

# FD2024M

**4MP IP Fixed dome camera with 5x motor zoom, IR, 1/3" CMOS**

## DESCRIPTION

The FD2024M is a 4 megapixel fixed dome camera providing clear images in any situation. A wide angle 2.7 to 13.5 mm 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, Electronic Image Stabilization, Defog and 3D DNR.

## FEATURES

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1/3 Progressive scan CMOS

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2.7 .. 13.5 mm (5x motor zoom)

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2688x1520 (4MP)

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120 dB WDR

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Quad stream H.265, H.264 and MJPEG video

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

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Electronic Image Stabilisation

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ONVIF Profile S, T, G

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## Description

### Multi-encoder & multi-streaming

#### High-Efficiency Video Coding (HEVC)

H.265 or HEVC is a video compression standard, the successor of H.264. In comparison, H.265 offers about double the compression ratio at the same level of video quality or substantially improved video quality at the same bit rate. Thus saving bandwidth and recording space.

#### ONVIF

Multiple options are available to easily integrate the FD2024M into a video management system. In support of open standards, the FD2024M is compliant with ONVIF (Profile S, Profile G, Profile T).

#### Image enhancement

The FD2024M features a set of tools to enhance the image quality, such as smart IR, Defog, BLC, and 3D noise reduction.

#### Ease of installation

The FD2024M comes with mounting options (separately sold) for pendant wall mounting and pole mounting.

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## Camera

Image sensor	1/3" CMOS
Max. Resolution	2688x1520 (4MP)
Max. Frame rate	30
Minimum scene illumination	0.003 lx (Color); 0 lx (B/W, IR lighting)); F1.4, AGC ON
Shutter Speed	1/3 .. 1/100000 s
Lens	Motorized 2.7 .. 13.5 mm (5x zoom), F1.4, Auto-iris
Field of View	107.6 .. 32.9 deg horizontal, 56 .. 18.5 deg vertical
Focus Control	Auto, Semi-Auto, Manual
Slow Shutter	Supported
Day/Night	Automatic IR-cut Filter
IR illumination	40 m; 850 nm

## Video

Stream 1 resolutions	2688x1520, 1920x1080, 1280x720
Stream 2 resolutions	1280x720, 640x480, 640x360
Stream 3 resolutions	1920x1080, 1280x720, 640x480, 640x360
Stream 4 resolutions	1280x720, 640x480, 640x360
Video Compression	H.265, H.264, MJPEG
H.264 profiles	Baseline profile, Main profile, High profile
H.265 profiles	Main profile
Video Bitrate	32 .. 8000 Kbps
Bitrate Control	CBR, VBR
Number of video output streams	Up to 6
Region of interest	Supported, 5x

## Image

Image control	Brightness, Contrast, Saturation, Sharpness, Whitebalance, AGC
Day/Night control	Day, Night, Auto
Wide dynamic range	120 dB
SNR	52 db
Image enhancement	BLC, HLC, Defog, 3DNR, 2DNR
Rotation	Supported
Mirror	Off, Left/Right, Up/Down, Center
Privacy masks	Video.1.Image.PrivacyMask.Line
Text and picture overlay	8x Text, Date/time, Camera name, Picture

## Mechanical adjustment

Pan range	0 .. 355°
Tilt range	0 .. 75°

## Analytics

# Specs



## Analytics

Smart analytics	Line crossing, Intrusion detection, Zone enter, Zone exit, Audio exception, Scene changed, Left luggage, Object removed, Loitering
Event detections	Motion detection, Tampering, Network disconnected, IP address conflict, Invalid login, Storage full, Storage error, Image quality, Bad focus, Bad lighting, Bad contrast, Bad SNR
Event actions	Alarm output, 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.711ulaw, G.711alaw, G.722.1, G.726, MP2L2, MP3, AAC

## Alarm

Input	1x Alarm IN
Output	1x Digital OUT (max. 24 VDC/24 VAC, 1 A)

## Network

Interface	RJ45 10 M/100 M self-adaptive Ethernet port
Protocols	TCP, UDP, ICMP, HTTP, FTP, SFTP, SRTP, RTP, DHCP, DNS, DDNS, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP v1/v2/v3, IGMP v1/v2, 802.1x, QoS, IPv4, IPv6, Bonjour, SSL, TLS, ONVIF Profile S/G/T, SPI, ISAPI, SMB, NFS, CIFS
Interoperability	ONVIF Profile S/G/T, SPI, ISAPI
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, TRTP over HTTPS, RTSP over HTTPS, Logout after idle timeout, Security audit log, TLSv1.2, TLSv1.3, Signed firmware, Secure boot
Web browser	Internet Explorer 11, Microsoft Edge, Google Chrome, Mozilla Firefox
Local Storage	uSD, uSDHC, uSDXC, max. 512 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 (max. 15W) PoE 802.3at class 4 (max. 18W)

# Specs



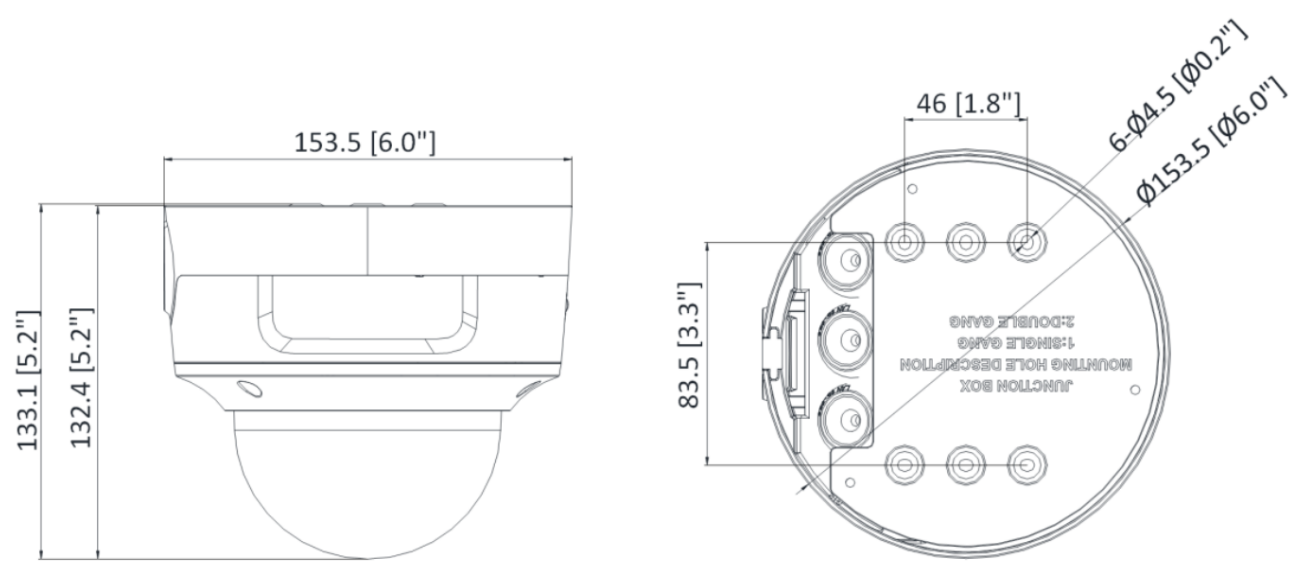
## Environmental

## Mechanical

Material	Metal
Product dimensions	153.5 x 153.5 x 133.1
Product weight	0.9 kg (1.9 lbs)
Package dimensions	244 x 174 x 173
Package weight	1.8 kg (3.9 lbs)

## Ordering Information

FD2024M	4MP IP Fixed dome camera with 5x motor zoom, IR, 1/3" CMOS
WM21	Wall mount, for FD200xM1-EI, FD200xv2M
PM10	Pole mount, for BL/FD200xM1-EI, FD200xv2M
CM21	Ceiling mount, for FD200xM1-EI, FD200xv2M
CM22	Flush mount, for FD200xM1-EI, FD200xv2M
WM20	Corner mount, for 200xM/200xv2M series cameras



Unit: mm (inch)

## RELATED

**TKH Security WM21**

Wall mount, for FD200xM1-EI, FD200xv2M, FD202xM

**TKH Security PM10**

Pole mount, for BL/FD200xM1-EI, FD202xv2M, BL/FD200xM

**TKH Security CM21**

Ceiling mount, for FD200xM1-EI, FD200xv2M, FD202xM

**TKH Security CM22**

Flush mount, for FD200xM1-EI, FD200xv2M, FD202xM

**TKH Security WM20**

Corner mount, for 200xM, 200xv2M, 202xM

**TKH Security DC31**

Dome cover, transparent, vandal proof, for FD200xM1-EI. FD200xv2M

**TKH Security DC31S**

Dome cover, smoked, vandal proof, for FD200xM1-EI. FD200xv2M