

# FD5008M

**4K IP Fixed dome color camera with 4x motor zoom, 1/1.8" CMOS**

## DESCRIPTION

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

The FD5008M is an 8 megapixel 4K IP fixed dome camera providing clear images in any situation. A wide angle 2.8 .. 12 mm (4x zoom) motorized autofocus lens allows for easy setup and ensures sharp and clear images. The camera has a wide range of intelligent video analytics features to detect numerous events. Intelligent video encoding ensures good image quality and low storage costs. It offers many image enhancement techniques, such as BLC and HLC, Image stabilization, Defog and 3DNR; for further enhancement of the image, dedicated AI is assisting in the removal of the classical low-light artefacts such as noise and motion blur. FD5008M is capable of streaming out by HTTPS protocol.

## FEATURES

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1/1.8 Progressive scan CMOS

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Max. 3840x2160 (8MP) resolution

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2.8 .. 12 mm (4x motor zoom)

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8MP 30fps, 1080p 60fps

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120 dB WDR (Dual exposure HDR)

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

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Extreme low light sensitivity in color / WDR / BLC

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AI enforced embedded video analytics

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ONVIF Profile S, T, G, M

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## Description

### Multi-stream multi-codec

The camera has triple stream capability for simultaneous streaming of H.264, H.264+, H.265, 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 8 megapixel 4K resolution is available at 25/30 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 FD5008M 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 FD5008M utilizes advanced image processing technology. Crisp and detailed 8MP 4K 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 FD5008M can be powered by 12 Vdc, or over the network with PoE.

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**Camera**

Image sensor	1/1.8" CMOS
Max. Resolution	3840x2160 (8MP)
Max. Frame rate	60 (1080p)
Minimum scene illumination	0.0005 lx (Color); lx (B/W, IR lighting)); F1.0
Shutter Speed	1/2 .. 1/100000 s
Lens	Motorized 2.8 .. 12 mm (4x zoom), F1.0, DC-iris
Field of View	102.8 .. 55.3 ° horizontal, 52.6 .. 30.9 ° vertical
Focus Control	Auto, Manual
Slow Shutter	Supported

**Video**

Stream 1 resolutions	3840x2160, 3072x2048, 2592x1944, 2592x1520, 2560x1440, 2304x1296, 1920x1080
Stream 2 resolutions	1920x1080, 1280x720, 640x480, D1
Stream 3 resolutions	1280x720, 640x480, 480x240, D1, CIF
Video Compression	H.264, H.264+, H.265, H.265+, MJPEG
H.264 profiles	Base profile, Main profile, High profile
H.265 profiles	Main profile
Video Bitrate	64 .. 12000 Kbps
Bitrate Control	CBR, VBR
Number of video output streams	Up to 10
Region of interest	Supported, 8x
Video output	Supported, 1x (CVBS)

**Image**

Image control	Brightness, Contrast, Saturation, Sharpness, Whitebalance, AGC
Day/Night control	Auto, Day, Night, Timer
Wide dynamic range	120 dB (Dual exposure HDR)
SNR	50 dB
Image enhancement	BLC, HLC, Defog, 3DNR, 2DNR, ColorNR
Rotation	0, 180
Mirror	Mirror, Flip
Privacy masks	4 (Solid)
Text and picture overlay	6x Text, Date/time, Camera name, Picture
Image stabilization	Supported (EIS)
Digital Zoom	16x

**Mechanical adjustment**

Pan range	0 .. 355°
Tilt range	0 .. 90°

**Analytics**

# Specs



## Analytics

Smart analytics	Line crossing, Intrusion detection, Zone enter, Zone exit, Scene changed, Left luggage, Object removed, Object counting, Loitering, Face detection, People counting, Illegal parking, Simultaneous AI, Video Metadata
Event detections	Motion detection, Tampering, Network disconnected, IP address conflict, Storage full, Storage error, Image quality, Bad focus, Audio detection, Periodical
Event actions	, Record video clip, Send message, Upload image

## Audio

Audio input	1x Line IN (mono, 3.5mm connector)
Audio output	1x Line OUT (mono, 3.5mm connector)
Compression	G.711alaw, G.711ulaw

## Alarm

Input	1x Alarm IN
Output	1x 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
Interoperability	ONVIF Profile S/G/T/M, SPI
Security	Password, Complex password, HTTPS encryption, 802.1x port authentication, EAP, Watermark, 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	IP66, IK10
Operating temperature	-30 .. 60 °C (-22 .. 140 °F)
Relative humidity (Operating)	Max. 95% (non-condensing)
Storage temperature	-30 .. 65 °C (-22 .. 149 °F)
Relative humidity (Storage)	Max. 95% (non-condensing)
Power supply	12VDC, PoE 802.3af

## Mechanical

# Specs



Mechanical	
Material	Metal and plastic
Product dimensions	141 x 141 x 100
Product weight	
Package dimensions	180 x 180 x 175
Package weight	1.2 kg (2.6 lbs)
Color	Signal white, black
Ordering Information	
FD5008M	4K IP Fixed dome color camera with 4x motor zoom,
	1/1.8" CMOS

## RELATED

**TKH Security PM50**

Pole mount, for BL50xxM, FD50xxM, FE5012

**TKH Security JBFD50**

Junction box, for FD50xxM

**TKH Security WMFD50**

Wall mount, for FD50xxM

**TKH Security CMFD50**

Ceiling mount, for FD50xxM

**TKH Security WM50**

Corner mount, for FD50xxM, FE5012