

WatchAI 5" Dual Lens Smart Full-Colour PTZ Camera

IPCAM-PTZ8300-5.3-159



Key Features

- Panoramic: 1/1.8" 4MP STARVIS™ CMOS, Detail: 1/2.8" 5MP STARVIS™ CMOS
- Supports face, human, and vehicle detection & capture.
- Supports human and vehicle attribute detection.
- Intelligent analytics: Intrusion, smart motion detection, single line crossing, double line crossing, loitering, wrong-way detection, area people limit, perimeter detection, illegal parking, running detection, fall detection, fight detection, smoke and flame detection, and people counting.
- Supports alarm-linked tracking and intelligent tracking based on person/vehicle targets.
- True WDR (120dB), 3D DNR, ICR, Defog and DIS
- Built-in mic and speaker, 1/1 audio input/output, 2/2 alarm input/output
- Smart Illumination, Up to 200 m IR and 60 m warm light distance
- Supports heated glass for defogging, IP66



Specifications

Camera	
Image Sensor	PTZ camera: 1/2.8" Progressive Scan CMOS Overview camera: 1/1.8" Progressive Scan CMOS
Max Resolution	PTZ camera: 5MP, 2592(H) × 1944(V) Overview camera: 4MP, 2592(H) × 1520(V)
Shutter Speed	1/5 to 1/20,000s
Min Illumination	PTZ camera: - Color: 0.005 Lux @ (F1.6, AGC ON), - B/W: 0.0001 Lux @ (F1.6, AGC ON), 0 Lux with illuminator on Overview camera: - Color: 0.001 Lux @ (F1.6, AGC ON), - B/W: 0.0005 Lux @ (F1.6, AGC ON), 0 Lux with illuminator on
Day & Night	Auto (ICR)
S/N Ratio	55 dB
Lens	
Focal Length	PTZ camera: 5.3 to 159 mm, 30x optical zoom Overview camera: 2.8 mm, 4 mm optional
Max. Aperture	PTZ camera: F1.6 (W) to F4.3 (T) Overview camera: F1.0
Field of View (FOV)	PTZ camera: - H: 56.8° to 2.6°, V: 42.7° to 2.0° Overview camera: - 2.8 mm, H: 112°, V: 60° - 4 mm, H: 88.7°, V: 48.2°
Digital Zoom	16x
Iris	PTZ camera: Auto / Manual Overview camera: Fixed
Focus Control	PTZ camera: Auto / Manual Overview camera: Fixed
Illuminator	
Type	IR, Warm light
IR wavelength	850 nm
Distance	PTZ camera: - IR distance up to 200 m (656.17 ft) - Warm light up to 60 m (196.85 ft) Overview camera: - IR distance up to 30 m (98.4 ft) - Warm light up to 30 m (98.4 ft)
Control	IR mode, White mode, Intelligent mode, None
Intelligent Analytics	

Multi-Object Detection	- Supports face, human, and vehicle detection & capture; - Supports human and vehicle attribute detection; - Supports multiple frame modes: Full Frame, Four-Corner Frame, Mosaic.
Attribute Extraction	Human Attributes: Gender, age, glasses, hat, bag, upper clothing color & style, lower clothing color & style, reflective vest Vehicle Attributes: Type, color, brand, orientation
Intelligent Analysis	Intrusion detection, smart motion detection, single line crossing, double line crossing, loitering, wrong-way detection, area people limit, perimeter detection, illegal parking, running detection, fall detection, fight detection - Supports accurate target classification (human/vehicle)
Smoke and Flame Detection	Supported
People Counting	Supported

Video & Audio

Number of Streams	3 Streams
Resolution	PTZ camera: - Stream1: 2592×1944, 2592×1520, 1920×1080, 1280×720 - Stream2: D1, VGA, CIF - Stream3: VGA, CIF, QVGA Overview camera: - Stream1: 2592×1520, 2304×1296, 1920×1080, 1280×720 - Stream2: D1, VGA, CIF - Stream3: VGA, CIF, QVGA
Frame Rate	Up to 25/30fps
Bit Rate Control	CBR/VBR
Bit Rate	Stream1: 200 Kbps to 12 Mbps Stream2: 100 Kbps to 6 Mbps Stream3: 100 Kbps to 3 Mbps
Smart Encoding	Supported
Region of Interest (ROI)	Supported
Audio Compression	G.711 A-law, G.711 μ -law, RAW_PCM
Audio Bit Rate	64 kbps (G.711), 128 kbps (RAW_PCM)

Image

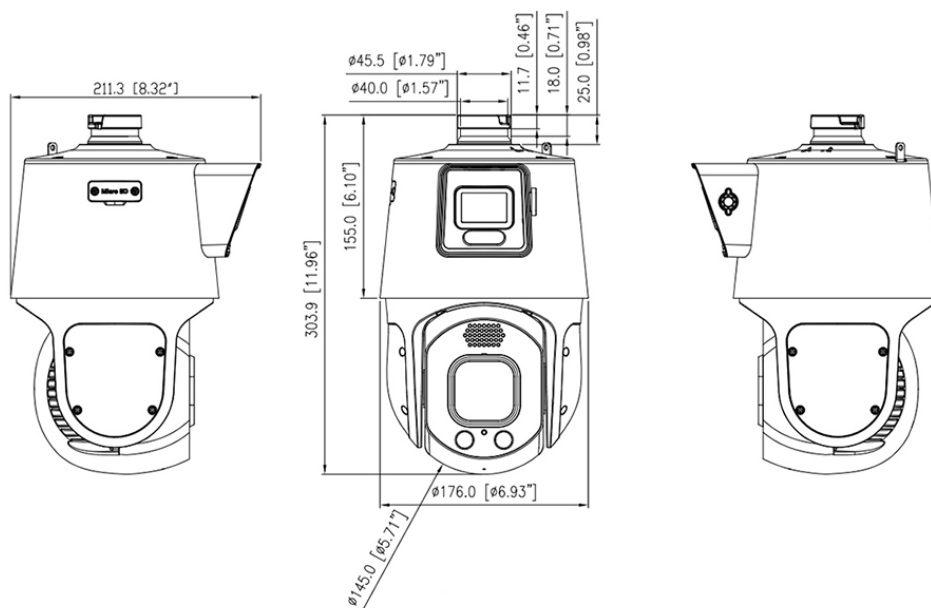
Image Adjustment	Brightness, Sharpness, Contrast, Saturation adjustable
Scene Mode	Indoor, Outdoor, Mirror
Exposure Mode	Auto, Manual, Shutter priority, Iris priority
White Balance	Auto, Tungsten, Fluorescent, Daylight, Shadow, Manual
Day/Night Setting	Auto, Day mode, Night mode, Timer
Noise Reduction	2D/3D DNR
Image Enhancement	HLC, BLC, Defog, WDR, Anti-shake
Wide Dynamic Range	True WDR (120dB)
Privacy Masking	Support 40 zones, mask color configurable

PTZ

Pan/Tilt Range	PTZ Camera: - Pan: 0° to 360° endless, Tilt: -15° to +90° (auto-flip) Overview camera: - Tilt: 13° to 23°
Pan Speed	Pan speed: 0.1° to 180°/s, preset speed: 180°/s
Tilt Speed	Tilt speed: 0.1° to 90°/s, preset speed: 90°/s
Preset Accuracy	≤ 0.2°
Preset	400
Track	6 Track
Scan	12 Scan
Tour	12 Tour (up to 32 presets each tour)
Intelligent Tracking	Supported Object auto tracking (Person/Vehicle)
Power-Off Memory	Supported
3D Positioning	Supported
PTZ Status Display	Supported
Idle Motion	The time can be set (1-240 minutes), and functions such as preset positions, patrols, scans, and tracks can be run.
Event	
Alarm Triggers	IVS, Motion detection, Alarm input, Network alarm, Disk alarm, Day/Night switch alarm, Abnormal sound detection
Event Actions	Alarm record, Alarm output, FTP upload, SMTP upload, Snapshot, Audible alarm output, White light alarm output
Network	
Protocols	IPv4/IPv6, HTTP/HTTPS, DNS, DDNS, DHCP, PPPoE, RTSP/ RTP/RTCP, TCP/UDP, NTP, ARP, UPnP, FTP, SMTP, QoS, ICMP, IGMP, SMTP, 802.1x, SNMP, Multicast
Application Programming Interface	ONVIF (Profile S/T/G/M), SDK, CGI
Max Concurrent Streams	10 channels
User/Host Level	32+ users, 3 levels: Administrator, Operator, Media user
Web Viewer	<IE11, Chrome, Firefox, Microsoft Edge
Security	
OS / Firmware Protect	Encrypted firmware, Secure boot, Signed firmware
User Authentication	Digest authentication, Prevent brute-force attack
Network Authentication	IEEE 802.1X(EAP-TLS)
Secure Communication	HTTPS, WSS (WebSocket Secure), SRTP
Access Control	IP-based access control, Auto logout
Data Protect	Encryption credentials
Audit	Access / System / Event Log management
Secure Storage	SDcard partition encrypt (AES-256), Secure element

Supply Chain Security	SBOM
Interface	
Network Interface	1 × Ethernet (10/100 Base-T), RJ-45 connector
Built-in Microphone	Supported
Built-in Speaker	Supported
Audio Interface	1ch Input, 1ch Output
Alarm Interface	2ch Input, 2ch Output
SD Card Slot	Built-in microSD card slot, up to 1 TB
Reset Button	Supported
General	
Language	English, Chinese, Traditional Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian, Japanese, Korean. Default: English
Power Supply	24 VAC / 36 VDC / PoE++ (802.3bt), Standard Equipped: 36 VDC
Power Consumption	Basic: 9.5 W, Max. 40 W (illuminator + speaker + PTZ working + glass defogging)
Operating Temperature	-40°C to 60°C (-40°F to 140 °F)
Operating Humidity	Less than 95% RH
Ingress Protection	IP66
Certifications	CE-EMC - EN 55032, EN IEC 61000-6-4, EN IEC 61000-3-2, EN 61000-3-3, EN 55035, EN 50130-4 CE-LVD - EN IEC 62368-1 FCC 47 CFR Part 15 Subpart B RCM
Material	Metal
Dimensions	176.0 × 211.3 × 303.9 mm (6.93 × 8.32 × 11.96 inch)
Net Weight	Approx. 4.5 kg
DORI Distance (EN62676-4 standard)	
Detect	PTZ camera: - 103 to 3,090 m (337.93 to 10,137.8 ft) Overview camera: - 4 mm: 65 m (213.3 ft)
Observe	PTZ camera: - 41.2 to 1,236 m (135.17 to 4,055.1 ft) Overview camera: - 4 mm: 26 m (85.3 ft)
Recognize	PTZ camera: - 20.6 to 618 m (67.59 to 2,027.6 ft) Overview camera: - 4 mm: 13 m (42.7 ft)
Identify	PTZ camera: - 10.3 to 309 m (33.79 to 1,013.8 ft) Overview camera: - 4 mm: 6.5 m (21.3 ft)

Dimensions (mm)



Accessories

Optional:



SN-CBK504B
Wall Mount



SN-BK348A
Ceiling Mount



SN-BK605
Corner Mount



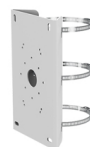
SN-BK604B
Pole Mount



SN-BK367
Junction Box



SN-BK358
Corner Mount



SN-BK359
Pole Mount