VAUGHAN

VNW00002 - Varley Street School Technical Submission

Equipment:	Ref:	Date:
CCTV	VAR-VES-XX-XX-TS-E- 0007 REV C01	12.02.25

Drawing Ref:	Schedule Ref:
68 Series drawings	N/A

The Information Enclosed Within This Technical Submission Is Issued for:

Tender	Information	Comment	Procurement	Construction
☐	☐	☑	☑	☑

Issued to (where applicable):

Main Contractor	Client	M&E Consultant	O&M Technical Author	Architect - Ellis Williams	Other - Acoustician
☑	☐	☑	☐	☑	☐

Information provided encompasses the following elements (where applicable)

Building Work Requirements	Drainage Requirements	Electrical Requirements	Mechanical Requirements	BMS Requirements	Asset Register / Maintenance Required
☐	☐	☑	☐	☐	☑

Sample	Install Info	Co-ordination Info	O&M Info	Acoustic Info	Other BCO/Fire
☐	☑	☑	☑	☐	☑

Technical Submission:

Introduction:

Details of the proposed CCTV System

Please provide your comments on the following proposals:

Confirm acceptance of the proposed products to be issued for manufacture.

Documents 'Enclosed':

ACC2FBLA
DH-IPC-HFW2531TP
DH-PFA130-E
Doc_3164721DH-IPC-HDW2439T
NVR608-64_128-4KS2_
OM22

Compliance/VE statement(s):

The equipment proposed above is compliant with the requirements of the specification.

Notes:

1. Please be advised that in the absence of a response by the 'due date' stated below, it is our intention to proceed with the ordering/installation of the materials/equipment/systems in accordance with the enclosed technical details/quotation(s)/drawings/catalogue pages/sample(s).

2. We believe that we have provided sufficient information for you to fully appraise our proposal(s), however, should you require anything further or would like to meet to discuss/review the enclosed details then please contact us.

Response required by: 19/07/2024 **Raised By:** Ben Green

Response: (Please Feel Free To Mark Up Drawings With Any Comments)

A) No Comments	B) Minor Comments	C) Major Comments	D) Rejected
☐	☐	☐	☐

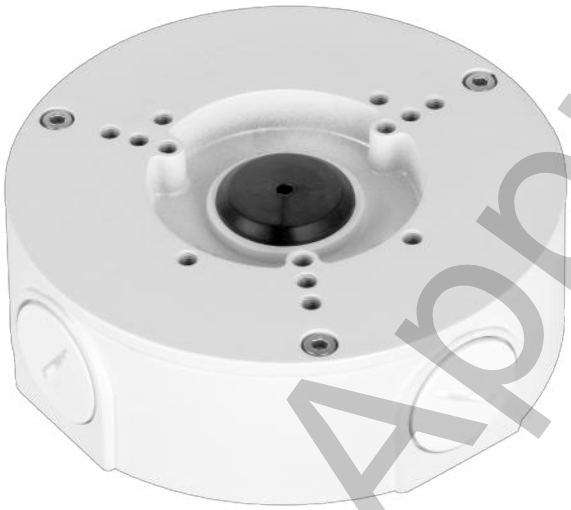
Response Date: **Completed By:** **Signed:**

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DH-PFA130-E

Water-proof Junction Box



Features

- Neat & Integrated design
- Material: Aluminum
- IP66 junction box

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Camera Mount Series | DH-PFA130-E

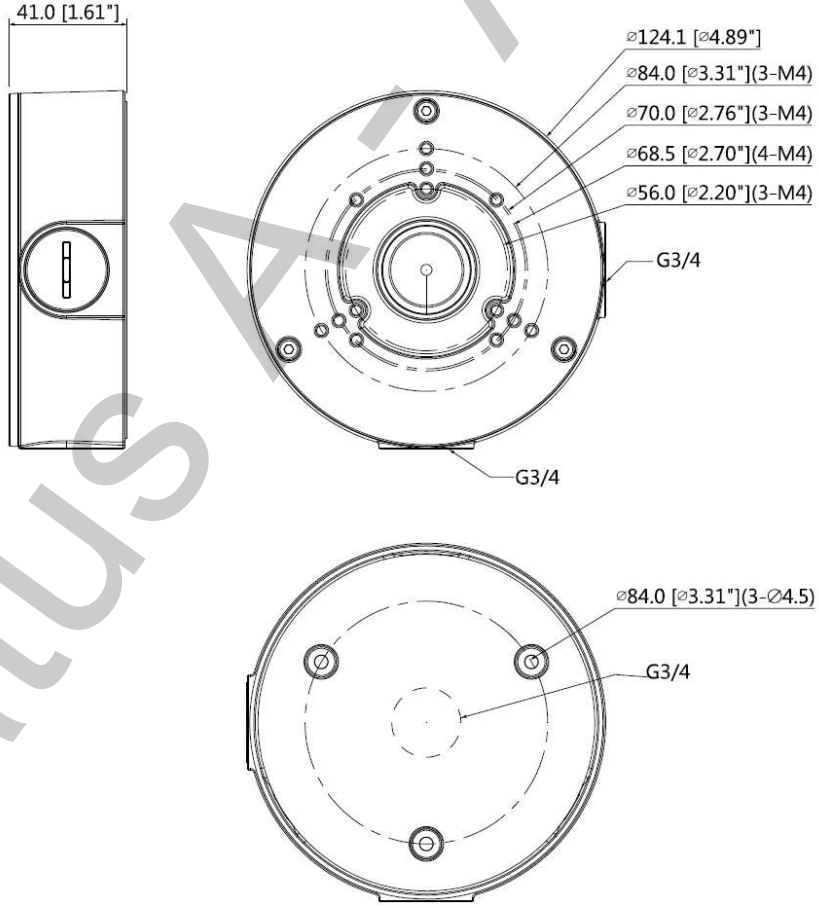
Technical Specifications

Model	DH-PFA130-E
General	
Material	Aluminum
Dimension	Φ124mmx41mm(ϕ4.88"x1.61")
Pipe thread	G3/4"
Weight	0.35kg(0.77lb)
Load bearing	3.0kg(6.61lb)
Color	White
Protection	IP66
Operating temperature	-40°C ~60°C(-40℉~+140℉)
Humidity	<90% RH
Applicable model	Please see "Accessory Selection"

Order Information

Type	Part Number	Description
Camera mount	DH-PFA130-E	Water-proof junction box
	PFA130-E	Water-proof junction box

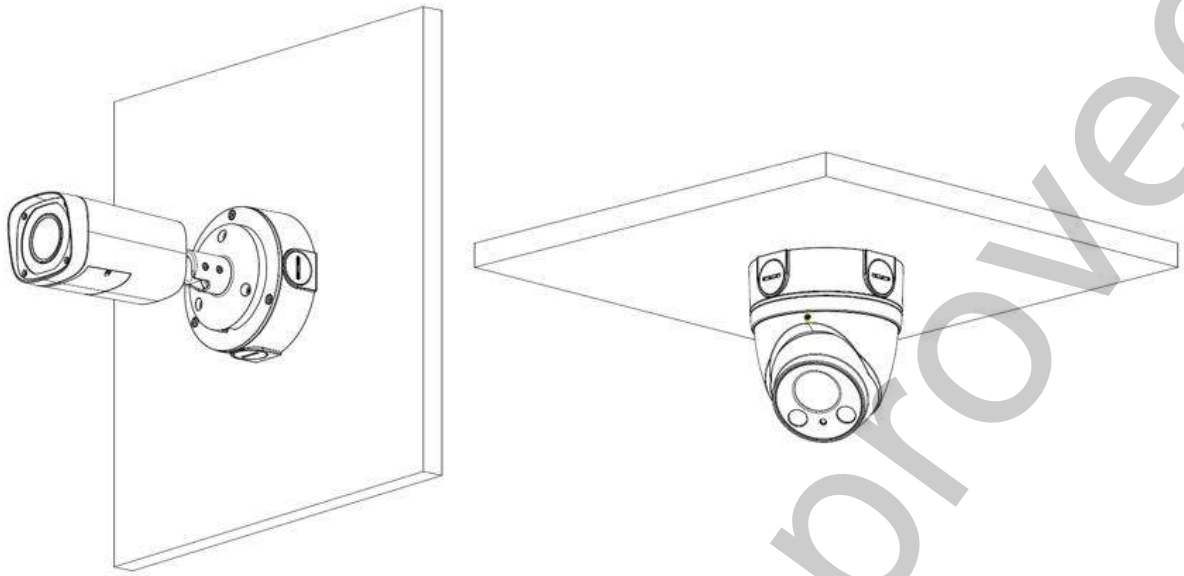
Dimensions (mm/inch)



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Camera Mount Series | DH-PFA130-E

Application



Package Information

- Water-proof junction box DH-PFA130-E *1
- M4x10 screw *4
- ST4.2x25 screw *3
- Plastic Anchor: 3
- Mounting sticker *1
- S3.0 wrench *1

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DH-IPC-HDW2439T-AS-LED-S2

4MP Lite Full-color Fixed-focal Eyeball Network Camera



- 4MP, 1/3" CMOS image sensor, low illuminance, high image definition
- Outputs 4MP (2560 × 1440) @ 25/30 fps, Max. supports 4MP (2688 × 1520) @ 20 fps
- H.265 codec, high compression rate, ultra-low bit rate
- Built-in warm lights, max. illumination distance: 30 m
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes
- Intelligent detection: Intrusion, tripwire
- Abnormality detection: Motion detection, video tampering, scene changing, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, voltage detection
- Supports max. 256 GB Micro SD card and built-in Mic
- 12V DC/PoE power supply
- IP67 protection



Series Overview

With upgraded H.265 encoding technology, Dahua Lite series network camera has efficient video encoding capacity, which saves bandwidth and storage space. This camera adopts the latest starlight technology and displays better color image in the condition of low illumination. It supports SD card storage, dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 (Supported by some select models).

Functions

Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, Dahua smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

Full-color

With high-performance sensor and large aperture lens, Dahua Full-color technology can display clear colorful image in the environment of ultra-low illuminance. With this photosensitivity technology, the camera can capture more available light, and display more colorful image details.

WDR

With advanced Wide Dynamic Range (WDR) technology, Dahua network camera provides clear details in the environment of strong brightness contrast. The bright and dark area can get clear video even in high brightness environment or with backlight shadow.

IVS

With advanced video algorithm, Dahua IVS technology supports intelligent functions, such as tripwire and intrusion.

Cyber Security

Dahua network camera is equipped with a series of key security technologies, such as security authentication and authorization, access control, trusted protection, encrypted transmission, and encrypted storage, which improve its security defense and data protection, and prevent malicious programs from invading the device.

Protection (IP67, wide voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can works normal after soaking in 1 m deep water for 30 minutes.
Wide voltage: The camera allows ±30% (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

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Lite Series | DH-IPC-HDW2439T-AS-LED-S2

Technical Specification

Camera

Image Sensor	1/3" 4Megapixel progressive CMOS
Max. Resolution	2688 (H) × 1520 (V)
ROM	128 MB
RAM	128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Minimum Illumination	0.004 Lux@F1.0
S/N Ratio	> 56 dB
Illumination Distance	30 m (98.4 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	2 (Warm light)
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8 mm 3.6 mm
Max. Aperture	2.8 mm: F1.0 3.6 mm: F1.0
Field of View	2.8 mm: Horizontal 96° × Vertical 51° × Diagonal 115° 3.6 mm: Horizontal 81° × Vertical 44° × Diagonal 97°
Iris Type	Fixed
Close Focus Distance	2.8 mm: 1.3 m (4.3 ft) 3.6 mm: 1.8 m (5.9 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	2.8mm	56.0 m (183.7 ft)	22.4 m (73.5 ft)	11.2 m (36.7 ft)	5.6 m (17.1 ft)
	3.6mm	72.0 m (236.2 ft)	28.8 m (94.5 ft)	14.4 m (47.2 ft)	7.2 m (23.6 ft)

Smart event

IVS	Tripwire; intrusion

Video

Video Compression	H.265; H.264; H.264B; MJPEG (only supported by the sub stream)
Smart Codec	Smart H.265+/ Smart H.264+
Video Frame Rate	Main stream: 2688 × 1520 (1 fps–20 fps) 2560 × 1440 (1 fps–25/30 fps) Sub stream: 704 × 576 (1 fps–20/25 fps) 704 × 480 (1 fps–20/30 fps)
Stream Capability	2 streams
Resolution	2688 × 1520 (2688 × 1520); 2560 × 1440 (2560 × 1440); 2304 × 1296 (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 32 kbps–6144 kbps H.265: 12 kbps–6144 kbps
Day/Night	Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
White Balance	Auto/natural/street lamp/outdoor/manual/regional custom
Gain Control	Auto/Manual
Noise Reduction	3D NR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest(RoI)	Yes (4 areas)
Smart Illumination	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 2688×1520 resolution and lower.)
Mirror	Yes
Privacy Masking	4 areas

Audio

Built-in MIC	Yes
Audio Compression	G.711A; G.711Mu; G.726

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; motion detection; video tampering; tripwire; intrusion; illegal access; voltage detection; audio detection; safety exception

Network

Network	RJ-45 (10/100 Base-T)
SDK and API	Yes
Cyber Security	Video encryption; firmware encryption; configuration encryption; Digest; WSSE; account lockout; security logs; IP/MAC filtering; generation and importing of X.509 certification; syslog; HTTPS; 802.1x; trusted boot; trusted execution; trusted upgrade
Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP ; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; Bonjour
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone; Genetec
User/Host	20 (Total bandwidth: 72 M.)
Storage	FTP; Micro SD card (support max. 256 G); NAS; SFTP
Browser	IE Chrome Firefox
Management Software	Smart PSS; DSS; DMSS
Mobile Phone	IOS; Android

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Lite Series | DH-IPC-HDW2439T-AS-LED-S2

Certification

Certifications	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B

Power

Power Supply	12V DC/PoE (802.3af)
Power Consumption	< 7.4W

Environment

Operating Conditions	-40°C to +60°C (-40°F to +140°F)/less than ≤ 95% RH
Storage Temperature	-40°C to +60°C (-40°F to +140°F)
Protection Grade	IP67

Structure

Casing	Inner core: metal; cover: plastic (pedestal: plastic)
Dimensions	100.9 mm × Φ109.9 mm (4.0" × Φ4.3")
Net Weight	0.365 kg (0.8 lb)
Gross Weight	0.527 kg (1.2 lb)

Ordering Information

Type	Part Number	Description
4MP Camera	DH-IPC-HDW2439TP-AS-LED-S2	4MP Lite Full-color Fixed-focal Eyeball Network Camera,PAL
	DH-IPC-HDW2439TN-AS-LED-S2	4MP Lite Full-color Fixed-focal Eyeball Network Camera,NTSC
Accessories (optional)	PFA130-E	Junction Box
	PFB203W	Wall Mount
	PFA152-E	Pole Mount
	PFM321D	12V DC 1A Power Adapter
	LR1002-1ET/1EC	Single-port Long Reach Ethernet over Coax Extender
	PFM900-E	Integrated Mount Tester
	PFM114	TLC SD Card

Accessories

Optional:



PFA130-E
Junction Box



PFB203W
Wall Mount



PFA152-E
Pole Mount



PFM321D
12V DC 1A Power Adapter



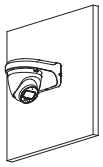
LR1002-1ET/1EC
Single-port Long Reach Ethernet over Coax Extender



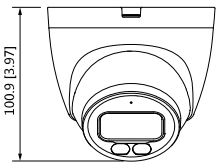
PFM900-E
Integrated Mount Tester

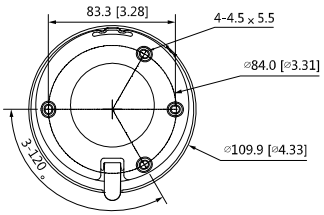


PFM114
TLC SD Card

Junction Box	Junction Box	Pole Mount
PFA130-E	PFB203W	PFA152-E+PFB203W
		

Dimensions (mm[inch])





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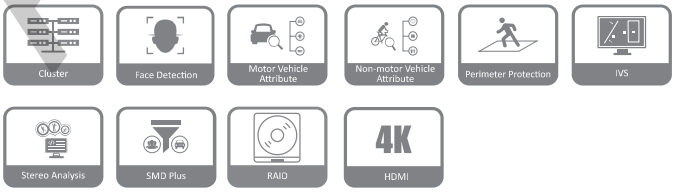
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DHI-NVR608-64/128-4KS2

64/128 Channel 2U 8HDDs Ultra series Network Video Recorder



- New 4.0 user interface
- 16-channel decoding@1080p (30 fps); self-adaptive decoding capability
- Access, storage or forwarding at 384 Mbps
- Simultaneous video output for VGA and HDMI1; 4K heterogeneous output for the 2 HDMI ports
- Multiple data mode such as Raid0, Raid1, Raid5, Raid6, and Raid10
- Remote configuration and management of IPCs, such as setting pa rameters, acquiring information and upgrading IPCs of the same model in batches
- AI-by-camera functions such as perimeter protection, face detection and recognition, SMD Plus, video metadata, ANPR and 3D behavior analysis
- N+M cluster. When the host fails, the standbydevice will continue to record; once the host recovers,video recorded on the standby device will be transmitted back



Series Overview

Dahua's next generation network video recorder offers unparalleled recording technology for IP video surveillance applications. For applications where details are critical for identification, this enterprise-level NVR provides a powerful Intel processor with up to 4K resolution. Additionally, the NVR features a mouse shortcut operation menu, remote management and control, centre storage, edge storage, and back up storage.

This NVR is ideal for a wide range of applications such as public safety, transportation stations, government institutions, hotel resorts, shopping malls, city centers, and financial institutions, where demand expansion flexibility, high reliability and centralized storage management.

The NVR is compatible with numerous third-party devices making it the perfect solution for surveillance systems with or without a video management system (VMS). Its open architecture supports multi-user access and is compatible with ONVIF.

Functions

Perimeter Protection by Camera

Automatically filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improving alarm accuracy.

SMD Plus by Camera

With intelligent algorithm, Dahua smart motion detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

Video Metadata by Camera

With deep learning algorithm, Dahua Video Metadata technology can detect, track, capture vehicle, non-motor vehicle and people, and select the best images, and extract attributes.

ANPR by Camera

With deep learning algorithm, Dahua ANPR technology can recognize the number plate information of vehicles in the image with ANPR cameras. Support block/allowlist mode, searching target vehicles from recorded video.

Stereo Analysis by Camara

With deep learning algorithm and scene 3-dimensional information, Dahua Stereo Analysis technology can recognize people's behaviors, such as fall detection, violence detection, strand detection, and space exception, and then generates alarm signals and triggers linkage.

N+M Hot Standby

The highly reliable redundancy N+M Hot Standby design provides a secure, failover technique ensuring immediate backup. In the event of a system failure, the sub instantly takes over the main ensuring no data is lost.

RAID

Support RAID 0,RAID 1,RAID 5,RAID 6,RAID 10 (optional). It can Improve your storage speed, while ensuring data security.

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Ultra series | DHI-NVR608-64/128-4KS2

Technical Specification

System

Main Processor	Industrial embedded micro-processor
Operating System	Embedded Linux
Operation Interface	Web/local GUI

Perimeter Protection by Camera

Performance	24 channels
AI Search	Search pictures by channel, time, event type

Face Recognition by Camera

Performance	24 channels
Face Attributes	6 attributes: Gender, age, glasses, expression, mouth mask, and beard
AI Search	Search pictures by channel, time and face attributes

SMD Plus By Camera

Performance	32 channels
AI Search	Search by target classification (Human, Vehicle)

Video Metadata By Camera

Performance	12 channels
Human Body	Top, top color, bottom, bottom color, hat, bag, gender, age, umbrella
Vehicle	Plate No., type, color, vehicle type, logo, plate color, ornament, calling, seatbelt, region
Non-motor Vehicle	Type, color, number of passengers, helmet
AI Search	Support search target video by metadata

ANPR by Camera

Performance	8 channels

Stereo Analysis by Camera

Performance	32 channels
AI Search	Search by target classification (Fall Detection, People Approach Detection, People No. Exception Detection, People Staying Detection, Violence Detection)

Video

Access Channel	64/128
Network Bandwidth	384 Mbps for access, 384 Mbps for storage and 384 Mbps for forwarding
Resolution	12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/ 1080p/960p/720p/D1/CIF/QCIF
Decoding Capability	16-ch@1080p (30 fps)
Video Output	VGA: 1920 × 1080, 1280 × 1024, 1280 × 720 HDMI1/HDMI2: 3840 × 2160@30 fps, 3840 × 2160@25fps, 1920 × 1080, 1280 × 1024, 1280 × 720 1 channel VGA output, 2 channels HDMI output, VGA and HDMI 1 homologous output, double HDMI heterogeneous output. Support 4K display for both HDMI1 and HDMI2
Multi-screen Display	1st Screen: 1/4/8/9/16/25/36/64 2nd Screen: 1/4/8/9/16
Third Party Camera Access	Panasonic, Sony, Samsung, Axis, Pelco, Arecont, Onvif, Canon and more

Compression

Video	Smart H.265+/H.265/Smart H.264+/H.264/MPEG4/ MJPEG
Audio	MP2/G726/G729/G722/G723/G711A/G711U/PCM

Network

Network Protocol	HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, SNMP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, IP Search (Support Dahua IP camera, DVR, NVS, etc.), P2P, iSCSI
Mobile Phone Access	iOS, Android
Interoperability	ONVIF (profile T/S/G), CGI, SDK
Browser	Chrome, IE9 or later, Firefox

Record Playback

Multi-channel Playback	1/4/9/16
Record Mode	Manual, Schedule (General, MD (Motion Detection), Alarm, MD & Alarm, Intelligent, POS)
Storage Method	Local HDD and network
Backup	Hard drive, USB device, eSATA device
Playback Function	1. Play, pause, stop, fast forward, fast backward, rewind, play by frame 2. Full screen, backup (cut/file), partially enlarge, audio on/off

Storage

Disk Group	Support
Raid Support	RAID 0/1/5/6/10

Alarm

General Alarm	Motion detection, privacy masking, video loss, local alarm, PIR alarm, IPC alarm
Anomaly Alarm	Camera offline, storage error, full storage, IP conflict, MAC conflict, login lock, network security anomaly
Intelligent Alarm	Perimeter protection, face detection, face recognition, SMD, video metadata (human, motor-vehicle, non-motor vehicle), ANPR, people counting, stereo analysis, crowd distribution, heatmap, video quality diagnosis
Alarm Linkage	Record, snapshot, IPC external alarm output, buzzer, log, preset, email

External Port

Audio Input	1 channel, RCA connector
Audio Output	1 channel, RCA connector
HDD	8 SATA III ports, up to 10 TB for a single HDD. The maximum HDD capacity varies with environment temperature. Supports Hot-swap.
Alarm Input	16 channels
Alarm Output	8 channels
eSATA	1 eSATA
RS-232	1 channel, used to debug and pass through serial data

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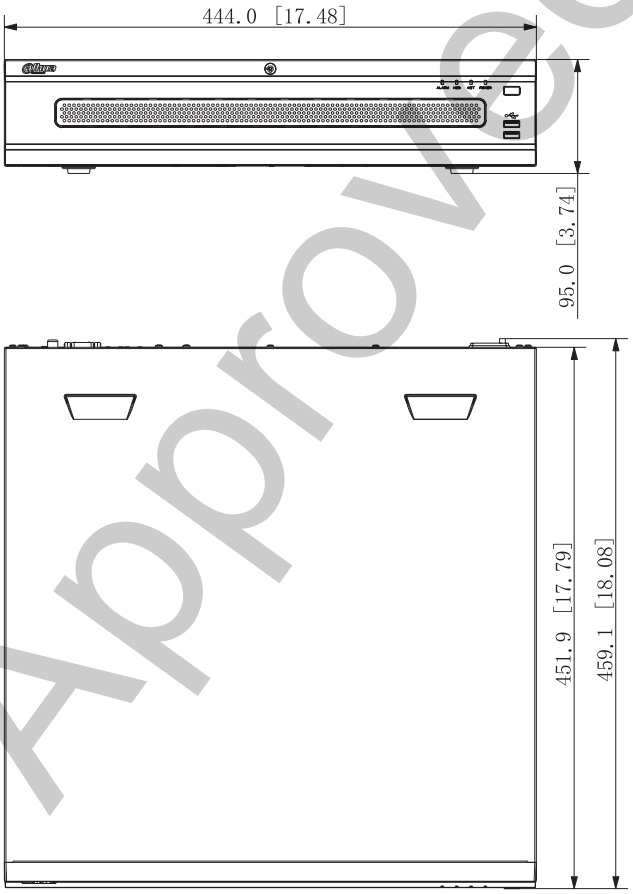
Ultra series | DHI-NVR608-64/128-4KS2

RS-485	1 channel, used to control PTZ, and it supports multiple protocols
USB	2 front USB 2.0 ports, 2 rear USB 3.0 ports
HDMI	2
VGA	1
Network	2 RJ-45 10/100/1000 Mbps self-adaptive Ethernet ports

General Parameter

Power Supply	Single, AC100V–240V, 50–60 Hz
Power Consumption	< 20 W (Without HDD)
Net Weight	9 kg (19.8 lb) (Without HDD)
Gross Weight	10.5 kg (23.1 lb) (Without HDD)
Product Dimensions	444 mm × 459.1 mm × 95 mm (W × L × H) 17.48 inch × 18.08 inch × 3.74 inch (W × L × H)
Package Dimensions	570 mm × 570 mm × 226 mm (W × L × H) 22.44 inch × 22.44 inch × 8.90 inch (W × L × H)
Operating Conditions	–10°C to +55°C (+14°F to +131°F), +35°C (+95°F) when raid enabled
Storage Conditions	0°C to +40°C (+32°F to +104°F)
Operating Humidity	10%–93% (RH)
Storage Humidity	30%–85% (RH)
Operating Altitude	3000 m (9843 ft)
Certifications	CE: EN55022, EN55024, EN50130-4, EN60950-1 FCC: Part 15 Subpart B, ANSI C63.4-2014 UL: UL 60950-1 and CAN/CSA C22.2 No.60950-1

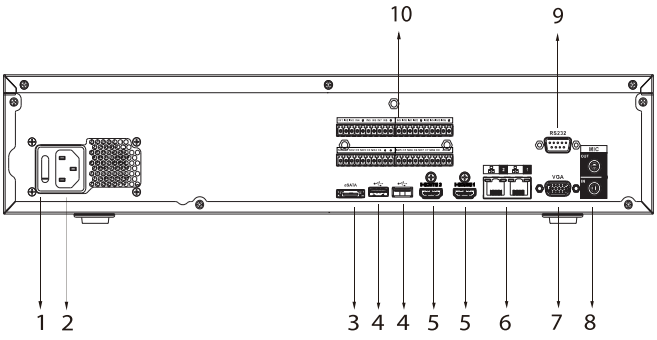
Dimensions (mm[inch])



Ordering Information

Type	Model	Description
64 Channel NVR	DHI-NVR608-64-4KS2	64 Channel Ultra Series 4K H.265 Network Video Recorder
128 Channel NVR	DHI-NVR608-128-4KS2	128 Channel Ultra Series 4K H.265 Network Video Recorder
Accessories	ESS1504C	4 HDDs eSATA Storage (Please confirm with Technical Support for HDD capacity & compatibility)

Panels



1	Power Switch	2	Power Input
3	eSATA Port	4	USB Ports
5	HDMI Ports	6	Network Ports
7	VGA Port	8	AUDIO IN/OUT, RCA Connector
9	RS-232 Port	10	Alarm In/Out

Accessories



ESS1504C
4 HDDs eSATA Storage (Please confirm with Technical Support for HDD capacity & compatibility)

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olix

OM22
(22" HDMI/VGA Plastic Case Monitor)





Product Feature

- Industrial level DID LCD panel, suitable for extensive 7×24 continuous works.
- Physical resolution of 1920×1080.
- 5ms fast response time, no image ghosting.
- Adapt newest 3D digital filtering and 3D digital noise reduction technology.
- Picture fast response; 178° wide viewing angle; Ensure that the image display is not deformed.
- High fidelity digital processing, brilliant and vivid video.
- Built-in speaker.
- Humanize Menu; Convenient Controller.

DNIe digital image processing

Dynamic optimization



Natural color



Contrast enhancement



Detail enhancement



Wide Viewing Angles(Up to 178°)



170° (H)/170° (V)

Status A - Approved

DISPLAY CHARACTERISTICS

Mode Name	OM-22
Screen Size	22''
Active Display Area (mm)	476.64mm(W)×268.11mm(H)
Display Mode	16:9
LED Type	TFT-LED
Resolution	1920 × 1080
Display Color	16.7M
Pixel Pitch(mm)	0.248(H)×0.248(V)
Brightness(nits)	350cd/㎡
Contrast Ratio	1000:1
Viewing Angle	178(H) /178(V)
Response Time	5ms
Backlight	LED

INPUT&OUTPUT

HDMI 2.0	1
VGA	1
Speaker	2x3W(Stereo)

VIDEO

Color System	PAL/NTSC/SECAM
OSD Control	Auto adjust, Brightness, Contrast, Hori. / Vert. Position, Clock, phase, Color, Language..
3D comb filter	YES
Video Noise Reduction	YES

POWER&Mount Way

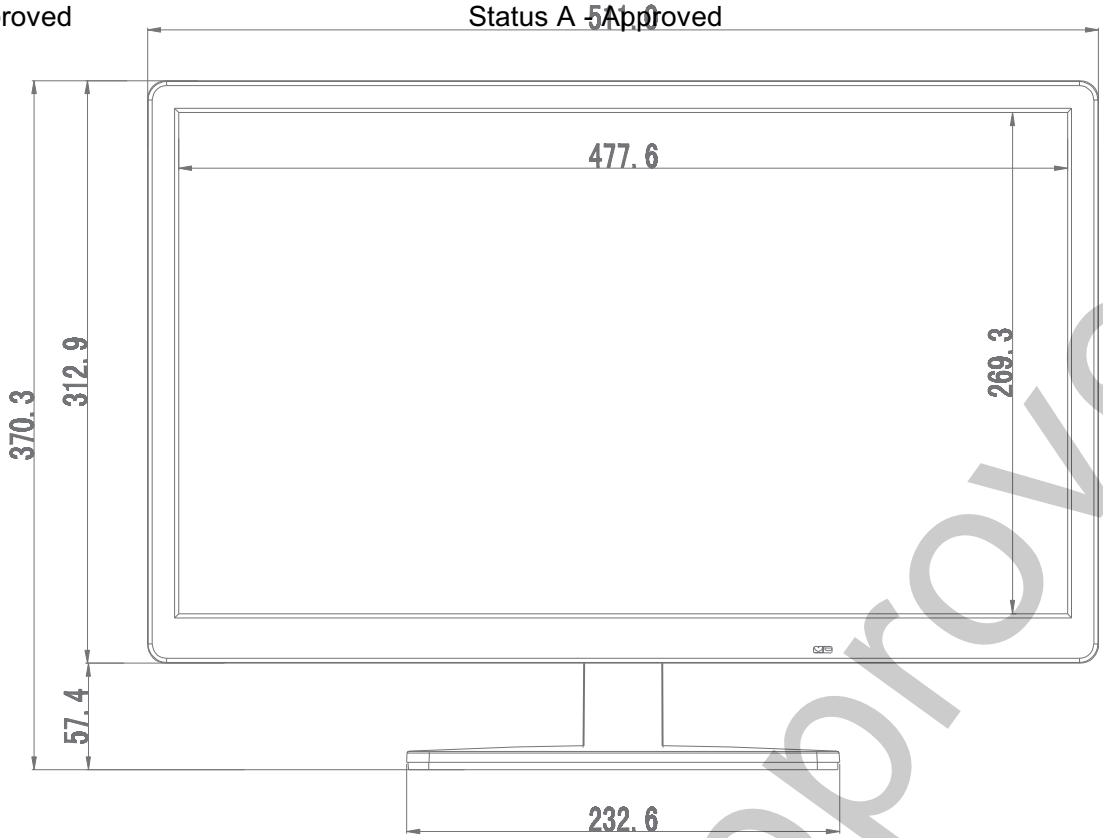
Power	DC12V~24V,50/60Hz
Working Temperature	-30 to +85 ℃
Power Consumption	≦20W
Menu	Chinese/English(other languages supported)
Mounting	Stand mount, VESA mount
MTBF	50000Hours
Certificate Approval	CE,RoHS,CCC,FCC,ISO9000, UL
Application	Monitoring , Transportation, Controlling room, ETC

ACCESSORIES

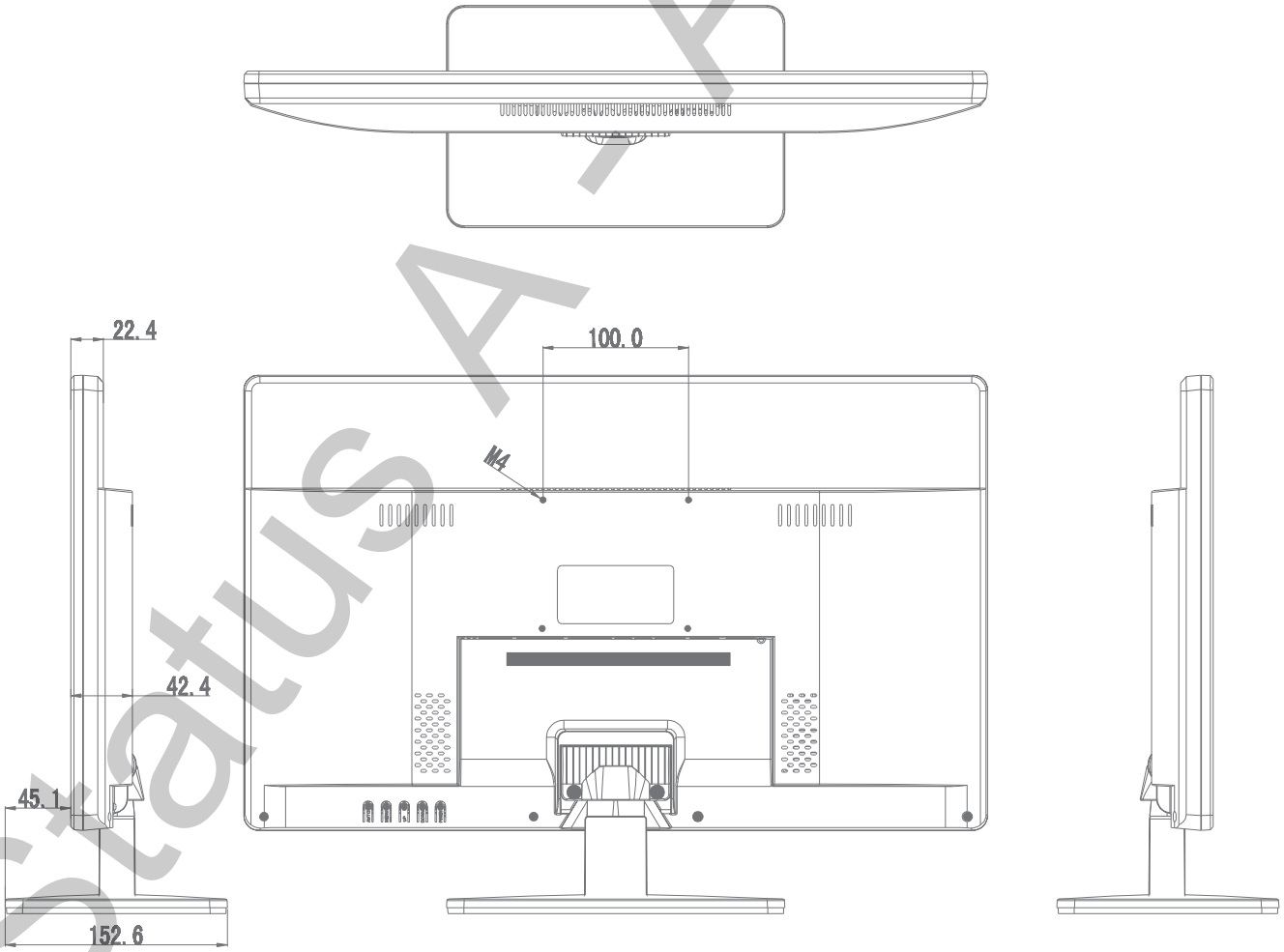
INCLUDED ACCESSORIES	Industrial PSU,Screw, Cable holder, Quick start guide

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Unit:mm



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All LCD's comply with ISO-9241-307:2008 in connection with pixel defects.

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→ ACC Modular Columns



ACC2FBLA

Fixed height range 4.5m - 10m
Tilt-down height range 4.5m - 15m

Altron Camera Columns, a cost effective and comprehensive range with most models available 'ex stock', offering a good level of security. Suitable for installations where the public has access - tilt-down models have internal padlock facility. The range is generally for light to medium fixed and PTZ applications, but there are also heavy duty (HD) options for high loading PTZ and dual lighting & CCTV applications.

Typically used for the following types of installation

- Industrial and commercial premises
- Perimeter detection
- Utilities sites
- Schools and universities
- Railway platforms & car parks
- Car parks
- Petrochemical sites
- Sports stadia

Security Features

- Internal cabling
- Internal padlock facility on tilt-down models to protect against unauthorised lowering
- Close fitting flush doors
- Solid secure heavy duty door locks

General Features

- Modular construction for ease of assembly and installation on site
- Ideal for restricted access areas
- Provides stable mounting platform for all camera types
- Demountable winches ensure tilt down models are secure and reduces costs on multiple installations
- Tilt Down models enable camera maintenance at ground level, therefore reducing maintenance costs
- Tilt Down models available in both bolt down and post mounted base versions
- A wide range of standard Altron Accessories and Brackets available ex stock
- Quick turnaround for larger projects
- Constructed in high tensile steel and hot dip galvanised after fabrication for durability
- Option of painting over the galvanised finish in colours available from BS and RAL colour charts
- For design, manufacturing and finishing standards, see details on page 107



Tilt-down columns have the facility to be padlocked internally



All columns have flush fitting doors



ACC2BPLA in tilted position

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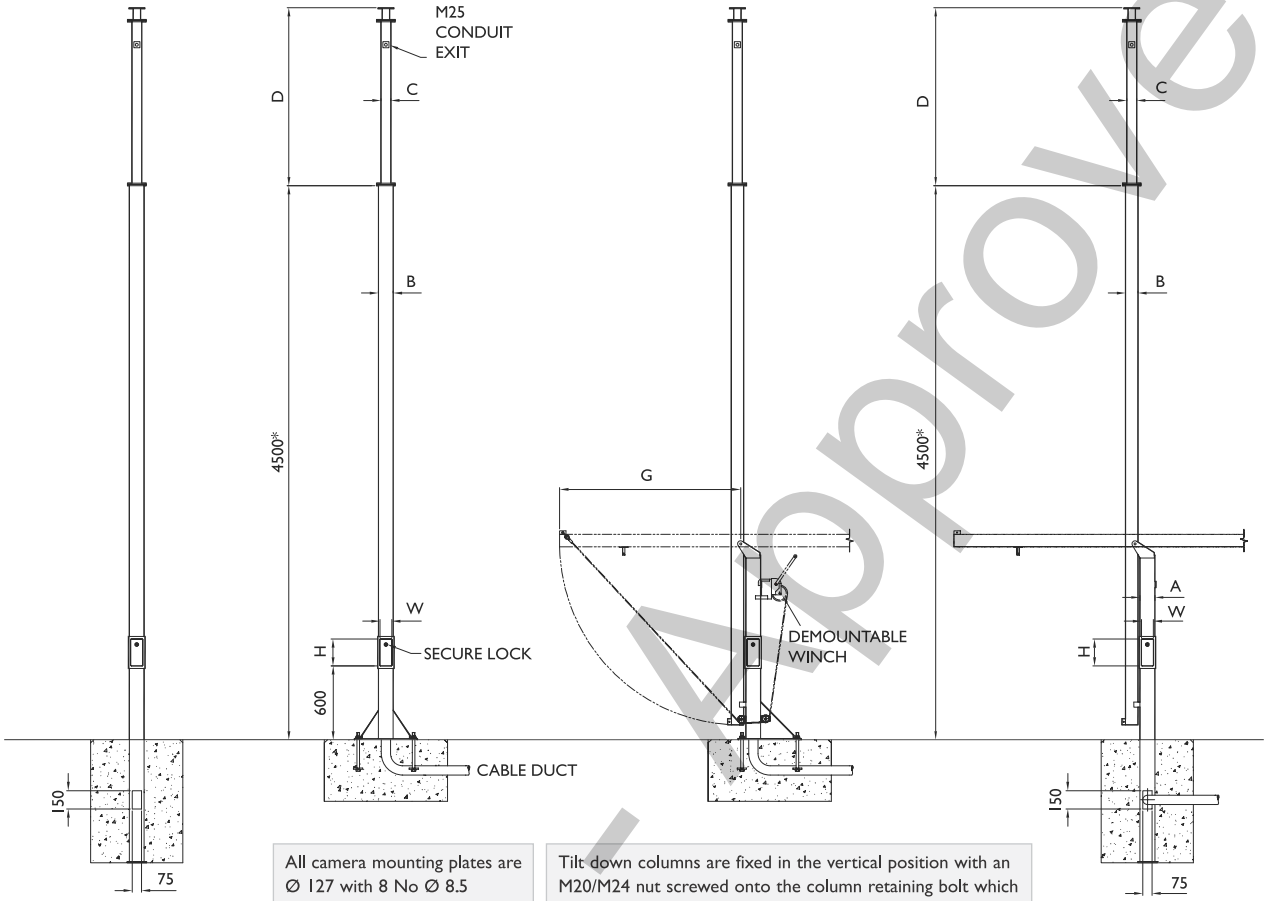
ACC

EB Embedded Base

FB Fixed Base

BP Base Post

PM Post Mounted



* On models ACC4HD, ACC12 & ACC15 this dimension = 4900

All camera mounting plates are Ø 127 with 8 No Ø 8.5 equi-spaced on 101.6 PCD. Ø 40 thro' column spacer

Tilt down columns are fixed in the vertical position with an M20/M24 nut screwed onto the column retaining bolt which enters into the secure access hatch through the front of the post. This is then padlockable to stop unauthorised tilting.

FOR FOUNDATION AND BOLTING DETAILS REFER TO PAGE 21

Model No.	Height in mtrs	Post type	Max equip weight at top kgs	Max equip surface area m²	Post size A²	Lower section B²	Mid section B²	Upper section C²	Extension length D mtrs	Door aperture size HxW	Column Rear clearance when tilting G	Winch part number	Product weight kgs
ACC1 Standard duty	4.5	**FB/EBLA**	35	0.3	–	100	–	–	–	250x70	–	–	68
		PMLA	35	0.3	120	100	–	–	–	270x80	1700	**DW1000/AC**	100
		BPLA	35	0.3	120	100	–	–	–	270x80	1700	**DW1000/AC**	115
ACC2 Standard duty	6	**FB/EBLA**	25	0.2	–	120	–	90	1.5	270x80	–	–	114
		PMLA	25	0.2	120	100	–	80	1.5	270x80	1700	**DW1000/AC**	115
		BPLA	25	0.2	120	100	–	80	1.5	270x80	1700	**DW1000/AC**	130
ACC2HD Heavy duty	6	**FB/EBLA**	35	0.3	–	150	–	100	1.5	280x110	–	–	144
		PMLA	35	0.3	120	120	–	90	1.5	270x80	1700	**DW1000/AC**	138
		BPLA	35	0.3	120	120	–	90	1.5	270x80	1700	**DW1000/AC**	157
ACC3 Standard duty	7.5	**FB/EBLA**	25	0.2	–	150	–	100	3	280x110	–	–	161
		PMLA	25	0.2	150	120	–	90	3	280x110	2000	**DW1500/AC**	189
		BPLA	25	0.2	150	120	–	90	3	280x110	2000	**DW1500/AC**	193
ACC3HD Heavy duty	7.5	**FB/EBLA**	50	0.3	–	200	–	120	3	315x150	–	–	178
		PMLA	50	0.3	150	150	–	100	3	280x110	2000	**DW1500/ACHD**	218
		BPLA	50	0.3	150	150	–	100	3	280x110	2000	**DW1500/ACHD**	222
ACC4 Standard duty	9	**FB/EBLA**	25	0.16	–	150	–	100	4.4	280x110	–	–	197
		PMLA	25	0.16	150	150	–	100	4.4	280x110	2000	**DW2500/AC**	244
		BPLA	25	0.16	150	150	–	100	4.4	280x110	2000	**DW2500/AC**	248
ACC4HD Heavy duty	10	**FB/EBLA**	50	0.5	–	200	–	150	4.9	315x150	–	–	305
		PMLA	50	0.5	200	200	–	150	4.9	315x150	2600	**DW2500/ACHD**	492
		BPLA	50	0.5	200	200	–	150	4.9	315x150	2600	**DW2500/ACHD**	500
									i ii				
ACC12	12	**PMLA**	35	0.3	200	200	150	100	4.9 4.9	315x150	2600	**DW2500/ACHD**	518
		BPLA	35	0.3	200	200	150	100	4.9 4.9	315x150	2600	**DW2500/ACHD**	526
ACC15	15	**PMLA**	25	0.16	200	200	150	100	4.9 4.9	315x150	2600	**DW2500/ACHD**	555
		BPLA	25	0.16	200	200	150	100	4.9 4.9	315x150	2600	**DW2500/ACHD**	563

Where payloads are greater than those stated above, please contact Altron
EB Version is directly embedded
All dimensions in mm unless stated otherwise

Accessories

Top mounting brackets for Fixed and PTZ cameras	P76
Swanneck brackets for Dome cameras	P81
Anti-climb guards	P77
Clamp-on camera mounting brackets	P78
Telemetry box mounting brackets	P77
Column top mounting cages	P83

Quick reference

Single fixed camera knuckle	**PTS-1**
Twin fixed camera bracket	**TB2-600F**
Half swanneck for dome	**AW1699H**
Full swanneck for dome	**AW1699F**
Anti climb guard	**SGC**
Accessory bracket	**ATBC**

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DH-IPC-HFW2531T-AS-S2

5MP Lite IR Fixed-focal Bullet Network Camera



· 5MP, 1/2.7" CMOS image sensor, low illuminance, high image definition
· Outputs max. 5MP (2592 × 1944) @20 fps, and supports 2688 ×1520 (2688 × 1520) @25/30 fps
· Support Triple Stream
· H.265 codec, high compression rate, ultra-low bit rate
· Built-in IR LED, max IR distance: 80 m
· RoI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments
· Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes
· Intelligent detection: Intrusion, tripwire
· Abnormality detection: Motion detection, video tampering, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal ac- cess, local alarm, voltage detection,audio detection
· Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 GB Micro SD card
· 12V DC/POE power support supply
· IP67 protection, IK10 protection (optional)



Series Overview

With upgraded H.265 encoding technology, Dahua Lite series network camera has efficient video encoding capacity, which saves bandwidth and storage space. This camera adopts the latest starlight technology and displays better color image in the condition of low illumination. It supports SD card storage, dust-proof function, waterproof function and vandal-proof function, complying to the standards of IP67 and IK10 (Supported by some select models).

Functions

Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, Dahua smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

WDR

With advanced Wide Dynamic Range (WDR) technology, Dahua network camera provides clear details in the environment of strong brightness contrast. The bright and dark area can get clear video even in high brightness environment or with backlight shadow.

Starlight

Dahua Starlight technology mainly applies to the environment of low illuminance, and it can provide clear colorful video. Even in the environment of ultra-low illuminance, the technology can guarantee the good image effect.

IVS

With advanced video algorithm, Dahua IVS technology supports intelligent functions, such as tripwire and intrusion.

Cyber Security

Dahua network camera is equipped with a series of key security technologies, such as security authentication and authorization, access control, trusted protection, encrypted transmission, and encrypted storage, which improve its security defense and data protection, and prevent malicious programs from invading the device.

Protection (IP67, IK10, wide voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can works normal after soaking in 1 m deep water for 30 minutes.
IK10: The enclosure can stand the punch more than 5 times from a 5 kg hammer falling from a height of 40 cm (Impact energy is 20J).
Wide voltage: The camera allows ±30% input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

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Lite Series | DH-IPC-HFW2531T-AS-S2

Technical Specification

Camera

Image Sensor	1/2.7" 5Megapixel progressive CMOS
Max. Resolution	2592 (H) × 1944 (V)
ROM	128 MB
RAM	256 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.008 Lux@F1.6
S/N Ratio	> 56 dB
Illumination Distance	80 m (262.5 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	4 (IR LED)
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	3.6 mm; 6 mm; 8 mm
Max. Aperture	3.6 mm: F1.6 6 mm: F1.6 8 mm: F1.6
Field of View	3.6 mm: Horizontal 84° × Vertical 58° × Diagonal 110° 6 mm: Horizontal 51° × Vertical 37° × Diagonal 64° 8 mm: Horizontal 40° × Vertical 29° × Diagonal 48°
Iris Type	Fixed
Close Focus Distance	3.6 mm: 1.4 m (4.6 ft) 6 mm: 3.1 m (10.2 ft) 8 mm:4.9 m (16.1 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	3.6 mm	80 m (262.5 ft)	32.0 m (105.0 ft)	16.0 m (52.5 ft)	8.0 m (26.2 ft)
	6 mm	120.0 m (393.7 ft)	48.0 m (157.5 ft)	24.0 m (78.7 ft)	12.0 m (39.4 ft)
	8 mm	160.0 m (524.9 ft)	64.0 m (210.0 ft)	32.0 m (105.0 ft)	16.0 m (52.5 ft)

Smart Event

IVS	Tripwire; intrusion

Video

Video Compression	H.265; H.264; H.264B; MJPEG (only supported by the sub stream)
Smart Codec	Smart H.265+/ Smart H.264+
Video Frame Rate	Main stream: 2592 × 1944 (1 fps-20 fps) 2688 × 1520 (1 fps–25/30 fps) Sub stream: 704 × 576 (1 fps–25 fps); 704 × 480 (1 fps–30 fps) Third stream: CIF@1fps
Stream Capability	3 streams
Resolution	2592 × 1944 (2592 × 1944); 2688 × 1520 (2688 × 1520); 2560 × 1440 (2560 × 1440); 3M (2048 × 1536); 2304 × 1296 (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 32 kbps–8192 kbps H.265: 12 kbps–8192 kbps
Day/Night	Auto(ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
White Balance	Auto/natural/street lamp/outdoor/manual/regional custom
Gain Control	Auto/Manual
Noise Reduction	3D NR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest (RoI)	Yes (4 areas)
Smart Illumination	Yes
Image Rotation	0°/90°/180°/270° (Supports 90°/270° with 2592 × 1944 resolution and lower)
Mirror	Yes
Privacy Masking	4 areas

Audio

Audio Compression	G.711a; G.711Mu; G.726

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio detection; voltage detection; security exception; local alarm

Network

Network	RJ-45 (10/100 Base-T)
SDK and API	Yes
Cyber Security	Video encryption; firmware encryption; configuration encryption; Digest; WSSE; account lockout; security logs; IP/MAC filtering; generation and importing of X.509 certification; syslog; HTTPS; 802.1x; trusted boot; trusted execution; trusted upgrade
Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP ; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; Bonjour
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; Milestone; Genetec; P2P
User/Host	20
Storage	FTP; SFTP; Micro SD Card (support max. 256 GB); NAS
Browser	IE Chrome Firefox
Management Software	Smart PSS; DSS; DMSS

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Mobile Phone	IOS; Android

Certification

Certifications	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07

Port

Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)
Alarm Input	1 channel in: 5mA 3V–5V DC
Alarm Output	1 channel out: 300mA 12V DC

Power

Power Supply	12V DC/PoE (802.3af)
Power Consumption	< 8.2W

Environment

Operating Conditions	–40°C to +60°C (–40°F to +140°F)/less than ≤ 95% RH
Storage Temperature	–40°C to +60°C (–40°F to +140°F)
Protection Grade	IP67; IK10(optional)

Structure

Casing	Metal
Dimensions	244.1 mm × Φ90.4 mm (9.61" × Φ3.26")
Net Weight	0.91 kg (2.0 lb)
Gross Weight	1.16 kg (2.6 lb)

Ordering Information

Type	Part Number	Description
5MP Camera	DH-IPC-HFW2531TP-AS-S2	5MP Lite IR Fixed-focal Bullet Nework Camera,PAL
	DH-IPC-HFW2531TN-AS-S2	5MP Lite IR Fixed-focal Bullet Nework Camera,NTSC
Accessories (optional)	PFA130-E	Junction Box
	PFA152-E	Pole Mount
	PFM321D	12V DC 1A Power Adapter
	LR1002-1ET/1EC	Single-port Long Reach Ethernet over Coax Extender
	PFM900-E	Integrated Mount Tester
	PFM114	TLC SD card

Accessories

Optional:



PFA130-E
Junction Box



PFA152-E
Pole Mount



PFM321D
12V DC 1A Power Adapter



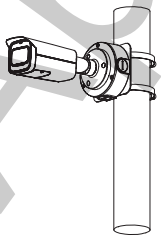
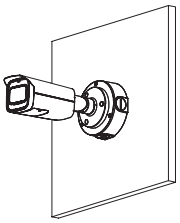
LR1002-1ET/1EC
Single-port Long Reach Ethernet over Coax Extender



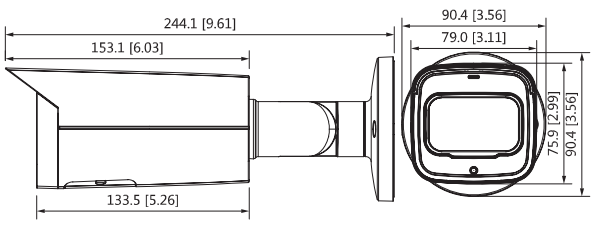
PFM900-E
Integrated Mount Tester

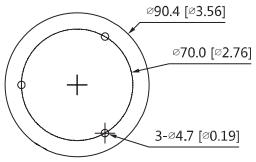


PFM114
TLC SD Card

Pole Mount	Junction Mount
PFA130-E+PFA152-E	PFA130-E
	

Dimensions (mm[inch])





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