Face Recognition AI Network Camera
2 MP H.265 Starlight Box Network Camera

- 1/1.9-in. 2 MP Progressive-scan CMOS Sensor
- Triple-stream Encoding
- Smart H.265+ and H.264 Dual Codec
- 1080p (1920 x 1080) at 60 fps
- Advanced Facial Recognition with Extraction Display
- Starlight Technology for Low-light Applications
- True Wide Dynamic Range (120 dB) and Day/Night IR Cut Filter
- Built-in Microphone
- Intelligent Video System with Advanced Business Analytics
- Micro SD Memory, PoE
- Five-year Warranty*

System Overview

The Dahua 2MP Starlight Face Recognition Camera offers Artificial Intelligence at the edge – performing complex real-time facial recognition and facial feature comparison without the need for an external database. 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 VPU, coupled with Dahua's Deep Learning technology, allows the camera to enhance target faces to extract and categorize various features, including age, gender, expression, and whether the target face wears glasses or sports facial hair.

The camera includes human facial feature extraction, real-time facial snapshots, and supports a database of up to 10,000 face images and five (5) libraries. The facial recognition feature enables a pro-active way to identify persons of interest before an incident occurs. The Starlight Face Recognition Camera is ideal for applications that require entrance/exit management, where knowing who is coming and going is a valuable asset.

Functions

Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.001 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

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.

True Wide Dynamic Range

For applications with both bright and low-light 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.

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.

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 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.

Interoperability

The camera conforms to the ONVIF (Open Network Video Interface Forum) and to the PSIA (Physical Security Interoperability Alliance) specifications, ensuring interoperability between network video products regardless of manufacturer.

*Warranty applies to products sold through an authorized Dahua Dealer.

Technical Specification

Camera

Image Sensor	1/1.9-in. 2 MP CMOS
Effective Pixels	1920(H) x 1080(V)
RAM/ROM	2040 MB/4096 MB
Scanning System	Progressive
Electronic Shutter Speed	1/3 s to 1/100,000 s, Auto and Manual
Minimum Illumination	Color: 0.001 lux at F1.2 (1/3 s, 30 IRE) Color: 0.01 lux at F1.2 (1/30 s, 30 IRE) B/W: 0.0005 lux at F1.2 (1/3 s, 30 IRE) B/W: 0.005 lux at F1.2 (1/30 s, 30 IRE)
S/N Ratio	More than 50 dB
Lens Mount Type	C/CS

Video

Compression	Smart H.265+, H.265, Smart H.264+, H.264
Streaming Capability	Three (3) Streams
Resolution	1080p (1920 x 1080), 1.3 MP (1280 x 960), 720p (1280 x 720), D1 (704 x 480), VGA (640 x 480)
Frame Rate	Main Stream: 1080p at 60 fps
	Sub Stream 1: D1 at 60 fps
	Sub Stream 2: 1080p at 60 fps
Bit Rate Control	VBR
Bit Rate	H.265: 14 Kbps to 6144 Kbps H.264: 24 Kbps to 10240 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
Gain Control	Auto, Manual
Noise Reduction	3D DNR
Motion Detection	Off, On (4 Zone, Rectangle)
Region of Interest	Off, On (4 Zone)
Privacy Masking	Off, On (4 Area, Rectangle)
Advanced Features	Electronic Image Stabilization (EIS) Defog
Flip	0°, 90°, 180°, 270°
Mirror	Off, On

Audio

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

Network

Ethernet	RJ45 (100/1000 Mbps Base-T)
Protocol	HTTP, TCP, ARP, RTSP, RTP, UDP, RTCP, SMTP, FTP, DHCP, DNS, DDNS, PPPOE, IPv4/v6, SNMP, QoS, UPnP, NTP
Interoperability	ONVIF, PSIA, CGI
Streaming Method	Unicast / Multicast
Maximum User Access	10 Users /10 Users
Edge Storage	Network Attached Storage (NAS) Local PC for Instant Recording MicroSD Card, maximum 128 GB
Web Viewer	IE, Firefox, Safari
Management Software	SmartPSS, DSS
Mobile Operating System	IOS, Android

Certifications

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

Interface

Video Output	One (1) BNC (1.0 Vp-p, 75 Ω)
Audio	Input: • Two (2) Channels, 3.5 mm Jack • One (1) Built-in Microphone Output: One (1) Channel, 3.5 mm Jack
RS485	One (1) Port
Alarm	Input: Two (2) Channels (5 mA, 5 VDC) Output: Two (2) Channels (1 A, 30 VDC; 0.5 A, 50 VAC)

Electrical

Power Supply	12 VDC, 24 VAC, or PoE (802.3af Class 0)
Power Consumption	< 10 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

Construction

Casing	Metal
Dimensions	161.60 mm x 85.50 mm x 74.0 mm (6.36 in. x 3.37 in. x 2.91 in.)
Net Weight	0.78 kg (1.72 lb)
Gross Weight	0.92 kg (2.03 lb)

Artificial Intelligence- Face Recognition

On-camera Storage Capability	• up to 10,000 Facial Images • up to Five (5) Image Libraries
Facial Feature Extraction	• Age • Gender • Expression (Happy, Calm, Surprise, Sad, Rage) • Wearing Glasses • Wearing a Mask • Facial Hair

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. • IP Address Conflict
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	
People Counting	Measure the number of customers, visitors or passengers in a surveillance scene.
Heat Map	Generates a visual representation of data.

Ordering Information

Type	Part Number	Description
Face Recognition Camera	DH-IPC-HF8242FN-FR	2 MP Box Network Camera, WDR, IVS
Accessories, optional	PFB110W	Wall/Ceiling Mount
	PFB121W	Wall Mount
	DH-PLZ20C0-D	12 MP 3.7 mm to 16 mm Vari-focal Lens
	DH-PLZ21C0-D	12 MP 10.5 mm to 42 mm Vari-focal Lens

Accessories

Optional:

| PFB110W Wall Mount | PFB121W Wall Mount | DH-PLZ20C0-D 12 MP Lens | DH-PLZ21C0-D 12 MP Lens |

Wall Mount	Wall/Ceiling Mount
PFB121W	PFB110W

Dimensions