



IP PTZ Camera with AI Video Analytics



ZN8-P5X40DL-HA

Key Features:

- Smart Encode
- 1/2.8" STARVIS™ CMOS sensor, 5 MP
- Built-in analytics **GENSTAR IVS 2.0**: intrusion, SMD, line crossing, perimeter detection, loitering, wrong-way detection, illegal parking, running, fall and fight detection
- Multi-Object Detection**: face, human and vehicle detection and capture, plus attribute analysis
- Smoke and fire detection
- People counting
- Intelligent human and vehicle tracking
- Auto-Tracking**: 400 presets, 6 tours, 12 scans and 12 patrols (up to 32 presets per patrol)
- 3D PTZ control with mouse
- Pan speed - 300°/s
- SMART IR up to 300 m and gyroscopic stabilization
- True WDR (120 dB), 3D DNR, Defog and EIS
- Zoom 40× optical / 16× digital
- RS-485, CVBS, **IP66 / IK10** and **NDAA compliance** (National Defense Authorization Act)

Model	ZN8-P5X40DL-HA
Image Sensor	1/2.8" STARVIS™ Progressive Scan CMOS, 5 MP
Min. Illumination (AGC ON)	Color: 0.005 Lux @ F1.6 (AGC ON) B/W: 0.001 Lux @ F1.6, 0 Lux with IR
Day/Night	Auto IR-Cut Filter
Electronic Shutter	1/5 - 1/20,000 s
Iris	Auto / Manual, F1.68 - F5
WDR Mode	True WDR (120 dB)
Noise Reduction	2D / 3D-DNR S/N 55 dB
Lens	Motorized Zoom AF 5-200 mm 40× optical / 16× digital. Field of View: H 64.8°-1.8°, V 50.3°-1.3°
IR Illuminator	SMART IR 850 nm, range up to 300 m
PTZ Range	Pan: 0°-360° (continuous) Tilt: -10° to +90° (auto-flip)
Video Compression	H.265 H.264 MJPEG Smart Encode
Bitrate (CBR/VBR)	Stream 1: 200 Kbps - 16 Mbps Stream 2: 100 Kbps - 6 Mbps Stream 3: 100 Kbps - 3 Mbps
Resolution and Frame Rate	Stream 1: 2592×1944, 2592×1520, 1920×1080, 1280×720 @25/30 fps Stream 2: D1, VGA, CIF @25/30 fps Stream 3: VGA, CIF, QVGA @25/30 fps
Image Settings	Brightness, sharpness, contrast and saturation
Security	Secure Boot, signed firmware, protection against brute-force
Digital Functions	HLC BLC EIS ROI DEFOG Anti-shake WDR
Corridor Mode	None
Privacy Masking	Up to 40 zones, configurable mask color
Events	GENSTAR IVS 2.0 analytics, alarms and tracking
Network Protocols	IPv4/IPv6, HTTP/HTTPS, DNS, DDNS, DHCP, PPPoE, RTSP/RTCP/RTP, TCP/UDP, NTP, ARP, UPnP, FTP, SMTP, QoS, ICMP, IGMP, SNMP, IEEE 802.1X, Multicast
RTSP Support	Standard RFC 2326 (VLC Player / QuickTime)
Compatibility	ONVIF (Profile S/T/G/M), SDK, CGI

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Technical Specifications

Ethernet Interface	10/100 Base-T, RJ45
AUDIO	1 × IN / 1 × OUT (RCA)
ALARM	7 × IN / 2 × OUT
Analog Output	1 × BNC
Operating Temperature	-40°C ... +60°C
Operating Humidity	<95% RH, non-condensing
Reset Button	None
RS-485	YES
SD Card Support	MicroSD up to 1 TB
Power Supply	24 VAC / 36 VDC / PoE++ (802.3bt); max. 45 W
Dimensions / Weight	Ø226.1 × 362.8 mm / approx. 5.5 kg
Certifications and Ratings	CE / FCC / IP66 / IK10 / NEMA 4X (optional)

 CBC Tokyo HQ
 CBC Osaka
 CBC Nagoya
 CBC Fukuoka
 CBC Mishima

 CBC New Jersey
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 CBC Mexico
 CBC Beijing
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 CBC Shanghai
 CBC HongKong
 CBC Singapore
 CBC Taiwan
 CBC Bangladesh

 CBC Guangzhou
 CBC Indonesia
 CBC Thailand
 CBC UK
 CBC Germany

 CBC Poland
 CBC Italy
 CBC Spain
 CBC Russia
 CBC India

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Network and Cybersecurity

Network and Access	
Max. Concurrent Streams	10 concurrent channels
Users / Levels	32+ users; Administrator, Operator, Media User
Web Browsers	Chrome, Firefox, Microsoft Edge, IE11 or earlier
Security / Cybersecurity	
OS / Firmware Protection	Encrypted firmware, Secure Boot, signed firmware
User Authentication	Digest authentication; brute-force attack protection
Network Authentication	IEEE 802.1X (EAP-TLS)
Secure Communication	HTTPS, WSS (WebSocket Secure), SRTP
Access Control	IP-based access control; auto logout
Data Protection	Credential encryption
Audit	Access, system and event logs
Secure Storage	AES-256 encryption of SD card data
Supply Chain Security	SBOM

Built-in GENSTAR IVS 2.0 Video Analytics (AI Analytics)

AI Multi-Target	Face, human and vehicle detection and capture; human/vehicle classification; tracking display modes
Human Attributes	Gender, age, glasses, headwear, bag, upper/lower clothing color and style, reflective vest
Vehicle Attributes	Type, color, brand and vehicle direction/orientation
Intelligent Analytics	Intrusion, SMD, single and double line crossing, loitering, wrong-way detection, area people limit, perimeter detection, illegal parking, running, fall and fight detection
Additional Functions	Smoke and fire detection, people counting, human/vehicle tracking and alarm-triggered tracking

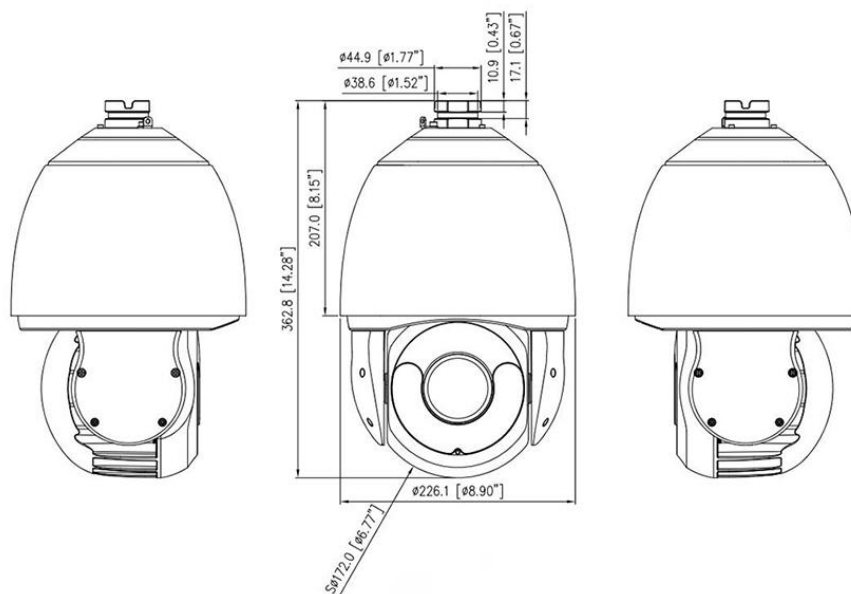
DORI and OODPCVS

DORI Distance (EN 62676-4)						
Lens		Detection	Observation	Recognition	Identification	
5–200 mm		82–3280 m	32.8-1312 m	16.4-656 m	8.2-328 m	
OODPCVS Distance (calculated using pixel density thresholds per IEC/EN 62676-4:2025)						
General View	Object Outline	Object Discrimination	Behavior Perception	Object Characterization	Verification	Detailed Analysis
102.5-4100 m	51.3-2050 m	25.6-1025 m	16.4-656 m	8.2-328 m	4.1-164 m	1.4-54.7 m

Standard Package

Component	Qty.
PTZ Camera	1
User Manual	1
Mount Connector	2
No. 5 Hex Key	1
Flat-head Screwdriver	1
Terminal Block	2
Pair of Gloves	1
36 VDC Power Supply	1
Wall Mount Bracket ZA8-CBK506B	1
Stainless Steel Hex Screw M5*9 mm	1
Stainless Steel Hex Screw M6*14 mm	3

Overall Dimensions



Camera Mounting Accessories

