FE5012

12MP IP Fixed dome camera, IR, 1/1.7'' CMOS

D E S C R I P T I O N

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

The FE5012 12 megapixel IP fisheye camera with built-in IR illumination providing clear images under any lighting condition. The camera has multi-stream capabilities for simultaneously streaming of H.264/H.264+/H.265/H.265+/MJPEG. Multiple combinations of resolution and frame rate can be configured. Front-end dewarping mode is equipped and a variety of resolutions and image modes like the full 360° view, dewarped panoramic view (2x 180°), or dewarped single viewview can be selected. With its IP66 construction, IK10 vandal-resistant housing, and fixed lens, installation is fast and easy.

F E A T U R E S

1/1.7'' progressive scan CMOS sensor

4000x3000 (12MP) sensor resolution

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

On-board dewarping for easy installation

Dewarped ePTZ via camera web page

Various Dewarp mode Quad View, Double Panoramic View etc.

Built-in IR illuminator

AI enforced embedded video analytics

ONVIF Profile S, T, G, M

IP66, IK10 vandal proof

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 6 megapixel resolution is available at 25/30 fps still offering multiple exposure WDR (or HDR, in short) with the possibility to add a second stream.

Dewarping Mode

The FE5012 is equipped with on-board dewarping. With this function, the camera dewarps the original 360 view to various image modes and streams dewarped image independently across the network. The dewarped view can be moved by the ePTZ function in the webpage to the desired angle without a blind spot. Next to on-board dewarping, the fish eye camera can also show the original 360 degree circular picture, so that the video management software can take care of de-warping on the server or client workstation.

Open standards

Multiple options are available to easily integrate the FE5012 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.

Power source choices

The FD5006M can be powered by 12 Vdc, or over the network with PoE.

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Camera

Image sensor	1/1.7'' CMOS
Max. Resolution	4000x3000 (12MP)
Max. Frame rate	30
Minimum scene illumination	0.01 lx (Color); 0.01 lx (B/W); F2.8
Shutter Speed	1/3 .. 1/100000 s
Lens	1.65 mm, F2.0, Fixed
Field of View	° horizontal, vertical
Focus Control	
Slow Shutter	Supported
Day/Night	Automatic IR-cut Filter
IR illumination	20 m; 850 nm

Video

Stream 1 resolutions	4000x3000, 3000x3000, 2160x1800, 2800x1624,
	2688x1520, 1920x1080
Stream 2 resolutions	1440x1440, 720x720, 480x480
Stream 3 resolutions	960x960, 640x640, 360x360
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	128 .. 16000 Kbps
Bitrate Control	CBR, VBR
Number of video output streams	Up to 6
Region of interest	Supported, 8x
Video output	Supported, 1x

Image

Image control	Brightness, Contrast, Saturation, Sharpness,
	Whitebalance, AGC
Day/Night control	Auto, Day, Night, Timer
Wide dynamic range	90 dB (Digital WDR)
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
Digital Zoom	16x

Analytics

Smart analytics	Line crossing, Intrusion detection, Zone enter,
	Zone exit, Scene changed, Left luggage, Object removed,
	Object counting, Loitering, Face detection, People counting,

Specs

Analytics

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

Data

Serial port	1x RS-485
Protocols	

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 .. 60 °C (-22 .. 140 °F)
Relative humidity (Storage)	Max. 95% (non-condensing)
Power supply	12VDC, PoE 802.3af

Specs

Environmental

Mechanical

Material	Metal and plastic
Product dimensions	131 x 131 x 46
Product weight	
Package dimensions	
Package weight	1.2 kg (2.6 lbs)
Color	Signal white, black

Ordering Information

FE5012	12MP IP Fixed dome camera, IR, 1/1.7'' CMOS

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

TKH Security WM50
Corner mount, for FD50xxM, FE5012

TKH Security WMFE50
Wall mount, for FE5012