

# FD5006M

6MP IP Fixed dome camera with 5x motor zoom, IR, 1/2.5"

## DESCRIPTION

The FD5006M is a 6 megapixel IP fixed dome camera providing clear images in any situation. A wide angle 2.7 .. 13.5 mm (5x motor 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. FD5006M is capable of streaming out by HTTPS protocol.

## FEATURES

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1/2.5 Progressive scan CMOS

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Max. 3296x1856 (6MP) resolution

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2.7 .. 13.5 mm (5x motor zoom)

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6MP 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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Day/Night with IR-cut filter / WDR / BLC

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AI-enhanced embedded video analytics

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ONVIF Profile S, T, G, M

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NDAA Compliant

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## 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 FD5006M 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 FD5006M utilizes advanced image processing technology. Crisp and detailed 6MP 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-enhanced 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 FD5006M can be powered by 12 Vdc, or over the network with PoE.

(c) 20260528

Camera	
Image sensor	1/2.5" CMOS
Max. Resolution	3296x1856 (6MP)
Max. Frame rate	60 fps (1080p)
Minimum scene illumination	0.008 lx (Color); 0 lx (B/W, IR lighting); F1.6
Shutter Speed	1/4 .. 1/100000 s
Lens	Motorized 2.7 .. 13.5 mm (5x zoom), F1.6, DC-iris
Field of View	108° .. 36° horizontal, 57° .. 20° vertical
Focus Control	Auto, Manual
Slow Shutter	Supported
Day/Night	Automatic IR-cut Filter
IR illumination	50 m; 850 nm
Video	
Stream 1 resolutions	3296x1856, 3200x1800, 2880x1624, 2688x1520, 1920x1080
Stream 2 resolutions	1920x1080, 1280x720, 640x480, 480x240, 4CIF, CIF
Stream 3 resolutions	1280x720, 640x480, 4CIF, 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 .. 10000 kbps
Bitrate Control	CBR, VBR
Number of video output streams	Up to 10
Region of interest	Supported, 8x
Video output	Supported, 1x (CVBS, BNC)
Image	
Image control	Brightness, Contrast, Saturation, Sharpness, Whitebalance, AGC
Day/Night control	Auto, Day, Night, Timer
Wide dynamic range	120 dB (Dual Conversion Gain 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, Image (jpg)
Digital Zoom	16x
Mechanical adjustment	
Pan range	0° .. 355°
Tilt range	0° .. 90°
Analytics	
Smart analytics	Line crossing, Intrusion detection, Zone enter, Zone exit,

## Analytics

	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, Bad color, Audio detection
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, 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, 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, Object size - individually for People, Car, Motorcycle/Bicycle
Triggered Actions	Trigger sound alarm, 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: Area Counting

## Analysis Type: Area Counting

Zones/Lines	1x Zone
Classification	People, Car, Bicycle, Motorcycle
Other	Alarm duration, Time threshold, 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, Snapshot, Trigger SD card recording, E-mail, FTP, Alarm output

## Analysis Type: Heat Map

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

## Analysis Type: Moving Object Detection

Zones/Lines	4x Zones
Classification	People
Other	Alarm duration, Time threshold, Object detection and sensitivity, Object size
Triggered Actions	Trigger sound alarm, Snapshot, Trigger SD card recording, E-mail, FTP, Alarm output

## Analysis Type: Illegal Parking

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

## Analysis Type: Crowd Detection

Zones/Lines	4x Zones
Other	Alarm duration, Time threshold
Triggered Actions	Trigger sound alarm, Snapshot, Trigger SD card recording, E-mail, FTP, Alarm output

## Analysis Type: Attribute Detection

Zones/Lines	4x Zones, 4x Exclusion Zones
Classification	People, Car, Bicycle, Motorcycle
People Attributes	Gender, Age, Direction, Hat, Glasses, Backpack, Upper clothing type,

# Specs



## Analysis Type: Attribute Detection

	Upper clothing color, Lower clothing type, Lower clothing color, Skirt/Dress, Mask,
	Shoulder bag
Vehicle Attributes	Color, Type, Brand, Model
Motorcycle/Bicycle Attributes	Type
Triggered Actions	FTP, OSD 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	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
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), 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	-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	DC 12 V (max. 10W), PoE 802.3af (max. 10W)

## Mechanical

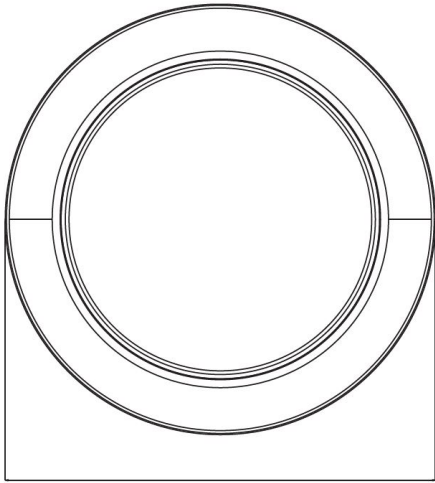
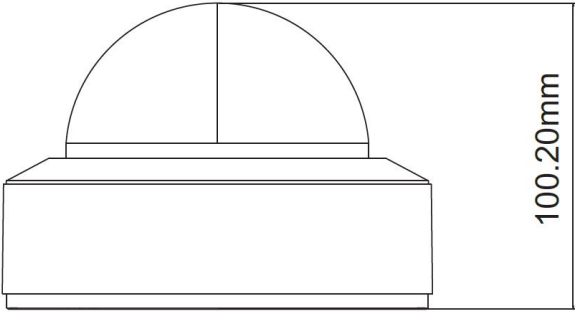
Material	Metal and plastic
Connectivity	Cable tail (45 cm, 17.7 inch)

# Specs



Mechanical	
Product dimensions	141 x 141 x 100
Product weight	0.9 kg (2.1 lbs)
Package dimensions	180 x 180 x 175
Package weight	1.2 kg (2.6 lbs)
Color	Signal white, black

Ordering Information	
FD5006M	6MP IP Fixed dome camera with 5x motor zoom, IR, 1/2.5" CMOS
JBFD50	Junction box, for FD50xxM
WMFD50	Wall mount, for FD50xxM
CMFD50	Ceiling mount, for FD50xxM
PM50	Pole mount, for BL50xxM, FD50xxM, FE5012
WM50	Corner mount, for FD50xxM, FE5012



## RELATED

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**TKH Security PM50**  
Pole mount, for BL50xxM, FD50xxM, FE5012

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**TKH Security JBFD50**  
Junction box, for FD50xxM

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**TKH Security WMFD50**  
Wall mount, for FD50xxM

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**TKH Security CMFD50**  
Ceiling mount, for FD50xxM

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**TKH Security WM50**  
Corner mount, for FD50xxM, FE5012

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