αhua
TECHNOLOGY

2MP Mini PTZ Network Camera
4x Starlight PTZ Network Camera

- 1/2.8-in. 2MP STARVIS™ CMOS Sensor
- 1080p at 30 fps Maximum Resolution
- H.265 and H.264 Dual Codecs
- 2.7 mm to 11 mm, 4x Optical Zoom
- Triple-stream Encoding
- Starlight Technology for Ultra-low Light Sensitivity
- True Wide Dynamic Range (120 dB)
- Intelligent Video System (IVS)
- IP66 Ingress Protection and IK10 Vandal Resistance
- PoE Support
- Five-year Warranty*

H.265	WDR	0.005Lux	ICR D/N	IP66	Vandal-proof

System Overview

The 2 MP Starlight Mini PTZ Dome camera features a 1/2.8-in. STARVIS™ CMOS imager with a 4x optical zoom lens, and provides an all in one solution for capturing video security for indoor and outdoor applications. The camera uses the H.265 video compression standard to improve encoding efficiency while preserving high-quality video. The PTZ camera is equipped with quick and accurate pan/tilt/zoom control and True Wide Dynamic Range for applications with direct sunlight or glare.

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 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Intelligent Video System

IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for video anomalies. A camera with IVS quickly and accurately responds to monitoring events in a specific area. In addition to scene analytics, the camera offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

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.

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.

Cybersecurity

Dahua network cameras are equipped with a series of key cybersecurity technologies including: security authentication and authorization, access control, trusted protection, encrypted transmission, and encrypted storage. These technologies improve the camera's ability to prevent malicious access and to protect data.

Environmental

With a temperature range of −30 °C to +60 °C (−22 °F to 140 °F), the camera is designed for extreme temperature environments. The camera complies with an IK10 vandal resistance 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 IP66 rating makes it suitable for demanding outdoor applications.

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

Technical Specification

Camera

Image Sensor	1/2.8-in. STARVIS™ CMOS Sensor
Effective Pixels	1920(H) x 1080(V), 2 MP
RAM/ROM	256 MB / 128 MB
Scanning System	Progressive
Electronic Shutter Speed	1/1 s to 1/30,000 s
Minimum Illumination	Color: 0.005 lux at F1.6 B/W: 0.0005 lux at F1.6

Lens

Focal Length	2.7 mm to 11 mm
Maximum Aperture	F1.6
Angle of View	Horizontal: 30° to 112.5° Vertical: 20° to 57° Diagonal: 40° to 133°
Optical Zoom	4x
Focus Control	Auto, Manual
Close Focus Distance	100 mm to 1000 mm (3.94 in. to 39.37 in.)
Iris	Automatic

DORI Distance[1]

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
124 m (407 ft)	50 m (163 ft)	25 m (81 ft)	12 m (40 ft)

PTZ

Pan/Tilt Range	Pan: 0° to 355° Tilt: 0° to 90°
Manual Control Speed	Pan: 0.1° to 100° /s Tilt: 0.1° to 60° /s
Preset Speed	Pan: 100° /s Tilt: 60° /s
Presets	300
PTZ Mode	8 Tours (up to 32 presets per tour)
Speed Compensation	Proportional Pan/Tilt Speed to Zoom Ratio
Power up Action	Auto restore to previous PTZ and lens status after power failure
Idle Motion	Activate Preset, Scan, Tour, Pattern if there is no command in the specified period
Protocol	DH-SD

Video

Compression	H.265, 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, 720p, or D1 at 30 fps
	Sub Stream 1	D1 or CIF at 30 fps
	Sub Stream 2	1080p, 720p, D1, or CIF at 30 fps
Bit Rate Control		CBR, VBR
Bit Rate		H.265/H.264: 448 K to 8192 Kbps MJPEG: 5120 Kbps to 10240 Kbps
Day/Night		Auto (ICR), Color, B/W
Backlight Compensation		BLC, HLC, True WDR (120 dB)
White Balance		Auto, ATW, Indoor, Outdoor, Manual
Gain Control		Auto, Manual
Noise Reduction		Ultra DNR (2D/3D)
Advanced Features		Motion Detection, Region of Interest, Defog
Digital Zoom		16x
Flip		180°
Privacy Masking		Up to 24 areas

Network

Ethernet	RJ-45 (10 Base-T/100 Base-TX)
Protocol	IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, QoS, Bonjour, 802.1x
Interoperability	ONVIF Profile S and G, API
Streaming Method	Unicast / Multicast
Maximum User Access	20 Users
Edge Storage	Network Attached Storage (NAS) Local PC for Instant Recording Micro SD Card Slot, maximum 128 GB
Web Viewer	IE, Firefox, Safari
Management Software	Smart PSS, DSS, DMSS
Mobile Operating System	IOS, Android
Cybersecurity	Video Encryption, Firmware Encryption, Configuration Encryption, Digest, WSSE, Account Lockout, Security Logs, IP/MAC Filtering, Generating and Importing X.509 Certification, Syslog, HTTPS, 802.1x, Trusted Boot, Trusted Execution, Trusted Upgrade

Certifications

CE	EN 55032 EN 55024 EN 50130-4
UL	UL 60950-1 + CAN/CSA C22.2, No.60950-1
Electromagnetic Compatibility (EMC)	CFR 47 FCC Part 15 Subpart B ANSI C63.4-2014

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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, 1.5 A or PoE (802.3af Class 0)
Power Consumption	5.5 W

Environmental

Operating Conditions	−30° C to 60° C (−22° F to +140° F) Less than 95% RH
Ingress Protection	IP66
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	Ø122.0 mm x 89.0 mm (Ø4.80 in. x 3.50 in.)
Net Weight	0.52 kg (1.23 lb)
Gross Weight	0.73 kg (1.61 lb)

Intelligence

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

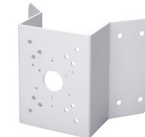|	
Standard Features	• Tampering with the camera. • Error writing to an onboard Micro SD card. • Error sending or receiving data over the network. • Unauthorized access to the camera.
Premium Features	
Motion	An object moves through any part of the scene.

Ordering Information

Type	Part Number	Description
2 MP PTZ Camera	22204UENI	2 MP 4x Starlight Mini PTZ Network Camera, True WDR, IVS
Accessories, optional	PFA137	Junction Box
	PFA151	Corner Mount (for use with PFB203W wall mount)
	PFA152-E	Pole Mount (for use with PFB203W wall mount)
	PFB200C	In-ceiling Mount
	PFB203W	Wall Mount
	DH-PFM320D-US	12 VDC, 2 A Power Adapter

Accessories

Optional :

PFA137
Junction Box

PFA151
Corner Mount

PFA152-E
Pole Mount

PFB200C
In-ceiling Mount

PFB203W
Wall Mount

DH-PFM320D-US
Power Adapter

Wall Mount	In-ceiling Mount
PFB203W	PFB200C

Junction Box Mount	Pole Mount
PFA137	PFB203W + PFA152-E

Dimensions (mm/in.)

ø122.0 mm
(4.80 in.)

89.0 mm
(3.50 in.)

ø84.80 mm
(3.34 in.)