People Counting AI Network Camera

3 MP Dual-sensor H.265 IR Network Camera

- Two (2) 1/2.8-in. 3 MP Progressive-scan CMOS Sensors
- Triple-stream Encoding
- Smart H.265+ and H.264 Dual Codec
- 3 MP (2048 x 1536) at 25 fps; 2.8 mm Fixed Lens
- Advanced, Accurate People Counting: Supports Line Crossing and Regional People Counting
- True Day/Night IR Cut Filter
- Built-in Microphone
- Maximum IR Length 10 m (33 ft)
- Intelligent Video System with Advanced Business Analytics
- IP67 Ingress Protection
- Five-year Warranty*

3Mp   H.265   Analysis   IP67

System Overview

The Dahua 3MP Dual-lens People Counting Camera offers Artificial Intelligence at the edge – using complex real-time people counting algorithms to deliver accurate flow statistics. The camera uses an advanced Vision Processor Unit (VPU) that delivers high-performance machine vision and visual awareness that enables advanced vision applications that are impossible with conventional ISPs.

The dual 3 MP sensors work in combination to deliver a single video stream that captures 3D depth in the image, offering improved accuracy as compared to single-sensor cameras. The dual-sensor technology captures an object's height, letting the camera better distinguish between people and other objects.

The camera offers two distinct people counting functions, Line Crossing and Regional. The line crossing function counts the number of people crossing a defined lines, and offers maximum/minimum height detection to help filter objects that are too tall or too small. The Regional function counts the number of people in ten (10) distinct, user-defined regions.

Functions

Intelligent Video System (IVS)

IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for Tripwire violations, intrusion detection, and abandoned or missing objects. A camera with IVS quickly and accurately responds to monitoring events in a specific area. The camera also offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

Smart Scene Adaptive 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.

Intelligent Business Analysis

The built-in IVS features people counting and heat map functionality, advanced features that add business intelligence to your security system. Intelligent Analysis tracks and stores daily, weekly, monthly, and yearly people flow through a defined scene and produces a configurable report. The system uses this data to produce a Heat Map, a two-dimensional representation of data that provides an immediate visual summary of information. People Counting and Heat Maps can identify the most active areas of a retail space providing valuable data analysis for commercial applications.

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.

Advanced 3DNR

3DNR is noise reduction technology that detects and eliminates random noises by comparing two sequential frames. Dahua's advanced 3DNR technology delivers remarkable noise reduction with little impact to sharpness, especially under limited lighting condition. 3DNR, in addition, effectively decreases the bandwidth and saves storage space.

Environmental

The camera's outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with IP67, making it suitable for indoor or outdoor environments. With a working temperature range of −30 °C to +60 °C (−22 °F to +140 °F), the camera is designed for extreme temperature environments. Supporting ±25% input voltage tolerance, this camera suits even the most unstable power supply conditions. Its 6KV lightning rating provides protection against the camera and its structure from the effects of lightning.

Onvif

Technical Specification

Camera

Image Sensor	Two (2) 1/2.8-in. 3 MP CMOS Sensors
Effective Pixels	2048 (H) x 1536 (V)
RAM/ROM	512 MB/4096 MB
Scanning System	Progressive
Minimum Illumination	Color: 0.009 lux at F1.8 (1/3 s,30 IRE) Color: 0.08 lux at F1.8 (1/30 s, 30 IRE) 0 lux at F1.8 (IR on)
S/N Ratio	More than 50 dB
IR Distance	10.0 m (32.81 ft)
IR On/Off Control	Auto, Manual
IR LEDs	One (1)

Lens

Lens Type	Fixed
Mount Type	Board-in
Focal Length	2.8 mm, each lens
Maximum Aperture	F1.8
Angle of View	Horizontal: 137° Vertical: 114°
Focus Control	Fixed
Close Focus Distance	0.6 m (1.97 ft)

DORI Distance[1]	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	45 m (147 ft)	18 m (59 ft)	9 m (29 ft)	4 m (13 ft)

Detection Width

Installation Height	2.20 m	2.50 m	2.80 m	3.50 m
Detection Width	1.10 m	2.60 m	3.10 m	4.30 m

Pan/Tilt/Rotation

Range	Tilt: −10˚ to 70˚

Video

Compression	H.265, H.264H, MJPEG (Sub Stream only)
Smart Codec	Smart H.265+, Smart H.264+
Streaming Capability	Three (3) Streams
Resolution	3 MP (2048 x 1536), 1080p (1920 x 1080), 1.3 MP (1280 x 960), 720p (1280 x 720), D1 (704 x 480), VGA (640 x 480),CIF (342 x 240)
Frame Rate	Main Stream: 3 MP at 25 fps
	Sub Stream 1: D1 at 30 fps
	Sub Stream 2: 6 MP at 7 fps (for camera adjustment only)

Bit Rate Control	CBR, VBR
Bit Rate	H.264: 192 kbps to 10240 Kbps H.265: 80 kbps to 6144 Kbps
Day/Night	Auto (ICR), Color, B/W
BLC Mode	BLC, HLC, Digital WDR, SSA
White Balance	Auto, Natural, Street Lamp, Outdoor, Manual
Gain Control	Auto, Manual
Noise Reduction	3D DNR
Motion Detection	Off , On (4 Zones, Rectangular)
Region of Interest	Off , On (4 Zones)
Advanced Features	Smart IR Defog
Digital Zoom	16x
Privacy Masking	Off, On (4 Areas, Rectangular)

Audio

Compression	G.711a, G.711Mu, AAC, G.726

Network

Ethernet	RJ-45 (100/1000 Base-T)
Protocol	HTTP, HTTPS, TCP, ARP, RTSP, RTP, RTCP, UDP, SMTP, FTP, DHCP, DNS, DDNS, PPPoE, IPV4/V6, QoS, UPnP, NTP, Bonjour, IEEE 802.1X, Multicast, ICMP, IGMP, TLS
Interoperability	ONVIF Profile S/G, API
Streaming Method	Unicast, Multicast
Max. User Access	10 Users/20 Users
Edge Storage	Network Attached Storage (NAS) Local PC for Instant Recording Micro SD Card, maximum 128 GB
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	SmartPSS, DSS, DMSS
Mobile Operating System	IOS, Android

Certifications

Safety	EN 60950:2000 UL 60950-1
Electromagnetic Compatibility (EMC)	FCC Part 15 Subpart B

Interface

Video Output	One (1) Port, BNC (for camera adjustment only)
Audio	Input: • Two (2) Channels, RCA • One (1) Built-in Microphone Output: One (1) Channel, RCA
Alarm	Input: Two (2) Channels Output: Two (2) Channels

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1. The DORI distance is a measure of the general proximity for a specific classification to help pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4 , the standard that defines the criteria for the Detect, Observe, Recognize and Identify classifications.

Electrical

Power Supply	12 VDC, 1 A or PoE (802.3af, Class 0)
Power Consumption	< 12 W

Environmental

Operating Conditions	−30° C to +60° C (−22° F to +140° F) Less than 95% RH
Storage Conditions	−30° C to +60° C (−22° F to +140° F) Less than 95% RH
Ingress Protection	IP67

Construction

Casing	Metal
Dimensions	204.0 mm x 78.0 mm x 62.0 mm (8.03 in. x 3.07 in. x 2.44 in.)
Net Weight	0.80 kg (1.76 lb)
Gross Weight	1.09 kg (2.40 lb)

Artificial Intelligence- People Counting

People Counting	• Built-in Calibration Function • Dual-lens Design for Depth of Information
Line Crossing	• Maximum/Minimum Height Detection • Sensitivity Control
Regional	• Counts Number of People in a Defined Area • Ten (10) Separate Regions

Intelligence

IVS triggers an alarm and takes a defined action for the following events:

Standard Features	• Tampering with the camera. • Error writing to an onboard Micro SD card. • Error sending or receiving data over the network. • Unauthorized access to the camera.

Premium Features

Motion	An object moves through any part of the scene.
Tripwire	A target crosses a user-defined line.
Intrusion	A target enters or exits a defined perimeter.
Scene Change	A person or object moves the camera to change the scene or covers the camera to obscure the scene.
Abandoned/Missing Object	A target leaves an object in designated area, or a target removes an object from the same designated area.

Advanced Features

Heat Map	Generates a visual representation of activity.

Ordering Information

Type	Part Number	Description
People Counting AI Camera	DH-IPC-HDW8341XN-3D	3 MP Dual-sensor People Counting AI Network Camera
Accessory, optional	PFM321	12 VDC, 1 A Power Adapter

Accessories

Optional:

PFM321
12 VDC, 1 A Power Adapter

Dimensions (mm/inch)