alhua TECHNOLOGY

2 MP In-ceiling PTZ Network Camera
2 MP 12x Starlight Network Camera

- 1/2.8-in. 2 MP STARVIS™ CMOS Sensor
- Starlight Technology for Ultra-low Light Sensitivity
- Powerful 12x Optical Zoom
- Triple-stream Encoding
- H.265 and H.264 Dual Codecs
- 1080p at 30 fps Maximum Resolution
- Intelligent Video System (IVS)
- IK10 Vandal Resistance
- PoE+ Support
- Five-year Warranty*

| H.265 | WDR | 0.005 Lux | ICR D/N | Vandal-proof | PoE+ |

System Overview

The 2 MP Starlight In-ceiling PTZ Dome camera features a 1/2.8-in. STARVIS™ CMOS imager with a 12x optical zoom lens, and provides an all in one solution for capturing long-distance video surveillance for indoor 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 WDR for applications with 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 Tripwire violations, intrusion detection, and abandoned or missing objects. A camera with IVS quickly and accurately responds to monitoring events in a specific area. In addition to scene analytics, the camera supports face detection to quickly capture a face and upload the image to a server. The camera also 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.

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.

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.).

Protection

This camera suits even the harsh conditions for outdoor applications. Its 2KV lightning rating provides protection against the camera and its structure from the effects of lightning.

ONVIF PSIA

Technical Specification

Camera

Image Sensor	1/2.8-in. STARVIS™ CMOS Sensor
Effective Pixels	1920(H) x 1080(V), 2 MP
RAM/ROM	1024 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
S/N Ratio	More than 55 dB

Lens

Focal Length	5.3 mm to 64 mm
Max. Aperture	F1.6 to F4.4
Angle of View	Horizontal: 58.2° to 4.8°
Optical Zoom	12x
Focus Control	Auto, Manual
Close Focus Distance	100 mm to 1000 mm

DORI Distance[1]

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
883 m (2897 ft)	353 m (1158 ft)	177 m (581 ft)	88 m (289 ft)

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless, Tilt: −2° to 90° Auto Flip 180°
Manual Control Speed	Pan: 0.1° to 300° /s Tilt: 0.1° to 120° /s
Preset Speed	Pan: 300° /s Tilt: 200° /s
Presets	300
PTZ Mode	5 Pattern, 8 Tour, Auto Pan, Auto Scan
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
Streaming Capability	Three (3) Streams
Resolution	1080p (1920 x 1080), 1.3 MP (1280 x 960), 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 K 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

Audio

Compression	G.711a, G.711u (32 kbps), PCM (128 kbps)

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, PSIA, CGI
Streaming Method	Unicast / Multicast
Max. 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 10, Firefox, Safari
Management Software	Smart PSS, DSS
Mobile Operating System	IOS, Android

Certifications

UL	UL60950-1 + CAN/CSA C22.2, No.60950-1
Electromagnetic Compatibility (EMC)	EN 55032 EN 50130-4 CFR 47 FCC Part 15 Subpart B ANSI C63.4-2014
Immunity	EN 55024

Interface

Audio	Input: One (1) Channel Output: One (1) Channel
Alarm	Input: Two (2) Channels Output: One (1) Channel

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	24 VAC, 1.5 A; PoE+ (802.3at Class 4)
Power Consumption	12 W

Environmental

Operating Conditions	−30° C to 60° C (−22° F to +140° F) Less than 90% RH
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	Ø198.0 mm x 158.0 mm (Ø7.80 in. x 6.22 in.)
Net Weight	2.30 kg (5.07 lb)
Gross Weight	3.30 kg (7.28 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.
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

Facial Detection	Detects and captures a snapshot of a human face in a defined area within a scene.

Ordering Information

Type	Part Number	Description
2 MP PTZ Camera	42C212TNI	2 MP 12x Starlight In-ceiling PTZ Network Camera, True WDR, IVS
Accessory, included	AC24V/1.5A	Power Adapter

Accessories

Included:

AC24V/1.5A
Power Adapter

Dimensions (mm/in.)

178.0 mm
(7.0 in.)

158.0 mm
(6.22 in.)

21.0 mm
(0.83 in.)

80.0 mm
(3.15 in.)

120.0 mm
(4.72 in.)

198.0 mm
(7.80 in.)

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