IP-1WP-F21-PA

1.3MP Dual-Lens People Counting AI Network Camera

· Two 1/3" 1.3Megapixel progressive scan STARVIS™ CMOS
· H.265&H.264 triple-stream encoding
· 25/30fps@1.3MP(1280×960)
· DWDR, Day/Night(Electronic), 3DNR, AWB, AGC, BLC
· Multiple network monitoring: Web viewer, CMS & VMS
· 2.1mm fixed lens (2.8mm optional)
· Micro SD memory, IP54, PoE
· People Counting: Support line crossing people counting, region people counting

Empower AI series products adopt the most advanced AI technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the Empower AI series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc.The complete lineup of Empower AI includes network (PTZ) cameras, network video recorders, servers, and platform management products. Beyond seeing the world, the power of AI allows devices to perceive the environment and understand the world in a better way.

System Overview

The Empower Stereo Vision People Counting camera uses dual-lens imaging technology to capture 3D depth information from within images. The camera pairs this information with deep learning algorithms to analyze and detect human bodies and track target objects in real time. The camera provides statistics for separate individuals' entrance and exit with up to 95% counting accuracy.

Functions

Smart Codec (H.265+ & H.264+)

Smart Codec is the optimized implementation of standard video compression (H.265 & H.264) 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 Codec technology reduces bit rate and storage requirements by up to 70% when compared to the standard video compression.

Technical Specification

Camera

Image Sensor	Two 1/3"1.3Megapixel progressive scan CMOS
Effective Pixels	1028(H)x960(V)
RAM/ROM	512MB/128MB
Scanning System	Progressive
Minimum Illumination	0.003Lux/F2.2 (Color,1/3s,30IRE) 0.02Lux/F2.2 (Color,1/30s,30IRE) 0.005Lux/F2.2 (B/W,1/3s,30IRE) 0.02Lux/F2.2 (B/W,1/30s,30IRE)
S/N Ratio	More than 50dB
IR Distance	N/A
IR On/Off Control	N/A
IR LEDs	N/A

Lens

Lens Type	Fixed
Mount Type	Board-in
Focal Length	2.1mm (2.8mm)
Max. Aperture	F2.2
Angle of View	H: 109.5° (89°), V: 84.3° (64°)
Optical Zoom	N/A
Focus Control	Fixed
Close Focus Distance	0.3m (0.98ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.1 mm	24m(79ft)	10m(33ft)	4.8m(15.7ft)	2.4m(7.9ft)
	2.8 mm	35m(115ft)	14m(46ft)	7m(23ft)	3.5m(11.5ft)

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	N/A

Artificial Intelligence

People Counting	Line crossing people counting, Region people counting, Height filter, Loitering filter

General Intelligence

Event Trigger	Motion detection, Video tampering, Scene changing, Network disconnection, Ip address conflict, Illegal access, Storage anomaly
General Intelligence	N/A

Video

Compression	H.265/H.264/H.264H/H.264B/MJPEG(Sub Stream)
Smart Codec	Support H.265+/H.264+
Streaming Capability	3 Streams
Resolution	1.3M(1280x960)/ 720P(1280x720)/ D1(704×576/704x480)/ VGA(640x480)
Frame Rate	Main Stream: 1.3MP (1~25/30fps)
	Sub Stream 1: D1 (1 ~ 25/30fps)
	Sub Stream 2: 720P (1~25/30fps)

Bit Rate Control	CBR/VBR
Bit Rate	H.264: 1280~ 6144Kbps H.265: 512~ 3072Kbps
Day/Night	Electronic
BLC Mode	BLC / HLC /DWDR
White Balance	Auto/Manual
Gain Control	Auto/Manual
Noise Reduction	3D DNR
Motion Detection	Off / On (4 Zone, Rectangle)
Region of Interest	Off / On (4 Zone)
Electronic Image Stabilization (EIS)	N/A
Smart IR	N/A
Defog	N/A
Digital Zoom	16x
Flip	N/A
Mirror	N/A
Privacy Masking	Off / On (4 Area, Rectangle)

Audio

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

Network

Ethernet	RJ-45 (10/100Base-T)
Protocol	HTTP;HTTPs;TCP;ARP;RTSP;RTP;UDP;RTCP;SMTP; FTP;DHCP;DNS;DDNS;PPPOE;IPv4/v6;QoS;UPnP; NTP;Bonjour;IEEE 802.1x;Multicast;ICMP;IGMP;S NMP;TLS
Interoperability	ONVIF Profile S&G, API
Streaming Method	Unicast / Multicast
Max. User Access	10 Users/20 Users
Edge Storage	NAS Local PC for instant recording Mirco SD card 128GB
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	WEB, CMS, UNISIGHT VMS
Smart Phone	IOS, Android

Certifications

Certifications	CE (EN 60950:2000) UL:UL60950-1 FCC: FCC Part 15 Subpart B

Interface

Video Interface	N/A
Audio Interface	Built-in Mic
RS485	1 port
Alarm	1 channel In: 5mA 5VDC 1 channel Out: 300mA 12VDC

Electrical

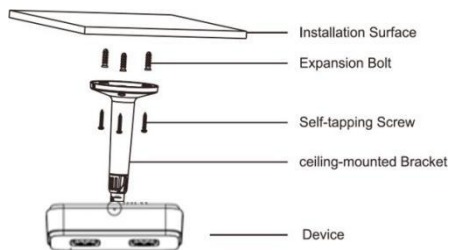|	
Power Supply	DC12V, PoE (IEEE 802.3af)(Class 0)
Power Consumption	DC12V: 3.6W 4.6W(People Counting on) PoE: 4.2W 5.3W((People Counting on))

Environmental

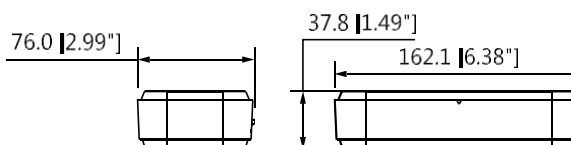|	
Operating Conditions	-10° C ~ +45° C (14° F ~ +113° F) / Less than 95% RH
Storage Conditions	-10° C ~ +45° C (14° F ~ +113° F) / Less than 95% RH
Ingress Protection	IP54
Vandal Resistance	N/A

Construction

Casing	Metal
Dimensions	162.1mmx76mmx37.8mm (6.38"x2.99"x1.49")
Net Weight	0.3kg (0.66lb)
Gross Weight	0.46kg (1.01lb)

Installation

Installation Surface
Expansion Bolt
Self-tapping Screw
ceiling-mounted Bracket
Device

Dimensions (mm/inch)

76.0 [2.99"]
37.8 [1.49"]
162.1 [6.38"]

Ordering Information

Type	Part Number	Description
1.3MP Camera	IP-1WP-F21-PA (2.1mm PAL)	1.3MP Dual-Lens People Counting AI Network Camera, PAL
	IP-1WP-F21-PA (2.1mm NTSC)	1.3MP Dual-Lens People Counting AI Network Camera, NTSC
	IP-1WP-F21-PA (2.8mm PAL)	1.3MP Dual-Lens People Counting AI Network Camera, PAL
	IP-1WP-F21-PA (2.8mm NTSC)	1.3MP Dual-Lens People Counting AI Network Camera, NTSC
Accessories (included)	Quick mounting board	Quick mounting board

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