PD5004W

4MP IP Pendant PTZ camera with 40x motor zoom, IR, Wiper, 1/1.8'' CMOS

DESCRIPTION

*** Planned release October 1, 2025 ***

The PD5004W is a 4 megapixel HD IP outdoor PTZ camera with Wiper. A powerful high-grade 40x optical zoom lens ensures sharp and clear images over a wide range. Built-in IR for zero lux operation. The high-speed pan, tilt, and zoom mechanism and auto-focus give instantaneous and stable focused images.

FEATURES

1/1.8 inch Progressive scan CMOS imager

40x optical zoom, 16x digital zoom

Built-in Wiper

Max. 2688x1520 (4MP) resolution

Triple stream H.264, H.264+, H.265, H.265+, and MJPEG

Max. 60fps

5° tilt above horizon without optical distortion

Secured Streaming, IEEE 802.1x authentication

120 dB WDR (HDR)

AI enforced embedded video analytics

ONVIF Profile S, G, T, M

Description

Multi-stream multi-codec
The camera has triple stream capability for simultaneous streaming of H.264, H.264+, H.205, H.265+, and MJPEG. Multiple combinations of resolution, frame rate, and encoding can be configured to fit all possible live viewing and recording scenarios. The 4 megapixel resolution is available at 50/60 fps still offering multiple exposure WDR (or HDR, in short) with the possibility to add a second stream.

Open standards
Multiple options are available to easily integrate the PD5004W to a video management system. The TKH Security signature SPI protocol is included as the easiest way to drive the camera in customized environments. In support of open standards, the camera is compliant with the ONVIF Profile S, T, G, and M. Any VMS today supports this camera via the ONVIF driver.

Image enhancement
The PD5004W utilizes advanced image processing technology. Crisp and detailed 4MP images with an extremely high dynamic range in real time due to multiple exposure HDR within one frame. Back-light and High-light compensation enhances image-visibility in difficult lighting situations. In addition the camera provides for 3D motion compensated noise reduction for the best images.
Truly remarkable about the camera is its AI enforced low-light sensitivity. Using this next-gen technology, the disadvantageous effects of low light environments such are noise and motion blur are effectively reduced by this camera, without the help of supplemental lighting.

Power source choices
The PD5004W can be powered by 24 Vdc, 24 Vac, or over the network with PoE++ (IEEE 802.3bt).

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Camera

Image sensor	1/1.8'' CMOS
Max. Resolution	2688x1520 (4MP)
Max. Frame rate	60 (1080p)
Minimum scene illumination	0.001 lx (Color); 0.0002 lx (B/W); F1.69, AGC on)
Shutter Speed	1/25 .. 1/100000 s
Lens	Motorized 6.3 .. 252 mm (40x zoom), F1.69, Auto (P-) iris
Field of View	63.62 .. 1.77 ° horizontal, 37.69 .. 0.99 ° vertical
Focus Control	Auto, Manual
Slow Shutter	Supported
Day/Night	Automatic IR-cut Filter
IR illumination	400 m (10pcs IR LED, each max 5Watt); 850 nm

Video

Stream 1 resolutions	2688x1520, 2560x1440, 1920x1080, 1280x960, 1280x720
Stream 2 resolutions	704x576, 640x480, 352x288
Stream 3 resolutions	1920x1080, 1280x960, 1280x720, 704x576, 640x480, 352x288
Video Compression	H.265, H.265+, H.264, H.264+, MJPEG
H.264 profiles	Baseline profile, Main profile, High profile
H.265 profiles	Main profile
Video Bitrate	32 .. 32000 Kbps
Bitrate Control	CBR, VBR
Number of video output streams	Up to 16
Region of interest	Supported, 8x
Video output	Supported, 1x (1 Vp-p Composite Output (75 ?/CVBS), BNC)

Image

Image control	Brightness, Contrast, Saturation, Sharpness, Whitebalance, AGC
Day/Night control	Auto, Day, Night, Schedule, Timer
Wide dynamic range	120 dB (Dual exposure HDR)
SNR	52 dB
Image enhancement	BLC, HLC, Defog, 3DNR, 2DNR
Rotation	0, 180
Mirror	Mirror, Flip
Privacy masks	24 (Solid)
Text and picture overlay	8x Text, Date/time, Camera name, Compass (Custom direction texts), Picture
Image stabilization	Supported (EIS)
Digital Zoom	16x

Specs

Image

PTZ

Pan range	0 .. 360° Endless
Tilt range	-5 .. 185° Auto mechanical flip
Pan speed	0.1 .. 180 °/s; Preset: max. 240 °/s
Tilt speed	0.1 .. 150 °/s; Preset: max. 180 °/s
Preset accuracy	0.1°
PTZ functions	Presets (360x), Tour (8x), Pattern (4x), Pan scan,
	Random scan, Auto PTZ tracking, Speed by zoom
Number of presets	360
Number of sequences	8

Analytics

Smart analytics	Line crossing, Intrusion detection, Zone enter,
	Zone exit, Pedestrian, Left luggage, Object removed, Object counting,
	Loitering, Face detection, Person detection, People counting,
	Vehicle detection, Auto tracking, Simultaneous AI, Video Metadata
Event detections	Motion detection, Tampering, Network disconnected,
	IP address conflict, Watchdog bark, Storage full, Storage error,
	Image quality, Audio detection, Periodical, Manual trigger
Event actions	Alarm output, Record video clip, Send message,
	Upload image

Audio

Audio input	1x Line IN (mono)
Audio output	1x Line OUT (mono)
Compression	G.711alaw, G.711ulaw

Data

Serial port	1x RS-485
Protocols	Pelco-D, Pelco-P

Alarm

Input	2x Alarm IN
Output	2x Digital OUT

Network

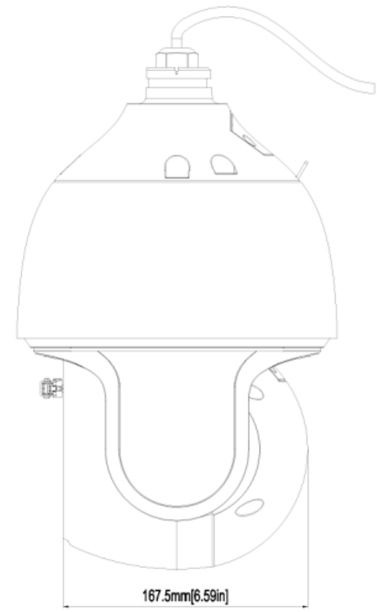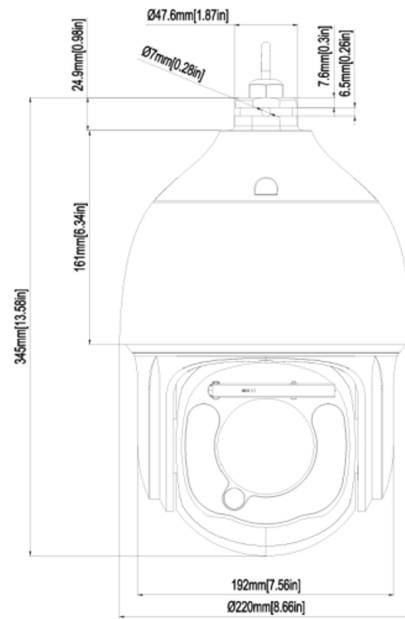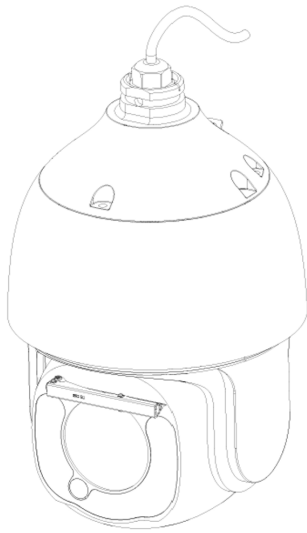|	
Interface	10Base-T (IEEE 802.3i) / 100Base-TX (FE, IEEE 802.3u),
	Self-adaptive RJ45, Flow control (IEEE 802.3x)
Protocols	TCP, UDP, ICMP, HTTP, FTP, RTP, DHCP, DNS, DDNS, RTSP,
	RTCP, PPPoE, NTP, UPnP, SMTP, SNMP v1/v2/v3, IGMP v1/v2/v3, 802.1x,
	QoS, IPv4, IPv6, SSL, TLS v1.0/v1.1/v1.2/v1.3, ONVIF Profile S/G/T/M,
	SPI, TACACS+, NTCIP 1205, Diamond

Specs

Network

Interoperability	ONVIF Profile S/G/T/M, SPI
Security	Password, Complex password, HTTPS encryption,
	802.1x port authentication, EAP, IP address filter,
	Basic authentication, Digest authentication, HTTP authentication,
	ONVIF WSSE authentication, ONVIF digest authentication,
	RTSP over HTTPS, RTSP over TLS, Logout after idle timeout,
	Security audit log, TLSv1.2 (HTTPS, 802.1x), TLSv1.3 (HTTPS, 802.1x)
Web browser	Microsoft Edge, Google Chrome, Mozilla Firefox
Local Storage	uSD, uSDHC, uSDXC, max. 256 GB

Environmental

Protection Level	IP67, IK10
Operating temperature	-40 .. 70 °C (-40 .. 158 °F)
	(-34..+74 °C conform NEMA TS2)
Relative humidity (Operating)	Max. 90% (non-condensing)
Storage temperature	-20 .. 70 °C (-4 .. 158 °F)
Relative humidity (Storage)	Max. 80% (non-condensing)
Demister/Heater	Built-in
Power supply	24VDC, 36VDC (max. 62W)
	24VAC,
	36VAC (max. 62W)
	PoE++ 802.3bt (max. 51W)
Overvoltage protection	TVS 6000V lightning protection,
	surge protection and voltage transient protection

Mechanical

Material	Aluminum Alloy (ADC12)
Wiper	Built-in
Product dimensions	220 x 220 x 345
Product weight	
Package dimensions	
Package weight	
Color	Signal white, black

Ordering Information

PD5004W	4MP IP Pendant PTZ camera with 40x motor zoom, IR, Wiper,
	1/1.8'' CMOS

Ø47.6mm[1.87in]

Ø7mm[0.28in]

24.9mm[0.98in]

7.6mm[0.3in]

6.5mm[0.26in]

161mm[6.34in]

345mm[13.58in]

192mm[7.56in]

Ø220mm[8.66in]

167.5mm[6.59in]

TKH Security WMPD50
Wall mount, for PD5004x

TKH Security PMPD50
Pole mount, for PD5004x

TKH Security CMPD50
Ceiling mount, for PD5004x

TKH Security WMPD51
Corner mount, for PD5004x