

# 2 MP Fixed Wedge Network Camera

IP67 Mobile Camera



## System Overview

Dahua's Mobile series cameras offers high-resolution video and cutting-edge technology in a compact and accessible package. The cameras feature H.265 video compression, reducing bandwidth and storage requirements without sacrificing video quality. The camera series incorporates True Wide Dynamic Range, and Smart IR features typically found on high-end surveillance systems. This series provides a rugged enclosure rated to IP67 Ingress Protection to protect your security investment.

## Functions

### True Wide Dynamic Range

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, True WDR (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

### True Day/Night

A day/night mechanical IR cut filter makes this camera ideal for applications with fluctuating lighting conditions, delivering color images during the day and automatically switching to monochrome as the scene darkens.

### Smart Scene Adaptive (SSA) Technology

Smart Scene Adaptive (SSA) is an intelligent image technology, developed by Dahua that automatically evaluates and compensates for changes in the luminance of a scene. SSA automatically regulates the exposure parameters to improve image quality in a backlit scene, especially in scenes with traffic lights or headlights.

- 1/2.8-in. 2 MP Progressive-scan STARVIS™ CMOS Sensor
- Triple-stream Encoding
- M12 D-Coding Aviation Connection
- Smart H.265+ and Smart H.264+ Dual Codec
- 2 MP (1920 x 1080) at 30 fps
- 2.8 mm Fixed Lens
- Smart Detection Support
- True Wide Dynamic Range (120 dB) and True Day/Night
- Built-in Microphone
- EN 50155 Shock and Vibration Certification
- Maximum IR LED Distance 30 m (98.43 ft)
- IP67 Ingress Protection and IK10 Vandal Resistance
- Five-year Warranty\*

## High Efficiency Video Coding (H.265)

The H.265 (ITU-T VCEG) video compression standard offers double the data compression ratio at the same level of video quality, or substantially improved video quality at the same bit rate, as compared to older video compression technologies. H.265 offers such impressive compression by expanding the pattern comparison and difference-coding, improving motion vector prediction and motion region merging, and incorporating an additional filtering step called sample-adaptive offset filtering.

### Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.

### Smart IR Illumination

With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts the intensity of the camera's infrared LEDs to compensate for the distance of an object. Smart IR technology prevents IR LEDs from whitening out images as they come closer to the camera. The camera's integrated infrared illumination provides high-performance in extreme low-light environments.

### Environmental

With a temperature range of -40 °C to +60 °C (-40 °F to +140 °F), the camera is designed for extreme temperature environments. The camera complies with the IK10 Vandal Resistance impact rating making it capable of withstanding the equivalent of 5 kg (11.02 lbs) of force dropped from a height of 40 cm (15.75 in.). Subjected and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications.

## Technical Specification

### Camera

Image Sensor	1/2.8-in. 2 MP Progressive Scan STARVIS™ CMOS
Effective Pixels	1920(H) x 1080(V)
RAM/ROM	512 MB / 128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto, Manual; 1/3 s to 1/100,000 s
Minimum Illumination	Color: 0.002 lux at F1.6 0 lux at F1.6 with IR on
S/N Ratio	More than 56 dB
IR Distance	Distance up to 30.0 m (98.43 ft)
IR On/Off Control	Auto, Manual
IR LEDs	Eight (8)

### Lens

Lens Type	Fixed-focal								
Mount Type	M12								
Focal Length	2.8 mm								
Maximum Aperture	F1.6								
Angle of View	Horizontal: 106° Vertical: 56° Diagonal 126°								
Iris Type	Fixed								
Close Focus Distance	0.60 m (1.97 ft)								
DORI <sup>1</sup> Distance	<table border="1"> <thead> <tr> <th>Detect (8 ppf)</th> <th>Observe (19 ppf)</th> <th>Recognize (38 ppf)</th> <th>Identify (76 ppf)</th> </tr> </thead> <tbody> <tr> <td>38.60 m (126.60 ft)</td> <td>15.40 m (50.50 ft)</td> <td>7.70 m (25.30 ft)</td> <td>3.90 m (12.80 ft)</td> </tr> </tbody> </table>	Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)	38.60 m (126.60 ft)	15.40 m (50.50 ft)	7.70 m (25.30 ft)	3.90 m (12.80 ft)
	Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)					
38.60 m (126.60 ft)	15.40 m (50.50 ft)	7.70 m (25.30 ft)	3.90 m (12.80 ft)						

### Pan/Tilt/Rotation

Range	Pan: -30° to 30° Tilt: 0° to 80° Rotation: 0° to 360°
-------	---

### Video

Compression	Smart H.265+, H.265, Smart H.264+, H.264H, H.264B, H.264, MJPEG (sub stream only)
Streaming Capability	Three (3) Streams
Resolution	1080p (1920 x 1080), 720p (1280 x 720), D1 (704 x 480), CIF (352 x 240)
Frame Rate	Main Stream: 1080p at 30 fps
	Sub Stream 1: D1 at 30 fps
	Sub Stream 2: 1080p at 8 fps
Bit Rate Control	CBR, VBR
Bit Rate	H.264: 32 Kbps to 8192 Kbps H.265: 12 Kbps to 8192 Kbps
Day/Night	Auto (ICR), Color, B/W
BLC Mode	BLC, HLC, True WDR (120 dB), SSA

White Balance	Auto, Natural, Street Lamp, Outdoor, Manual, Regional Custom
Gain Control	Auto, Gain Priority, Shutter Priority, Manual
Noise Reduction	3D DNR
Motion Detection	Off, On (4 Zone, Rectangle)
Region of Interest	Off, On (4 Zone)
Advanced Features	Defog, Smart Illumination
Flip	0°, 90°, 180°, 270°
Mirror	Off, On
Privacy Masking	Off, On (8 Areas, Rectangular)

### Audio

Compression	PCM, G.711a, G.711Mu, G.726, G.723
Audio Interface	Built-in Microphone

### Network

Ethernet	M12 D-coding Connector (10/100 Base-T)
Protocol	HTTP, HTTPS, TCP, ARP, RTSP, RTP, UDP, SMTP, FTP, DHCP, DNS, DDNS, PPPOE, IPv4/v6, QoS, UPnP, NTP, Bonjour, 802.1x, Multicast, ICMP, IGMP, SNMP
Interoperability	ONVIF (Profiles S, G, T), CGI, Milestone, Genetec, P2P
Maximum User Access	20 Users (total bandwidth: 80 Mbps)
Edge Storage	Network Attached Storage (NAS) FTP, SFTP, MicroSD Card Slot, maximum 256 GB
Web Viewer	IE, Chrome, Firefox, Safari

### Certifications

Safety	UL 60950-1, CAN/CSA C22.2 No.60950-1-07 EN 62368-1
Electromagnetic Compatibility	CFR 47 FCC Part 15 Subpart B Electromagnetic Compatibility Directive 2014/30/EU
Rolling Stock	EN 50155 (EN 50121-3-2, IEC61373) EN 45545 Fire protection on railway vehicles E-mark (ECE-Regulation No.10.05)

### Electrical

Power Supply	PoE (IEEE802.3af, Class 0)
Power Consumption	< 5.3 W

Environmental

Operating Conditions	-40° C to +60° C (-40° F to +140° F), Less than 95% RH
Storage Conditions	-40° C to +60° C (-40° F to +140° F),
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	ø108.90 mm x 55.0 mm (ø4.29 in. x 2.17 in.)
Net Weight	0.43 kg (0.95 lb)
Gross Weight	0.56 kg (1.23 lb)

Ordering Information

Type	Part Number	Description
2 MP Camera	IPC-HDBW5241FN-M12 2.8mm	2 MP IR Wedge Network Camera, 2.8 mm, True WDR, M12 D-coded Connector
Mobile Software, optional	DHI-MobileCenter-Base-License	Mobile Center Base Package License with 16 Auto-register Video Channels
Compatible Mobile NVR	MN4208-VM	8-channel 2 HDD, GPS, Verizon, WiFi, M12 D-coding, H.265
	MN4104-VM	4-channel 1 HDD, GPS, Verizon, WiFi, M12 D-coding, H.265

Dimensions (mm/inch)

