

PD5004

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

DESCRIPTION

The PD5004 is a 4 megapixel HD IP outdoor PTZ camera. 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.

Note that the WMPD50 already comes standard in the PD5004x cameras box; this WMPD50 can be bought separately as a spare or replacement.

FEATURES

1/1.8 inch Progressive scan CMOS imager

40x optical zoom, 16x digital zoom

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

NDAA Compliant



Description

Multi-stream multi-codec

Dual conversion gain HDR

Dual conversion gain HDR is a high dynamic range imaging technology that uses two different conversion gains (High Conversion Gain and Low Conversion Gain) on the image sensor. This technology allows the sensor to simultaneously capture both high and low brightness details in the same scene, thereby extending the sensor's dynamic range. The advantage of DCG HDR technology is that it can provide better signal-to-noise ratio and dynamic range while reducing motion artefacts.

Open standards

Multiple options are available to easily integrate the PD5004 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 ONVIF conformant. Any VMS today supports this camera via its ONVIF driver.

Image enhancement

The PD5004 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 as noise and motion blur are effectively reduced by this camera, without the help of supplemental lighting.

Power source choices

The PD5004 can be powered by 24 Vdc, 24 Vac, or over the network with PoE++ (IEEE 802.3bt).

(c) 20260529

Camera	
Image sensor	1/1.8" CMOS
Max. Resolution	2688x1520 (4MP)
Max. Frame rate	60 fps (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	640x480, 4CIF, CIF
Stream 3 resolutions	1920x1080, 1280x960, 1280x720, 640x480, 4CIF
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 Vpp Composite Output (75 Ohm, 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 Conversion Gain 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; via future firmware update), Image (jpg)
Image stabilization	Supported (EIS)
Digital Zoom	16x

PTZ	
Pan range	0° .. 360° Endless
Tilt range	-5° .. 185° Auto mechanical flip

Specs



PTZ	
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, Storage full, Storage error, Image quality, Bad color, Audio detection, Manual trigger
Event actions	Alarm output, Record video clip, Send message, Upload image

Analysis Type: Left/Removed Object	
Zones/Lines	1x Zone
Schedule	Working days, Holidays
Triggered Actions	Trigger sound alarm, Snapshot, Trigger SD card recording, E-mail, FTP, Alarm output

Analysis Type: Line Crossing	
Zones/Lines	4x Lines
Classification	People, Car, Bicycle, Motorcycle
Other	Direction, Object detection and sensitivity, Object size - individually for People, Car, Motorcycle/Bicycle
Triggered Actions	Trigger sound alarm, Start Tracking, Snapshot, Trigger SD card recording, E-mail, FTP, Alarm output

Analysis Type: Area Entry	
Zones/Lines	4x Zones
Classification	People, Car, Bicycle, Motorcycle
Other	Alarm duration, Object detection and sensitivity, Object size - individually for People, Car, Motorcycle/Bicycle
Triggered Actions	Trigger sound alarm, Start Tracking, Snapshot, Trigger SD card recording, E-mail, FTP, Alarm output

Analysis Type: Area Exit	
Zones/Lines	4x Zones
Classification	People, Car, Bicycle, Motorcycle
Other	Alarm duration, Object detection and sensitivity,

Specs



Analysis Type: Area Exit

	Object size - individually for People, Car, Motorcycle/Bicycle
Triggered Actions	Trigger sound alarm, Start Tracking, Snapshot, Trigger SD card recording, E-mail, FTP, Alarm output

Analysis Type: Object Counting

Zones/Lines	1x Line
Classification	People, Car, Bicycle, Motorcycle
Other	Number of entries/exits, Current status in object, Welcome threshold, Occupancy threshold
Schedule	Working days, Holidays
Triggered Actions	Trigger sound alarm, Snapshot, Trigger SD card recording, E-mail, FTP, Alarm output

Analysis Type: Zone Intrusion

Zones/Lines	4x Zones
Classification	People, Car, Bicycle, Motorcycle
Other	Alarm duration, Object detection and sensitivity, Object size - individually for People, Car, Motorcycle/Bicycle
Triggered Actions	Trigger sound alarm, Start Tracking, Snapshot, Trigger SD card recording, E-mail, FTP, Alarm output

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	100Base-TX (FE, IEEE 802.3u), MDI/MDI-X Auto negotiation, 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
Interoperability	ONVIF Profile S/G/T/M, SPI
Security	Password, Complex password, HTTPS encryption, 802.1x port authentication, EAP, IP address filter,

Specs



Network	
	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), Signed firmware, Secure boot
Web browser	Microsoft Edge, Google Chrome, Mozilla Firefox
Local Storage	uSD, uSDHC, uSDXC, max. 256 GB

Environmental	
Protection Level	IP66, IP67, IK10
Operating temperature	-40 .. 74 °C (-40 .. 165.2 °F) (-34..+74 °C conform NEMA TS2)
Relative humidity (Operating)	Max. 95% (non-condensing)
Vibration (NEMA TS-2)	5 to 30 Hz, 0.5 g during 1 h (x, y, and z)
Shock (NEMA TS-2)	10 g (z, y, and z)
Max. wind velocity	225 km/h (150 mph)
Storage temperature	-20 .. 70 °C (-4 .. 158 °F)
Relative humidity (Storage)	Max. 80% (non-condensing)
Demister/Heater	Built-in
Power supply	DC 24 V, DC 36 V (max. 62W) AC 24 V (max. 62W) PoE++ 802.3bt (max. 51W)
Overvoltage protection	TVS 6000V lightning protection, surge protection and voltage transient protection

Mechanical	
Material	Aluminum Alloy (ADC12)
Connectivity	Cable tail (70 cm, 27.6 inch)
Product dimensions	220 x 220 x 345
Product weight	6.8 kg (15 lbs)
Package dimensions	330 x 310 x 375
Package weight	8.4 kg (18.5 lbs)
Color	Signal white, black

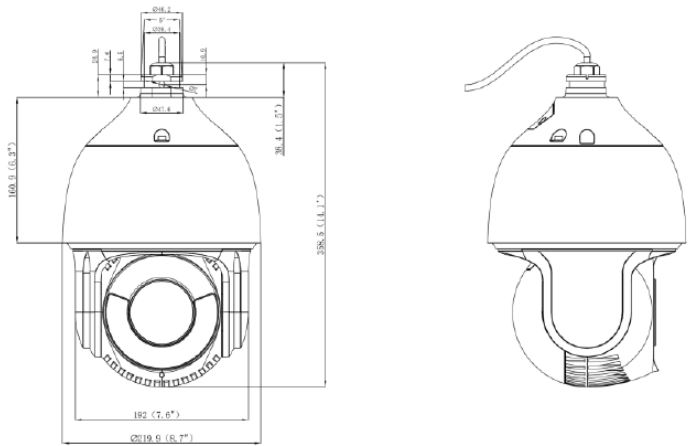
Ordering Information	
PD5004	4MP IP Pendant PTZ camera with 40x motor zoom, IR, 1/1.8" CMOS
JBPD50	Junction box, for PD5004x
WMPD50	Wall mount, for PD5004x
PMPD50	Pole mount, for PD5004x
CMPD50	Ceiling mount, for PD5004x
WMPD51	Corner mount, for PD5004x
WM12B	Wall mount with junction box, for PD20xx PTZ dome series

Specs



Ordering Information

PM07B	Pole mount with junction box, for PD20xx PTZ dome series
WM17B	Corner mount with junction box, for PD20xx PTZ dome series
WM16	Gooseneck mount, for PD20xx PTZ dome series



RELATED



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
