration	Supported (request by project)
Camera Integration	ONVIF
Event	Motion Detection, Smart VCA Event, Cyber Attack, PIR Detection, Tampering Detection, Camera DI/DO, Camera Disconnected, Disk Failure, Disk Full, NVR DI/DO
Event Action	Video recording, email with snapshot, buzzer, PTZ, FTP, DO (camera, system), full screen, send to CMS, VIVOCloud APP notification
User Management	User level: administrator, regular user
Log	System, recording, user, error
Date & Time	Time zone, manual, automatic sync NTP, daylight saving time

Advanced Features

VCA Counting Solution	Supported

Technical Specifications

Model	ND9322P-v2	ND9424P-v2
Form Factor	H.265 8-CH Embedded Plug & Play NVR	H.265 16-CH Embedded Plug & Play NVR
Deep Learning VCA Event	Supported	
Smart Search II	Supported	
Trend Micro IoT Security	Supported	
Cybersecurity Management	Supported	
Remote Client		
Software AP	Shepherd, VAST 2	
Mobile/Tablet App	iViewer (Android & iOS)	
Web Browser	Internet Explorer 10 (32 bit) or above/ Windows Chrome v68.0.3 & Firefox v61.02 or above/ Windows & macOS	
VIVOCloud	Supported	
General		
Power Input	100-240V AC, 50/60Hz	
Power Consumption	Max. 170 W	Max. 250 W
Dimensions	366 (W) x 320.3 (D) x 46 (H)mm	
Weight	2.5 kg (without HDD)	
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)	
Humidity	0 ~ 95%	
Safety Certifications	CE, FCC, VCCI, C-Tick, UL, CB, BSMI	
Warranty	24 months	

Dimensions

Product - Order Information

Model	Description	P/N
ND9322P-v2	H.265, 8CH, 8 PoE, 2HDD NVR	100214500G, US
		100214510G, EU
		100214520G, UK
		100214530G, AU
		100214540G, no power cord
ND9424P-v2	H.265, 16CH, 16 PoE, 2HDD NVR	100214600G, US
		100214610G, EU
		100214620G, UK
		100214630G, AU
		100214640G, no power cord

Accessory - Order Information

Model	Description
AM-611	Rack Mount Ear Bracket

Mechanical Information - ND9424P-v2

Front View

Back View
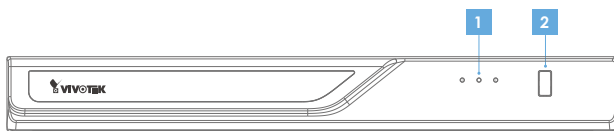
1	LED Indicators	5	Audio In/Out
2	USB 2.0	6	VGA
3	100-240V AC Power Input	7	HDMI
4	4 x Alarm In 1 x Alarm Out		
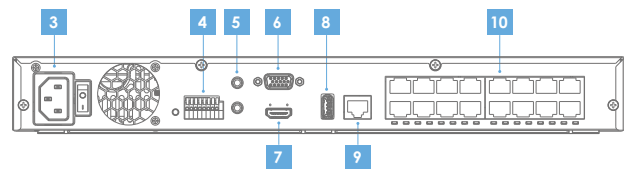
8	USB 3.0
9	Ethernet
10	16 x 802.3at/af PoE ports