

Z8616NFR-S | ZKBio Sense Series

H.265+ 16 Channels ZKBio Sense Smart Network Video Recorder



- Supports H.265+, H.265, and H.264 video formats with enhanced decoding performance
- Compatible with up to 12MP IP cameras inputs
- Supports 16-channels realtime playback synchronously
- 2 SATA Port, up to 16 TB storage capacity
- HDMI (4K) and VGA (1080p) outputs with independent simultaneous display capability
- Embedded intelligent classification algorithm based on computer vision technology for human/ vehicle classification
- Multiple intelligent video analytics functions (NVR local intelligence)
- Supports multiple web browsers login
- P2P cloud service supported
- Compatible with ONVIF Profile S/T/G



Target Counting



Line Crossing



Intrusion Detection



Motion Detection



Object Left / Remove

Product Overview

ZKBio Sense smart network video recorder (NVR) enhances the efficiency and safety of video surveillance system. ZKBio Sense smart NVR features a powerful CPU hardware and ZKTeco's intuitive graphical operating system, these recorders provide 24/7 continuous recording of all video channels and intelligent alarm events. The system automatically classifies and stores footage by human and vehicle detection on the hard drive. Moreover, an advanced retrieval functions enable rapid playback of specific targets (human/ vehicle), allowing users to quickly locate critical footage and alarm events.

ZKBio Sense smart NVR enhances surveillance system efficiency and safety across diverse applications including educational facilities, corporate offices, industrial parks, residential communities, and public security operations.

Core Features

H.265+

H.265+ is an optimization of the H.265 algorithm. Through technologies such as dynamic bitrate control and scene-adaptive encoding, it reduces the required bitrate by 20% - 40% compared with H.265 while maintaining the same video quality.

Intelligent Video Analytics (IVA)

ZKBio Sense Network Video Recorders support multiple intelligent video analytic functions, such as: Line Crossing, Area Detection, Target Counting, Counting Statistics, Object Lost/Left, Smart Motion Detection base on human and vehicle targets classification.

Smart Retrieval

ZKBio Sense Network Video Recorders support smart retrieval for video and alarm events by human & vehicle classification, enabling users to efficiently search and locate the targeted video clips and alarm events.

ANR (Only for SD card IPC models)

When the connection between IPC and NVR is lost, the video is saved in the SD card. The saved video is automatically transferred to the NVR when network connection is restored, preventing any video loss.

Alarm Push Notification

When the NVR receives alarm events, it can trigger actions including email, alarm alerts and buzzer activation. Also, the alarm messages are pushed to mobile app and management platform software in real-time.

Technical Parameters

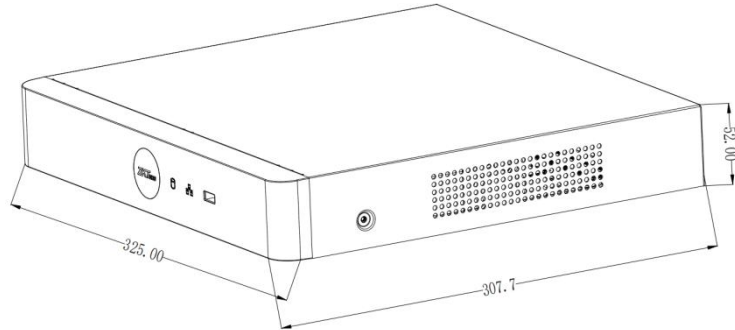
Model	Z8616NFR-S
System	
Main Processor	Multi-core embedded processor
Operating System	Embedded LINUX
Video and Audio	
Max. IPC Video Input	16CH
Two-way Talk	Support
Audio Compression	G.711u
Max. Audio Input	16CH by IPC
Third Party Camera Access	ONVIF & RTSP
Live View	
Display Split	1/4/6/8/9/16 CH
Resolution	12MP(4000*3000)/8MP(3840*2160)/6MP(3288*1850)/5MP(2592*1944)/4MP((2560*1440)/3MP(2304*1296)/2MP(1920*1080)/1.3MP(1280*1024)/ 1MP(1280*720)/D1(1024*768)
Max. Live View Capability	Local AI OFF:2CH@12MP, 4CH@6MP/5MP,6CH@4MP,8CH@2MP,9CH@2MP,16CH@720P Local AI ON:2CH@12MP, 4CH@6MP/5MP,6CH@4MP,8CH@2MP,9CH@2MP,16CH@720P
Recording	
Video Compression	H.265+ / H.265 / H.264
Recording Resolution	12MP/8MP/6MP/5MP/4MP/1080P/960P/720P/D1/VGA/4CIF/DCIF/2CIF/CIF/QCIF
Max. Decoding Capability	Local AI OFF:2CH@12MP, 4CH@6MP/5MP,6CH@4MP,8CH@2MP,9CH@2MP,16CH@720P Local AI ON:2CH@12MP, 4CH@6MP/5MP,6CH@4MP,8CH@2MP,9CH@2MP,16CH@720P
Incoming Bandwidth	Local AI OFF:160Mbps Local AI ON:156Mbps
Outgoing Bandwidth	Local AI OFF:160Mbps Local AI ON:160Mbps
Stream Type	Video, Video & Audio
Bit Rate	Main Stream: 16Kbps ~ 12288Kbps Sub Stream: 16Kbps ~ 4096Kbps
Storage Method	Local hard drive and network
Record Mode	Schedule, Manual, Motion Detection, IVA Events Alarm
Record Interval	1 ~ 120 min (default: 60 min), Pre-record: 1 ~ 30 sec, Post-record: 1~ 10 min
Playback and Backup	
Playback Channel	16CH synchronously playback
Search Mode	Time / Date, Alarm Types, IVA Search
Playback Function	Play, Stop, Play Forward, Play Backward, 30 Seconds Forward, 30 Seconds Backward, Fast Play, Slow Play, Single Frame Play, Hide/Show Time Bar, Backup, Snapshot, Full Screen
Backup Mode	USB Device / Network Remote
Intelligent Video Analytics	
IVA by Camera	Line Crossing, Area Detection, Smart Motion Detection (base on human and vehicle classification), Target Counting, Object Lost/Left, Fire Detection, Temperature Measurement, Heat Point Detection, Smoking Detection
Local IVA Functions	Line Crossing, Area Detection, Smart Motion Detection (base on human and vehicle classification), Target Counting, Counting Statistics, Object Lost/Left
IVA by Device(Number of Channels)	2
IVA by Camera (Number of Channels)	16
IVA Alarm	
Smart IVA Alarm	Line Crossing, Area Detection, Smart Motion Detection, Target Counting, Object Lost/Left, Fire Detection, Temperature Measurement, Heat Point Detection, Smoking Detection
Regular Detection	Motion Detection / Video Shelter / Video Loss / Privacy Mask

Anomaly Alarm	HDD Full, No HDD, S.M.A.R.T error, Network disconnected, IP conflict
Alarm Linkage	Preview, Recording, Snapshot, Buzzer, Preset, Email, Tour, Upload center
Smart Search	Support smart search out target video by human and vehicle classification filtering
Network	
Network Protocol	TCP/IP, HTTP, HTTPS, ONVIF, DHCP, DNS, DDNS, RTSP, NTP, UPnP, SMTP, IPv4, IPv6, UDP, SSL/TLS, PPPoE, WebSocket, ICMP, IGMP, RTMP, RTP, RTCP, ARP
Max. Online User	30
Web Browser	Google Chrome/Microsoft Edge/Firefox/Safari
Operation System	Windows
Management Platform	ZKBio CVSecurity / CVAccess / AntarVis 2.0
Mobile Application	AntarView Plus (iOS & Android)
P2P Cloud Service	Support OTA updates via the AntarView Plus
Interoperability	ONVIF Profile S/T/G, SDK, CGI, API
Storage & Auxiliary Interface	
SATA Ports	2 SATA Port, up to 16 TB storage capacity
eSATA	N/A
Raid 0/1/5/6/10	N/A
IPSAN/NAS	Support
HDMI	1*HDMI (4K)
VGA	1*VGA(1920*1080/60Hz, 1280*1024/60Hz)(support independent output)
Network Interface	1 RJ-45 Port (10/100/1000 Mbps self adaptive)
PoE Ports	N/A
Standard	N/A
USB	2*USB 2.0, 1*USB 3.0
Audio Input/Output	1 In / 1 Out
Alarm Input/Output	4 In / 2 Out
RS-485	Support
RS-232	N/A
Power	
Power Supply	DC 12V/5A
Power Consumption	≤24W (without HDD)
General	
Casing	1.5U
Working Temperature	-10°C ~ 55°C / 14°F ~ 131°F
Working Humidity	10% ~ 90%
Storage Humidity	10% ~ 90%
Operating Altitude	3,000 m (9,842.52 ft)
Installation	Desktop / Cabinet mount
Dimensions(L*W*H)	325*307*52(mm)
Net Weight	3KG(without HDD)
Gross Weight	3.5KG(without HDD)
Certifications	CE-LVD; CE-EMC; FCC certification
Environment	CE-RoHS, WEEE, Reach self-declaration

Ordering Information

Name	Model	Description
ZKBio Sense Smart NVR	Z8616NFR-S	16CH H.265+ 4K NVR, 2 SATA

Dimension (mm)



Rear Panel

