ANEXO 1
ESPECIFICACIONES TÉCNICAS DEL PROCESO IP-DTAN-087-2022

Objeto: Compraventa, Instalación y configuración de cámaras de seguridad en el edificio de Parques Nacionales Naturales de Colombia de la Dirección Territorial Andes Nororientales ubicado en la Avenida Quebrada Seca No.30-12

1. ESPECIFICACIONES TÉCNICAS DE LOS BIENES O SERVICIOS

ITEM	DESCRIPCIÓN	UNIDAD	CANTIDAD	MODELO Y MARCA
1	XVR 4 EN 1 AI 32CH GRABACIÓN HASTA 5M-N@10FPS CANALES IP MAX 6MP H.265+ 2 SATA HASTA 10TB 1P HDMI	Unidad	1	DH-XVR5232AN-I2 /
2	XVR 8CH + 4CH IP GRABACION CVI/IP HASTA 4K AHD/TVI HASTA 5MP 1 HDMI 1 E/S RCA 1 SATA RS485 H265+	Unidad	1	DHI-XVR5108H-4KL / DAHUA
3	DISCO DURO 8TB 3.5 SATA WD	Unidad	3	WD84PURZ
4	DOMO PTZ 4 EN 1 1/2.8" CMOS 1080P ZOOM 25X IP66 tecnología: 4 EN 1, Tipo: Cámaras PTZ Analógicas - Modelo: Domo PTZ Material: Metal/Plástica - Resolución: 1080p Zoom Óptico: 25X, - Tamaño Cupula: 16 cm Características: WDR 120dB, StarLight, Sensor de Imagen: Sensor 1/2.8" Rango Pan/Tilt: Pan 0°~360°, Tilt -15°~90°, Puerto RS485: RS485 - IR: IR 100m Protección: IP66, - E/S Audio: Mic RCA E/S Alarma: E/S Alarma 2/1 - Alimentación : 12VDC Consumo: 23.2W -Fuente de Poder Mínima: 3A	Unidad	4	DH-SD49225N-HC-LA1 - DAHUA
5	CAMARA 4 EN 1 1/2,7"" CMOS 5MP@20FPS TIPO DOMO METALICO 2,8MM FOV 93° DWDR IR 20M IP67	Unidad	28	DH-HAC-HDW1500SLN-0280B /DAHUA
6	CAMARA 4 EN 1 5MP@20FPS TIPO BALA LENTE MOTOR. 2,7- 12MM FOV 34°-98° DWDR ARRAY IR 60M IP67	Unidad	1	DH-HAC-HFW1500RN-Z-IRE6-A / DAHUA
7	CAMARA 4 EN 1 1/2,7" CMOS 5MP@25FPS TIPO BALA METALICA LENTE 3,6MM FOV 92° DWDR IR 80M IP67	Unidad	4	DH-HAC-HFW1500DN-0360B-S2 / DAHUA
8	MONITOR 32" RETROILUMINACION LED 4K ANGULO DE VISIÓN 170°(H)/160°(V) HDMI/VGA/DVI/BNC.CARC METALICA	Unidad	1	ZD32-4K - DAHUA
9	MONITOR 27" RETROILUMINACION LED 2K/4K ANGULO DE VISIÓN 170°(H)/160°(V) HDMI/VGA/RCA.CARC PLASTICA	Unidad	1	ZD27-2K - DAHUA
10	Kit de accesorios para Cámara PTZ incluye Caja de paso, fuente 24V 3A balun 5MP.	Unidad	4	ACCCJ30 - P24DC3A - HDVBP

11	Kit de accesorios para cámara Cableada incluye caja, fuente 12v, balun 5M	Unidad	33	ACCCJ30 - TRANS12V15 - HDVBP
12	Brazo tipo parapeto en aluminio para PTZ 879mmx836mmx180mm	Unidad	4	DH-PFB303S
13	Soporte y adaptador para soporte PTZ montaje en Esquinas	Unidad	4	DH-PFB203W
14	Extensor HDMI Activo Cable Red Utp 60 Metros	Unidad	2	Seisa
15	Extensor Usb 60 Metros Amplificador Señal Usb Mouse por cable UTP	Unidad	2	Generic
16	Soporte de Pared para monitor, incluye instalación	Unidad	2	Generic
17	Instalación, configuración y puesta en marcha del sistema, cámaras fijas.	Unidad	1	Mano de Obra
18	Instalación, configuración y puesta en marcha del sistema, cámaras PTZ	Unidad	1	Mano de Obra

Atentamente,



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DH-XVR5232AN-I2

32 Channel Penta-brid 5M-N/1080P 1U WizSense Digital Video Recorder



- H.265+/H.265 dual-stream video compression
- Supports HDCVI/AHD/TVI/CVBS/IP video inputs
- Max 32 channels IP camera inputs, each channel up to 6MP; Max 128 Mbps incoming bandwidth
- Up to 2 channels video stream (analog channel) Perimeter Protection
- Up to 16 channels video stream (analog channel) SMD Plus
- Up to 2 channels video stream (analog channel) human face recognition
- IoT & POS functionalities



Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

System Overview

Dahua Technology, a world-leading video-centric smart IoT solution and service provider, debuted its new XVR series, XVR5000-I2 featuring full-channel SMD Plus (except for 32-channel devices) to benefit customers from AI upgrade. The series are designated to reduce false-alarm rates and human surveillance costs, thus bringing great value to customers in search of products with accurate human/vehicle alarm to raise the security level of various indoor and outdoor facilities.

Functions

Real Time Face Recognition

Video stream real time face recognition. Facial attributes analysis features including gender, age, expression, glasses, moustache, mouth mask. Identify people and also capture, record faces with metadata. Facial feature filtering while real time display, only show faces with target features.

*The Face Recognition is conflicted with SMD Plus and Perimeter Protection.

Perimeter Protection

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

SMD Plus, referred to as Smart Motion Detection Plus, which is an upgrading version of SMD that greatly improves the alarm accuracy by loading deep-learning algorithm. It analyzes person and vehicle shapes based on motion detection and send alarms only when person and vehicle intrudes.

AI Coding

Compared with H.265, AI codec can reduce up to 50% bit rate and storage requirements while have no loss of decoding compatibility, providing clear human and vehicle details.

Smart H.265+

Smart Codec, H.265+ can reduce up to 90% bit rate and storage requirements compared with H.264 without having to invest in new cameras.

HDCVI/AHD/TVI/CVBS Auto-detect

The XVR can auto recognize the signal of front-camera without any setting. It makes operation more friendly and convenient.

High Definition Camera Input

The XVR supports up to 5MP HDCVI camera and 6MP IP camera input.

Coaxial Audio/Upgrade/Alarm

The integrated design can reduce wiring troubles which makes it much more cost-effective and convenient for installation.

Long Distance Transmission

The HDCVI system supports long distance transmission over coaxial cable and UTP, max. 700m for 4K/4MP, 800m for 1080P and 1200m for 720P.

AI Search

Extract and classify person and vehicles from massive video data, easy for end users to trace historical informaton and analyze. Person & Vehicle optonal for playback to achieve quick target search, saving event retrieval tme.

Technical Specification

System

Main Processor	Embedded Processor
Operating System	Embedded LINUX

Perimeter Protection

Performance	2 channels, 10 IVS for each channel
Object classification	Human/Vehicle secondary recognition for tripwire and intrusion
AI Search	Search by target classification (Human, Vehicle)

Face Recognition

Performance	Max 12 face pictures/sec processing
	2 channels video stream face recognition, only support analog camera
Stranger Mode	Detect strangers' faces (not in device's face database). Similarity threshold can be set manually.
AI Search	Up to 8 target face images search at same time, similarity threshold can be set for each target face image.
Database Management	Up to 10 face databases with 10,000 face images in total. Name, gender, birthday, address, certificate type, cerificate No., countries&regions and state can be added to each face picture.
Database Application	Each database can be applied to video channels independently .
Trigger Events	Buzzer, Voice Prompts, Email, Snapshot, Recording, Alarm Out, PTZ Activation, etc.

SMD Plus

Performance	16 channels
AI Search	Search by target classification (Human, Vehicle)

Video and Audio

Analog Camera Input	32 channels, BNC
HDCVI Camera Input	5MP, 4MP, 1080P@25/30fps, 720P@50/60fps, 720P@25/30fps
AHD Camera Input	5MP, 4MP, 1080P@25/30, 720P@25/30fps
TVI Camera Input	5MP, 4MP, 1080P@25/30, 720P@25/30fps
CVBS Camera Input	PAL/NTSC
IP Camera Input	32 channels, each channel up to 6MP
Audio In/Out	1/1, RCA
Two-way Talk	Reuse audio in/out, RCA

Recording

Compression	AI Coding/H.265+/H.265/H.264+/H.264
Resolution	5M-N, 4M-N, 1080P, 1080N, 720P, 960H, D1, CIF
Record Rate	Main stream: All channel 5M-N (1fps–10fps); 4M-N/1080P (1fps–15fps); 1080N/720P/960H/ D1/CIF (1fps–25/30fps) Sub stream: D1/CIF (1fps–15fps)
Bit Rate	32 Kbps–6144 Kbps Per Channel
Record Mode	Manual, Schedule (General, Continuous), MD (Video detection: Motion Detection, Video Loss, Tampering), Alarm, Stop
Record Interval	1 – 60 min (default: 60 min), Pre-record: 1 s–30 s, Post-record: 10 s–300 s
Audio Compression	G.711A, G.711U, PCM
Audio Sample Rate	8 KHz, 16 bit Per Channel
Audio Bit Rate	64 Kbps Per Channel

Display

Interface	1 HDMI ,1 VGA
Resolution	HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720
Multi-screen Display	1/4/8/9/16/25/36
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording

Network

Interface	1 RJ-45 Port (1000 MB)
Network Function	HTTP, HTTPS, TCP/IP, IPv4/IPv6, Wi-Fi, 3G/4G, SNMP, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE,DDNS, FTP, Alarm Server, P2P,IP Search (Supports Dahua IP camera, DVR, NVS, etc.)
Max. User Access	128 users
Smart Phone	iPhone, iPad, Android
Interoperability	ONVIF 16.12, CGI Conformant

Video Detection and Alarm

Trigger Events	Recording, PTZ, Tour, Video Push, Email, FTP, Snapshot, Buzzer and Screen Tips
Video Detection	Motion Detection, MD Zones: 396 (22 × 18), Video Loss, Tampering and Diagnosis
Alarm input	N/A
Relay Output	N/A

Playback and Backup

Playback	1/4/9/16
Search Mode	Time /Date, Alarm, MD and Exact Search (accurate to second)
Playback Function	Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom
Backup Mode	USB Device/Network

Storage

Internal HDD	2 SATA Ports, up to 10TB capacity for each disk
eSATA	N/A

Auxiliary Interface

USB	2 USB Ports (1 USB 2.0 , 1 USB 3.0)
RS485	1 Port, for PTZ Control
RS232	N/A

Electrical

Power Supply	DC 12V/5A
Power Consumption (Without HDD)	<16W

Construction

Dimensions	1U, 375 mm × 288 mm × 53 mm (14.76'' × 11.30'' × 2.09'')
Net Weight (without HDD)	1.9 kg (4.2 lb)
Gross Weight	3.2 kg (7.0 lb)
Installation	Desktop installation

Environmental

Operating Conditions	-10°C to +55°C (+14°F to +131°F), 0–90% RH
Storage Conditions	-20°C to +70°C (-4°F to +158°F) , 0–90% RH

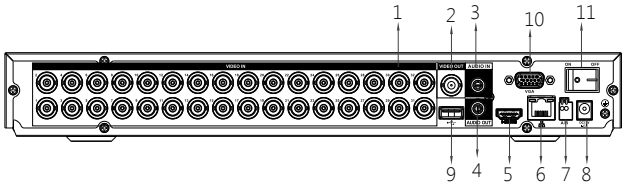
Third-party Support

Third-party Support	Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, Vivotek, and more

Certifications

Certifications	FCC: Part 15 Subpart B CE: CE-LVD: EN 60950-1/IEC 60950-1 CE-EMC: EN 61000-3-2, EN 61000-3-3, EN 55032, EN 50130, EN 55024

Panels

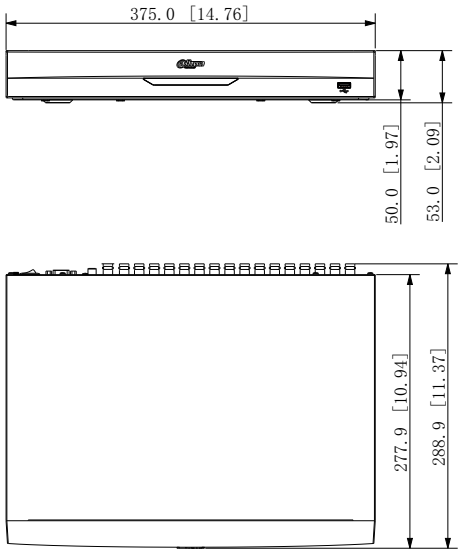


1	VIDEO IN	7	RS485 Interface
2	VIDEO OUT	8	DC 12V Power Input
3	AUDIO IN, RCA Connector	9	USB Interface
4	AUDIO OUT, RCA Connector	10	VGA Interface
5	HDMI Interface	11	Power Switch
6	Network Interface		

Ordering Information

Type	Model	Description
32 Channel WizSense XVR	DH-XVR5232AN-I2	1U WizSense Digital Video Recorder

Dimensions (mm[inch])



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Pictures in the document are for reference only, and the actual product shall prevail.

DHI-XVR5108/16H-4KL

8/16 Channel Penta-brid 4K Mini 1U Digital Video Recorder



- Embedded processor
- H.264+/H.264 dual-stream video compression
- Support HDCVI/AHD/TVI/CVBS/IP video inputs
- Max 12/24 channels IP camera inputs, each channel up to 8MP; Max 48/96Mbps Incoming Bandwidth
- Smart Search and Intelligent Video System



System Overview

Throughout the years, HDCVI technology gained international fame for becoming a brand new international standard for video surveillance, and has never stopped evolving. From 2MP to 4MP, now Dahua Technology brings HDCVI into the 4K era. It presents a much clear and vivid world.

As the perfect solution to upgrade existing video surveillance systems, XVR supports penta-brid access technology such as HDCVI, AHD, TVI, CVBS and IP to effortlessly integrate with popular industry formats, offering an affordable solution loaded with flexible options.

Designed as a full compatibility product, XVR is able to provide end user the simplicity of analog system, namely lower system cost, simple installation and use of existing cable. It is ideal for a wide range of applications such as public safety, retail store, transportation, home protection and education.

Functions

Smart H.264+

Smart Codec, H.264+ can reduce up to 70% bit rate and storage requirements without having to invest in new cameras.

HDCVI/AHD/TVI/CVBS Auto-detect

The XVR can auto recognize the signal of front-camera without any setting. It makes operation more friendly and convenient.

8MP Resolution

The XVR supports up to 8MP HD resolution (3840 x 2160) HDCVI camera and IP camera input.

Coaxial Audio/Upgrade/Alarm

The integrated design can reduce wiring troubles which makes it much more cost-effective and convenient for installation.

Intelligent Fan Design

The intelligent fan can automatically turn on or turn off according to the CPU temperature. This function can effectively reduce the fan noise to provide a better user experience while extending the life of the fan at the same time.

Spot Output

It is made for a secondary monitor. This allows the operator to view one special monitor that assigned to selected cameras or video inputs from higher security areas.

Intelligent Video System (IVS)

With built-in intelligent video analytics, the XVR has the ability to detect and analyze moving objects for improved video surveillance. The XVR provides optional standard intelligence at the edge allowing detection of multiple object behaviors such as abandoned or missing objects. IVS also supports Tripwire analytics, allowing the camera to detect when a pre-determined line has been crossed.

Face Detection

It is a type technology being used in a variety of applications that search or identify individuals which show front cameras.

Smart Search

This function helps you get more motion detect video during a short time through drawing a region when playback. It is very useful when an emergency occurs.

Technical Specification

System

Main Processor	Embedded Processor
Operating System	Embedded LINUX

Video and Audio

Analog Camera Input	8/16 Channel, BNC
HDCVI Camera	4K, 4MP, 1080P@25/30fps, 720P@50/60fps, 720P@25/30fps
AHD Camera	5MP, 4MP, 3MP, 1080P@25/30, 720P@25/30fps
TVI Camera	5MP, 3MP, 1080P@25/30, 720P@25/30fps
CVBS Camera	PAL/NTSC
IP Camera Input	8+4/16+8 Channel, each channel up to 8MP
Audio In/Out	1/1, RCA
Two-way Talk	Reuse audio in/Out, RCA

Recording

Compression	H.264+/H.264
Resolution	4K, 5MP, 4MP, 3MP, 1080P, 720P, 960H, D1, CIF, QCIF
Record Rate	Main stream: 4K(1~7fps); 5MP(1~12fps); 4MP/3MP(1~15fps); 1080P/720P/960H/D1/CIF/QCIF (1~25/30fps) Sub steram:960H(1~15fps); D1/CIF/QCIF(1~25/30fps)
Bit Rate	1Kbps ~ 6144Kbps Per Channel
Record Mode	Manual, Schedule (Regular, Continuous), MD (Video detection: Motion Detection, Video Loss, Tampering), Alarm, Stop
Record Interval	1 ~ 60 min (default: 60 min), Pre-record: 1 ~ 30 sec, Post-record: 10 ~ 300 sec

Display

Interface	1 HDMI, 1 VGA
Resolution	HDMI:3840×2160, 2560×1440, 1920×1080, 1280×1024, 1280×720, 1024×768 VGA: 1920×1080, 1280×1024, 1280×720, 1024×768
Multi-screen Display	When IP extension mode not enabled: 8CH: 1/4/8/9 16CH: 1/4/8/9/16 When IP extension mode enabled: 8CH: 1/4/8/9/16 16CH: 1/4/8/9/16/25
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording

Network

Interface	1 RJ-45 Port (1000M)
Network Function	HTTP, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE,DDNS, FTP, Alarm Server, P2P,IP Search (Support Dahua IP camera, DVR, NVS, etc.)
Max. User Access	128 users
Smart Phone	iPhone, iPad, Android
Interoperability	ONVIF 2.42, CGI Conformant

Video Detection and Alarm

Trigger Events	Recording, PTZ, Tour, Video Push, Email, FTP, Snapshot, Buzzer and Screen Tips
Video Detection	Motion Detection, MD Zones: 396 (22 × 18), Video Loss, Tampering and Diagnosis
Alarm input	N/A
Relay Output	N/A

Playback and Backup

Playback	8CH: 1/4/9 16CH: 1/4/9/16
Search Mode	Time /Date, Alarm, MD and Exact Search (accurate to second)
Playback Function	Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom
Backup Mode	USB Device/Network

Storage

Internal HDD	1 SATA Port, up to 8TB capacity
eSATA	N/A

Auxiliary Interface

USB	2USB Ports (1 USB 2.0 , 1 USB 3.0)
RS232	N/A
RS485	1 Port, for PTZ Control

Electrical

Power Supply	8CH:DC12V/2A 16CH:DC12V/3A
Power Consumption	8CH:<10W (Without HDD) 16CH:<15W (Without HDD)

Construction

Dimensions	Mini 1U, 325mm×255mm×55mm (12.8" x 10" x 2.2")
Net Weight	1.5kg (3.3 lb) (without HDD)
Gross Weight	2kg (4.4lb)
Installation	Desktop installation

Environmental

Operating Conditions	-10°C ~ +55°C (+14°F ~ +131°F), 0~ 90% RH
Storage Conditions	-20°C ~ +70°C (-4°F ~ +158°F) , 0~ 90% RH

Third-party Support

Third-party Support	Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, Vivotek, and more
Dimensions	Mini 1U, 325mm×255mm×55mm (12.8" x 10" x 2.2")

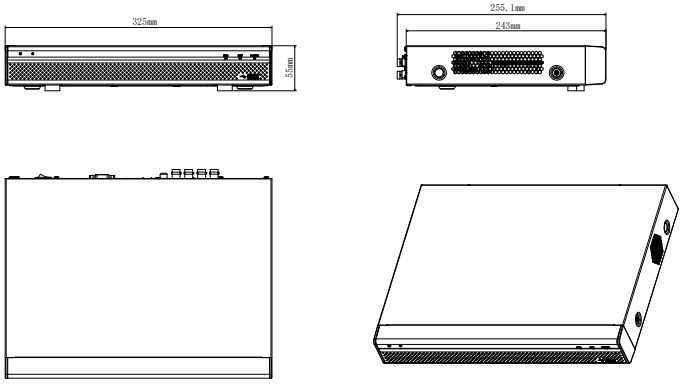
Certifications

Certifications	FCC: Part 15 Subpart B
	CE: CE-LVD: EN 60950-1/IEC 60950-1 CE-EMC: EN 61000-3-2, EN 61000-3-3, EN 55032, EN 50130, EN 55024
	UL: UL 60950-1

Ordering Information

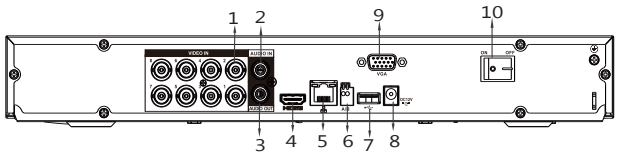
Type	Part Number	Description
8/16 Channel XVR	DHI-XVR5108H-4KL	8 Channel Penta-brid 4K 1U Digital Video Recorder
	DHI-XVR5116H-4KL	16 Channel Penta-brid 4K 1U Digital Video Recorder

Dimensions (mm)



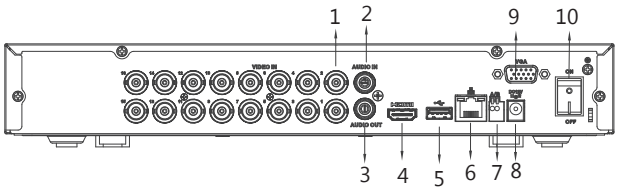
Rear Panel

DHI-XVR5108H-4KL



1	VIDEO IN	6	RS485 Interface
2	AUDIO IN, RCA Connector	7	USB Interface
3	AUDIO OUT, RCA Connector	8	DC 12V Power Input
4	HDMI Interface	9	VGA Interface
5	Network Interface	10	Power Switch

DHI-XVR5116H-4KL



1	VIDEO IN	6	Network Interface
2	AUDIO IN, RCA Connector	7	RS485 Interface
3	AUDIO OUT, RCA Connector	8	DC 12V Power Input
4	HDMI Interface	9	VGA Interface
5	USB Interface	10	Power Switch

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Western Digital.

WD Purple™

PRODUCT BRIEF

SURVEILLANCE HARD DRIVES



Product Highlights

- Capacity up to 18TB
- Engineered specifically for surveillance security systems.
- Tuned for write-intensive, low bit-rate, high stream-count workloads typical to most surveillance applications.
- AllFrame AI technology delivers additional enhancements and higher workload rate for AI-enabled recorders, systems, and solutions.
- Supports up to 180 TB/yr workload rate** (Up to 360 TB/yr workload rate on drives that support AllFrame AI technology).
- Support for more than eight bays.
- Tarnish-resistant components.
- 3-years limited Warranty

INTERFACE
SATA 6 Gb/s

FORM FACTOR
3.5-inch

PERFORMANCE CLASS
5400 / 7200 RPM Class

CAPACITIES
1TB to 18TB

MODEL NUMBERS
WD180PURZ
WD140PURZ
WD121PURZ
WD102PURZ
WD101PURZ
WD82PURZ
WD84PURZ
WD62PURZ
WD60PURZ
WD40PURZ
WD30PURZ
WD20PURZ
WD10PURZ

THE WESTERN DIGITAL ADVANTAGE

Western Digital puts our products through extensive Functional Integrity Testing (F.I.T.) prior to any product launch. This testing ensures our products consistently meet the highest quality and reliability standards of the Western Digital brand.

Western Digital also has a detailed Knowledge Base with more than 1,000 helpful articles as well as software and utilities. Our customer support lines have long operational hours to ensure you get the help you need when you need it. Our toll-free customer support lines are here to help, or you can access our Western Digital Support site for additional details.

WD Purple™ drives are engineered specifically for surveillance to help withstand the elevated heat fluctuations and equipment vibrations within NVR environments. An average desktop drive is built to run for only short intervals, not the harsh 24/7 always-on environment of a high-definition surveillance system. With WD Purple, you get reliable, surveillance-class storage that's tested for compatibility in a wide range of security systems. Exclusive AllFrame™ technology helps reduce frame loss and improve overall video playback. WD Purple 8TB[4] and higher drives have additional performance headroom to support a new generation of AI-enabled NVRs, video analytics appliances, and deep-learning servers.

Industry-leading storage. Surveillance you can trust.

Western Digital is a worldwide leader in the hard drive industry. With WD Purple surveillance storage, you have a drive engineered for high temperature, always-on surveillance systems so you can rely on quality video playback when you need it most. Whether you're protecting loved ones or monitoring your business, WD Purple offers performance you can trust.

Western Digital's Exclusive AllFrame Technology

All WD Purple™ drives are equipped with AllFrame technology, which improves ATA streaming to help reduce frame loss, improve overall video playback, and increase the number of hard drive bays supported within an NVR. WD Purple capacities up to 6TB[4] feature AllFrame 4K technology enabling high-quality recording in a multitude of security systems. WD Purple 8TB, 10TB, 12TB, 14TB, and 18TB capacities feature AllFrame AI technology that enables not only recording multiple streams per camera but also supports an additional 32 streams for Deep Learning analytics within the system.

Enhanced Workload Ratings

WD Purple drives with AllFrame 4k technology feature a workload rating of up to 180TB/year – up to three times that of desktop drives – to handle the unique demands of modern video surveillance DVR and NVR systems. WD Purple drives with AllFrame AI technology feature a workload rating up to 360TB/year to support the growing use of deep learning analytics.

Multiple Cameras, Multiple Streams

Modern recorders now support multiple video streams per camera. WD Purple™ 8TB and higher capacity drives are optimized to support up to 64 HD single-stream cameras[13], and can also support the latest smart cameras that transmit multiple streams. With so many options, you have the flexibility to upgrade or expand your security system in the future.

Designed for Today's and Tomorrow's Surveillance Solutions

With an MTBF of up to 1.5 million hours[1], WD Purple drives are engineered for mainstream surveillance DVRs and NVRs that operate 24/7. With tarnish-resistant components[1] and support for more than eight bays[2], WD Purple drives deliver reliable operation in large scale surveillance systems even in harsh environments.

Field-proven High Capacity

Now on its 6th generation, field-proven HelioSeal™ technology delivers trusted high-capacity WD Purple™ storage (10TB, 12TB, 14TB, and 18TB[4]) for the massive storage needs of 4K surveillance video and deep learning analytics.

Wide Compatibility. Seamless Integration.

WD Purple™ hard drives are built with compatibility in mind, so you can quickly and seamlessly add capacity to your surveillance system. With a wide range of industry-leading enclosures and chipsets supported, you're sure to find the DVR or NVR configuration that's right for you.

Proactive storage management with WDDA

Western Digital® Device Analytics™ (WDDA) provides a wealth of storage device parametric operational and diagnostic data to the system; algorithms interpret the data and direct the system to alert system administrators of specific recommended actions to address potential issues. WDDA is intended to empower OEMs, system integrators, and IT professionals to better monitor and proactively manage supported storage devices to maintain optimal operation.

Three Year Limited Warranty

As an industry-leading hard drive manufacturer, WD stands behind their surveillance storage solutions with a 3-year limited warranty included with every WD Purple drive.

Specifications[4]

	18TB	14TB	12TB	10TB	10TB	8TB
Model Number[3]	WD180PURZ	WD140PURZ	WD121PURZ	WD102PURZ	WD101PURZ	WD82PURZ
Formatted capacity[4]	18TB	14TB	12TB	10TB	10TB	8TB
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes	Yes	Yes	Yes
RoHS compliant[5]	Yes	Yes	Yes	Yes	Yes	Yes
Product Features						
Cameras supported[13]	Up to 64 HD	Up to 64 HD	Up to 64 HD	Up to 64 HD	Up to 64 HD	Up to 64 HD
Drive Bays Supported	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
AI Streams	32	32	32	32	32	32
Firmware Feature Name	AllFrame AI	AllFrame AI	AllFrame AI	AllFrame AI	AllFrame AI	AllFrame AI
Tarnish resistant components	Yes	Yes	Yes	Yes	Yes	Yes
Performance						
Interface transfer rate (max)[4]						
Buffer to host	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s
Host to/from drive (sustained)	272 MB/s	255 MB/s	245 MB/s	265 MB/s	245 MB/s	245 MB/s
Cache (MB)[4]	512	512	256	256	256	256
RPM	7200	7200	7200	7200	7200	7200
Reliability/Data Integrity						
Load/unload cycles[6]	600,000	600,000	600,000	600,000	600,000	600,000
Annualized workload rating[7]	360TB/yr	360TB/yr	360TB/yr	360TB/yr	360TB/yr	360TB/yr
Non-recoverable read errors per bits read	<1 in 10^{15}	<1 in 10^{15}	<1 in 10^{15}	<1 in 10^{15}	<1 in 10^{15}	<1 in 10^{15}
MTBF	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Limited warranty (years)[8]	3	3	3	3	3	3
Power Management[9]						
Average power requirements (W)						
Read/Write	6.3	6.0	6.6	9	6.3	8.6
Idle	5.9	5.7	5.6	8	5.2	7.4
Standby and Sleep	0.9	0.8	0.6	0.5	0.5	0.4
Environmental Specifications[10]						
Temperature (°C, on the base casting)						
Operating[11]	0 to 65	0 to 65	0 to 65	0 to 65	0 to 65	0 to 65
Non-operating	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock (Gs)						
Operating (2 ms, read/write)	50	70	30	70	30	30
Operating (2 ms, read)	50	70	65	70	65	65
Non-operating (2 ms)	250	300	250	250	250	250
Acoustics (dBA)[12]						
Idle	20	20	20	34	20	27
Seek (average)	27	36	29	38	29	29
Physical Dimensions						
Height (in./mm, max)	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1
Length (in./mm, max)	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6
Weight (lb/kg, ± 10%)	1.52/0.69	1.52/0.69	1.46/0.66	1.65/0.75	1.43/0.65	1.58/0.715

[1] Up to 1.5M MTBF for 8TB, 10TB, 12TB, 14TB, and 18TB capacities (up to 1.0M MTBF for lower capacities). MTBF specifications are based upon internal testing using a 40°C base casting temperature. MTBF is based on a sample population and is estimated by statistical measurements and acceleration algorithms. MTBF does not predict an individual drive's reliability and does not constitute a warranty.

[2] For capacities 4TB and higher.

[3] Not all products may be available in all regions of the world.

[4] As used for storage capacity, one gigabyte (GB) = one billion bytes and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 6 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

[5] WD hard drive products manufactured and sold worldwide after June 8, 2011, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the RoHS Directive 2011/65/EU.

[6] Controlled unload at ambient condition.

[7] Workload Rate is defined as the amount of user data transferred to or from the hard drive. Workload Rate is annualized (TB transferred x (8760 / recorded power-on hours)). Workload Rate will vary depending on your hardware and software components and configurations.

[8] See support.wdc.com/warranty for regional specific warranty details.

[9] Power measurements at room-ambient temperature.

[10] No non-recoverable errors during operating tests or after non-operating tests.

[11] On the base casting.

[12] Sound power level.

[13] 8TB and above, single stream @ 3.2Mbps (1080p, H.265, 25 fps). Results may vary depending on camera resolution, file format, frames per second, software, system settings, video quality, and other factors.

Specifications[4]

	8TB	6TB	6TB	4TB	3TB	2TB	1TB
Model Number[3]	WD84PURZ	WD62PURZ	WD60PURZ	WD40PURZ	WD30PURZ	WD20PURZ	WD10PURZ
Formatted capacity[4]	8TB	6TB	6TB	4TB	3TB	2TB	1TB
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RoHS compliant[5]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Product Features							
Cameras supported	Up to 64 HD	Up to 64	Up to 64	Up to 64	Up to 64	Up to 64	Up to 64
Drive Bays Supported	16	16	16	16	8	8	8
AI Streams	--	--	--	--	--	--	--
Firmware Feature Name	AllFrame 4K	AllFrame 4K	AllFrame 4K	AllFrame 4K	AllFrame 4K	AllFrame 4K	AllFrame 4K
Tarnish resistant components	Yes	Yes	Yes	Yes	No	No	No
Performance							
Interface transfer rate (max)[4]							
Buffer to host	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s
Host to/from drive (sustained)	194 MB/s	185 MB/s	175 MB/s	150 MB/s	145 MB/s	145 MB/s	110 MB/s
Cache (MB)[4]	128	128	64	64	64	64	64
RPM	5640	5640	5700	5400	5400	5400	5400
Reliability/Data Integrity							
Load/unload cycles[6]	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Annualized workload rating[7]	180TB/yr	180TB/yr	180TB/yr	180TB/yr	180TB/yr	180TB/yr	180TB/yr
Non-recoverable read errors per bits read	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}
MTBF	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Limited warranty (years)[8]	3	3	3	3	3	3	3
Power Management[9]							
Average power requirements (W)							
Read/Write	6.2	6.2	5.3	5.1	5.0	4.4	3.3
Idle	5.5	5.5	4.9	4.5	4.4	4.1	2.9
Standby and Sleep	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Environmental Specifications[10]							
Temperature (°C, on the base casting)							
Operating[11]	0 to 65	0 to 65	0 to 65	0 to 65	0 to 65	0 to 65	0 to 65
Non-operating	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock (Gs)							
Operating (2 ms, read/write)	30	30	30	30	30	30	30
Operating (2 ms, read)	65	65	65	65	65	65	65
Non-operating (2 ms)	250	250	250	250	250	250	250
Acoustics (dBA)[12]							
Idle	25	25	25	25	23	23	21
Seek (average)	30	30	28	28	24	24	22
Physical Dimensions							
Height (in./mm, max)	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1
Length (in./mm, max)	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6
Weight (lb/kg, ± 10%)	1.58/0.72	1.58/0.72	1.65/0.75	1.50/0.68	1.40/0.64	1.32/0.60	0.99/0.45

[1] Up to 1.5M MTBF for 8TB, 10TB, 12TB, 14TB, and 18TB capacities (up to 1.0M MTBF for lower capacities). MTBF specifications are based upon internal testing using a 40°C base casting temperature. MTBF is based on a sample population and is estimated by statistical measurements and acceleration algorithms. MTBF does not predict an individual drive's reliability and does not constitute a warranty.

[2] For capacities 4TB and higher.

[3] Not all products may be available in all regions of the world.

[4] As used for storage capacity, one gigabyte (GB) = one billion bytes and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 6 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

[5] WD hard drive products manufactured and sold worldwide after June 8, 2011, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the RoHS Directive 2011/65/EU.

[6] Controlled unload at ambient condition.

[7] Workload Rate is defined as the amount of user data transferred to or from the hard drive. Workload Rate is annualized (TB transferred x (8760 / recorded power-on hours)). Workload Rate will vary depending on your hardware and software components and configurations.

[8] See support.wdc.com/warranty for regional specific warranty details.

[9] Power measurements at room-ambient temperature.

[10] No non-recoverable errors during operating tests or after non-operating tests.

[11] On the base casting.

[12] Sound power level.

[13] 8TB and above, single stream @ 3.2Mbps (1080p, H.265, 25 fps). Results may vary depending on camera resolution, file format, frames per second, software, system settings, video quality, and other factors.

Western Digital.

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2579–810247-A06 January 2021

DH-SD49225-HC-LA

2MP 25x Starlight IR PTZ HDCVI Camera



- 1/2.8" 2Megapixel STARVIS™ CMOS
- Powerful 25x optical zoom
- Starlight technology
- 120 dB true WDR, 3D DNR
- Max. 25/30 fps@1080P, 25/30/50/60 fps@720P
- IR distance up to 100 m
- IP66



Featuring with powerful optical zoom and accurate pan/tilt/zoom performance, the SD49 series PTZ camera can provide large monitoring range and great detail. The camera delivers 1080P resolution at 25/30 fps, with 25x optical zoom, and has very excellent low light performance due to the latest starlight technology. SD49 series PTZ camera is equipped with smooth control, high quality image and good protection, which makes it meet small and medium-sized video surveillance applications.

Functions

Simplicity

HDCVI technology inherits the born feature of simplicity from traditional analog surveillance system, making itself a best choice for investment protection. HDCVI system can seamlessly upgrade the traditional analog system without replacing existing coaxial cabling. The plug and play approach enables full HD video surveillance without the hassle of configuring network.

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.

PFA Technology

PFA technology has innovatively introduced new methods of judgment to ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms. PFA ensures clarity of the image throughout the process of zooming and shortens focus time. The realization of PFA technology substantially improves user experience and increases product value.

Environmental

The camera is designed for extreme temperature environments. Subjected and certified to rigorous dust and water immersion tests, the IP66 rating makes it suitable for demanding outdoor applications.

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.

Protection

This camera suits even the harsh conditions for outdoor applications. Its 6KV lightning rating provides protection against the camera and its structure from the effects of lightning.

Technical Specification

Camera

Image Sensor	1/2.8" STARVIS™ CMOS
Pixel	2MP
Max. Resolution	1920 (H) x 1080 (V)
ROM	16 MB
RAM	256 MB
Electronic Shutter Speed	1/3 s–1/100000 s
Scanning System	Progressive
Min. Illumination	Color: 0.005 Lux@F1.6 B/W: 0.0005 Lux@F1.6 0 Lux@F1.6 (IR on)
Illumination Distance	100 m (328.08 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	6

Lens

Focal Length	4.8 mm–120 mm
Max. Aperture	F1.6–F3.5
Field of View	H: 58.5°–2.8°; V: 33.2°–1.5°; D: 67.5°–3.2°
Optical Zoom	25x
Focus Control	Auto/Semi-Auto/Manual
Close Focus Distance	0.1 m–1.5 m (0.33 ft–4.92 ft)
Iris Control	Auto/Manual

DORI Distance	Detect	Observe	Recognize	Identify
	1655.2 m (5430.45 ft)	656.8 m (2154.86 ft)	331.0 m (1085.96 ft)	165.5 m (542.98 ft)

PTZ

Pan/Tilt Range	Pan: 0°–360°Tilt: -15°–+90°; auto flip 180°
Manual Control Speed	Pan: 0.1°–200°/s; Tilt: 0.1°–120°/s
Preset Speed	Pan: 240°/s; Tilt: 200°/s
Presets	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Speed Adjustment	Support
Power-off Memory	Support
Idle Motion	Preset/Tour/Pattern/Scanning
Protocol	DH-SD Pelco-P/D (auto recognition)

Video

Resolution	1080P (1920 × 1080); 720P (1280 × 720); D1 (704 × 576/704 × 480)
Frame Rate	1080P (25/30 fps), 720P (25/30/50/60 fps)
Day/Night	Support
BLC	Support
WDR	120 dB
HLC	Support
White Balance	Auto/Indoor/Outdoor/Tracking/Manual/Sodium lamp/ Natural light/Street lamp
Gain Control	Auto/Manual
Noise Reduction	2D/3D
Defog	Electronic
Digital Zoom	16x
Flip	0°/180°
Privacy Masking	Up to 24 areas

Audio

Compression	G.711a; G.711Mu

Certification

Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014 UL: UL60950-1+CAN/CSA C22.2, No.60950-1

Port

Audio Input	1 (LINE IN; bare wire)
Alarm Input	2
Alarm Output	1

Power

Power Supply	DC 12V/3A ± 10%
Power Consumption	9.6 W 23.2 W (IR light on, PTZ)

Environment

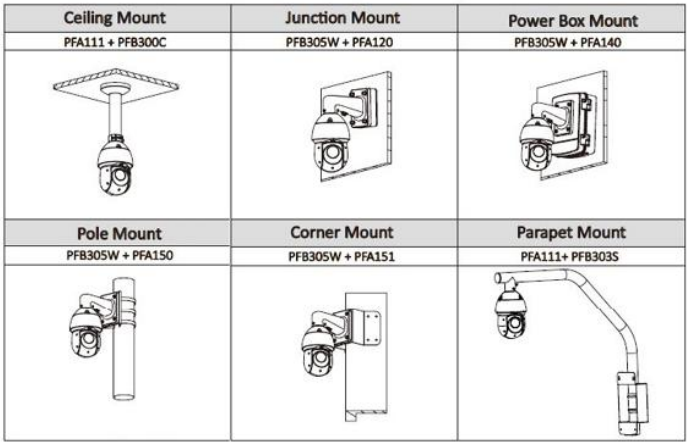
Operating Temperature	–40°C to +70°C (–40°F to +158°F)
Operating Humidity	≤ 95%RH
Protection	IP66; TVS 6000V lightning protection; surge protection

Structure

Dimensions	295.4 mm × Φ160.0 mm (11.63" × Φ6.30")
Net Weight	3 kg (6.61 lb)
Gross Weight	4.2 kg (9.26 lb)

Ordering Information

Type	Model	Description
2M Camera	DH-SD49225-HC-LA	2MP 25x Starlight IR PTZ HDCVI Camera, WDR, PAL
	DH-SD49225N-HC-LA	2MP 25x Starlight IR PTZ HDCVI Camera, WDR, NTSC
	SD49225-HC-LA	2MP 25x Starlight IR PTZ HDCVI Camera, WDR, PAL
	SD49225N-HC-LA	2MP 25x Starlight IR PTZ HDCVI Camera, WDR, NTSC
Accessories	PFB305W	Wall Mount Bracket
	PFA111	Mount Adapter
	DC12V/3A	Power Supply
	PFA140	Power Box
	PFB300C	Ceiling Mount Bracket
	PFA120	Junction Box
	PFA150	Pole Mount Bracket
	PFA151	Corner Mount Bracket
	PFB303S	Parapet Mount Bracket



Accessories

Included:



PFB305W
Wall Mount Bracket

Optional:



PFA111
Mount Adapter



DC12V/3A
Power Supply



PFA140
Power Box



PFB300C
Ceiling Mount Bracket



PFA120
Junction Box



PFA150
Pole Mount Bracket

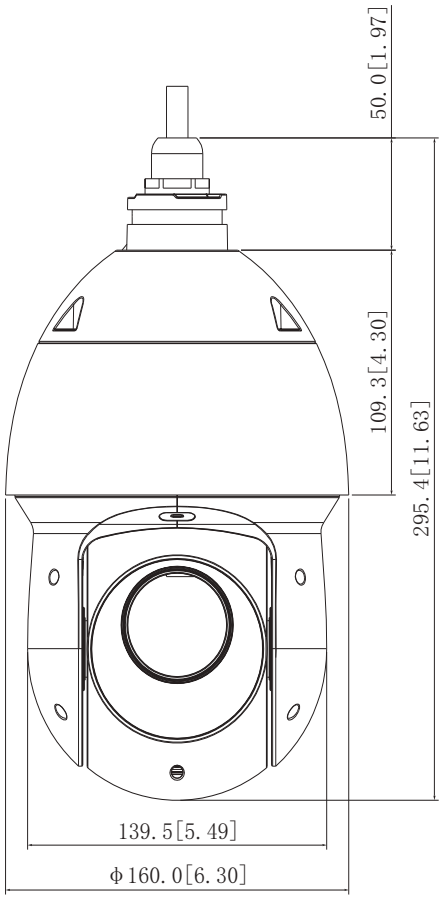


PFA151
Corner Mount
Bracket



PFB303S
Parapet Mount
Bracket

Dimensions (mm[inch])



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Pictures in the document are for reference only, and the actual product shall prevail.

DH-HAC-HDW1500SL

5MP HDCVI IR Eyeball Camera

HDCVI



- Max. 20fps@5MP
- HD and SD output switchable
- 3.6mm fixed lens (2.8mm, 6mm optional)
- Max. IR length 20m, Smart IR
- IP67, DC12V



System Overview

Experience superior 5MP video and the simplicity of reusing existing coaxial infrastructure with HDCVI. The Lite series 5MP HDCVI camera features a compact design and offers a high quality image with rich details at a friendly price. It offers various vari-focal/fixed lens models with a multi-language OSD and HD/SD switchable output. Its structural flexibility and high cost-performance makes the camera an ideal choice for SMB solutions.

Functions

4 Signals over 1 Coaxial Cable

HDCVI technology supports 4 signals to be transmitted over 1 coaxial cable simultaneously, i.e. video, audio*, data and power. Dual-way data transmission allows the HDCVI camera to interact with the HCVR, such as sending control signal or triggering alarm. Moreover, HDCVI technology supports PoC for construction flexibility.

* Audio input is available for some models of HDCVI cameras.

Long Distance Transmission

HDCVI technology guarantees long-distance and real-time transmission without any loss. It supports up to 700m for 5MP HD video via coaxial cable, and up to 300m via UTP cable.*

*Actual results verified by real-scene testing in Dahua's test laboratory.

Simplicity

HDCVI technology inherits the born feature of simplicity from traditional analog surveillance system, making itself a best choice for investment protection. HDCVI system can seamlessly upgrade the traditional analog system without replacing existing coaxial cabling. The plug and play approach enables full HD video surveillance without the hassle of configuring a network.

Smart IR

The camera is designed with microcrystalline LED IR illumination for best lowlight performance. Smart IR is a technology to ensure brightness uniformity in B/W image under low illumination. Dahua's unique Smart IR adjusts to the intensity of camera's infrared LEDs to compensate for the distance of an object, and prevents IR LEDs from overexposing images as the object come closer to the camera.

Multi-formats

The camera supports multiple video formats including HDCVI, CVBS and other two common HD analog formats in the market. The four formats can be switched over through OSD menu or by PFM820(UTC controller). This feature makes the camera to be compatible with not only HCVRs but also most end users' existing HD/SD DVRs.

Multi-language OSD

OSD menu provides multiple image adjustments and function settings to meet the requirements of different monitoring scenes. The OSD menu includes configurations such as backlight mode, day/night, white balance, privacy mask and motion detect. The camera supports 11 languages for OSD menu, namely, Chinese, English, French, German, Spanish, Portuguese, Italian, Japanese, Korean, Russian and Polish.

Protection

The camera's outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with IP67 ranking, making it suitable for indoor or outdoor environments.

With working temperature range of -40 °C to +60 °C (-40 °F to +140 °F), the camera is designed for extreme temperature environments.

Supporting ±30% input voltage tolerance, this camera suits even the most unstable power supply conditions. Its 4KV lightning rating provides protection against the camera and its structure from the effects of lightning.

Technical Specification

Camera

Image Sensor	1/2.7" CMOS
Effective Pixels	2592(H)×1944(V), 5MP
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/25~1/100000s NTSC: 1/30~1/100000s
Minimum Illumination	0.02Lux/F1.85, 30IRE, 0Lux IR on
S/N Ratio	More than 65dB
IR Distance	Up to 20m (66feet)
IR On/Off Control	Auto / Manual
IR LEDs	12

Lens

Lens Type	Fixed lens / Fixed iris
Mount Type	Board-in
Focal Length	3.6mm (2.8mm, 6mm Optional)
Max Aperture	F1.85
Angle of View	H: 77.5° (93°/49°)
Focus Control	N/A
Close Focus Distance	1400mm (800mm/2800mm) 55" (31.5"/110")

DORI Distance

Note: The DORI distance is a "general proximity" of distance which makes it easy to pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specification and lab test result according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify respectively.

	DORI Definition	Distance
Detect	25px/m (8px/ft)	2.8mm: 56m(184ft) 3.6mm: 80m(262ft) 6mm: 120m(394ft)
Observe	63px/m (19px/ft)	2.8mm: 22m(72ft) 3.6mm: 32m(105ft) 6mm: 48m(157ft)
Recognize	125px/m (38px/ft)	2.8mm: 11m(36ft) 3.6mm: 16m(53ft) 6mm: 24m(79ft)
Identify	250ppm (76px/ft)	2.8mm: 6m(21ft) 3.6mm: 8m(26ft) 6mm: 12m(39ft)

Pan / Tilt / Rotation

Pan/Tilt/Rotation	Pan: 0° ~ 360° Tilt: 0° ~ 90° Rotation: 0° ~ 360°

Video

Resolution	5MP (2592×1944)
Frame Rate	20fps@5MP, 25/30fps@4MP, 25/30fps@1080P
Video Output	1-channel BNC high definition video output / CVBS video output (Can switch)
Day/Night	Auto (ICR) / Manual
OSD Menu	Multi-language
BLC Mode	BLC / HLC / DWDR
WDR	DWDR
Gain Control	AGC
Noise Reduction	2D
White Balance	Auto / Manual
Smart IR	Auto / Manual

Certifications

Certifications	CE (EN55032, EN55024, EN50130-4) FCC (CFR 47 FCC Part 15 subpartB, ANSI C63.4-2014) UL (UL60950-1+CAN/CSA C22.2 No.60950-1)

Interface

Audio Interface	N/A

Eelectrical

Power Supply	12V DC ±30%
Power Consumption	Max. 3.6W (12V DC, IR on)

Environmental

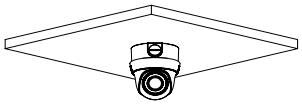
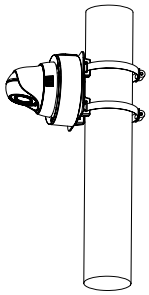
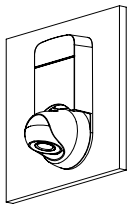
Operating Conditions	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 95% RH * Start up should be done at above-40°C (-40°F)
Storage Conditions	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 95% RH
Ingress Protection & Vandal Resistance	IP67

Construction

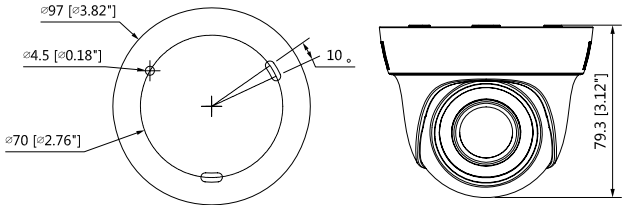
Casing	Plastic
Dimensions	Φ97mm×79.3mm(Φ3.8"×3.1")
Net Weight	0.19kg (0.42lb)
Gross Weight	0.27kg (0.60lb)

Ordering Information

Type	Part Number	Description
5MP Camera	DH-HAC-HDW1500SLP 2.8mm	5MP HDCVI IR Eyeball Camera, PAL
	DH-HAC-HDW1500SLP 3.6mm	
	DH-HAC-HDW1500SLP 6mm	
	DH-HAC-HDW1500SLN 2.8mm	5MP HDCVI IR Eyeball Camera, NTSC
	DH-HAC-HDW1500SLN 3.6mm	
	DH-HAC-HDW1500SLN 6mm	
Accessories	PFA12A	Plastic Junction Box(For use alone)
	PFA130-E	Junction box (For use alone or with PFA152-E pole mount)
	PFA152-E	Pole mount (For use with PFA130-E junction box)
	PFM800-E	Passive HDCVI Balun
	PFM800-4K	Passive Video Balun
	PFM800B-4K	Passive Video Balun
	PFM321	12V 1A Power Adapter
	PFM320D-015	12V 1.5A Power Adapter
	PFM300	12V 2A Power Adapter
	PFM820	UTC Controller

Junction Mount	Pole Mount
PFBA135	PFBA135+PFA152-E
	
Junction Mount	
PFBA12A	
	

Dimensions (mm/inch)

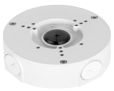


Accessories

Optional:



PFA130-E
Junction box



PFA130-E
Junction box



PFA152-E
Pole mount



PFM800-E
Passive HDCVI Balun



PFM800-4K
Passive Video Balun



PFM800B-4K
Passive Video Balun



PFM321
12V 1A Power Adapter



PFM320D-015
Power Adapter



PFM300
12V 2A Power Adapter



PFM820
UTC Controller

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DH-HAC-HFW1500R-Z-IRE6-A

5MP HDCVI IR Bullet Camera

HDCVI



- Max. 20fps@5MP
- Built-in mic
- HD and SD output switchable
- 2.7-12mm motorized lens
- Max. IR length 60m, Smart IR
- IP67, DC12V



System Overview

Experience superior 5MP video and the simplicity of reusing existing coaxial infrastructure with HDCVI. The Lite series 5MP HDCVI camera features a compact design and offers a high quality image with rich details at a friendly price. It offers various vari-focal/fixed lens models with a multi-language OSD and HD/SD switchable output. Its structural flexibility and high cost-performance makes the camera an ideal choice for SMB solutions.

Functions

Broadcast-quality Audio

Audio information is used as supplementary evidence in video surveillance applications. The HDCVI camera supports audio signal transmission over coaxial cable. In addition, it adopts unique audio processing and transmission technology that best restores source audio and eliminates noise, guaranteeing the quality and effectiveness of collected audio information.

4 Signals over 1 Coaxial Cable

HDCVI technology supports 4 signals to be transmitted over 1 coaxial cable simultaneously, i.e. video, audio*, data and power. Dual-way data transmission allows the HDCVI camera to interact with the HCVR, such as sending control signal or triggering alarm. Moreover, HDCVI technology supports PoC for construction flexibility.

* Audio input is available for some models of HDCVI cameras.

Long Distance Transmission

HDCVI technology guarantees long-distance and real-time transmission without any loss. It supports up to 700m for 5MP HD video via coaxial cable, and up to 300m via UTP cable.*

*Actual results verified by real-scene testing in Dahua's test laboratory.

Simplicity

HDCVI technology inherits the born feature of simplicity from traditional analog surveillance system, making itself a best choice for investment protection. HDCVI system can seamlessly upgrade the traditional analog system without replacing existing coaxial cabling. The plug and play approach enables full HD video surveillance without the hassle of configuring a network.

Smart IR

The camera is designed with array LED IR illumination for best lowlight performance. Smart IR is a technology to ensure brightness uniformity in B/W image under low illumination. Dahua's unique Smart IR adjusts to the intensity of camera's infrared LEDs to compensate for the distance of an object, and prevents IR LEDs from overexposing images as the object come closer to the camera.

HD/SD Switchable

The camera supports switchable HDCVI high definition video output and CVBS standard definition video output. The two formats can be switched over through OSD menu or by PFM820 (UTC controller). This feature makes the camera to be compatible with both HCVRs and existing analog DVRs and also facilitates debugging through analog testers.

Multi-language OSD

OSD menu provides multiple image adjustments and function settings to meet the requirements of different monitoring scenes. The OSD menu includes configurations such as backlight mode, day/night, white balance, privacy mask and motion detect. The camera supports 11 languages for OSD menu, namely, Chinese, English, French, German, Spanish, Portuguese, Italian, Japanese, Korean, Russian and Polish.

Protection

The camera's outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with IP67 ranking, making it suitable for indoor or outdoor environments.

With working temperature range of-40 °C to +60 °C (-40 °F to +140 °F), the camera is designed for extreme temperature environments.

Supporting ±30% input voltage tolerance, this camera suits even the most unstable power supply conditions. Its 4KV lightning rating provides protection against the camera and its structure from the effects of lightning.

Technical Specification

Camera

Image Sensor	1/2.7" CMOS
Effective Pixels	2592(H)×1944(V), 5MP
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/25~1/100000s NTSC: 1/30~1/100000s
Minimum Illumination	0.02Lux/F1.8, 30IRE, 0Lux IR on
S/N Ratio	More than 65dB
IR Distance	Up to 60m (197feet)
IR On/Off Control	Auto / Manual
IR LEDs	4

Lens

Lens Type	Motorized lens / Fixed iris
Mount Type	Board-in
Focal Length	2.7-12mm
Max Aperture	F1.8
Angle of View	H: 98°~34°
Focus Control	Motorized
Close Focus Distance	500mm 19.7''

DORI Distance

Note: The DORI distance is a "general proximity" of distance which makes it easy to pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specification and lab test result according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify respectively.

	DORI Definition	Distance	
		Wide	Tele
Detect	25px/m (8px/ft)	68m(223ft)	198m(650ft)
Observe	63px/m (19px/ft)	27m(89ft)	79m(259ft)
Recognize	125px/m (38px/ft)	14m(46ft)	37m(121ft)
Identify	250ppm (76px/ft)	7m(23ft)	20m(66ft)

Pan / Tilt / Rotation

Pan/Tilt/Rotation	Pan: 0° ~ 360° Tilt: 0° ~ 87° Rotation: 0° ~ 360°

Video

Resolution	5MP (2592×1944)
Frame Rate	20fps@5MP, 25/30fps@4MP, 25/30fps@1080P
Video Output	1-channel BNC HDCVI high definition video output / CVBS video output (Can switch)
Day/Night	Auto (ICR) / Manual
OSD Menu	Multi-language
BLC Mode	BLC / HLC / DWDR
WDR	DWDR
Gain Control	AGC
Noise Reduction	2D
White Balance	Auto / Manual
Smart IR	Auto / Manual

Certifications

Certifications	CE (EN55032, EN55024, EN50130-4) FCC (CFR 47 FCC Part 15 subpartB, ANSI C63.4-2014) UL (UL60950-1+CAN/CSA C22.2 No.60950-1)

Interface

Audio Interface	Built-in mic

Eelectrical

Power Supply	12V DC ±30%
Power Consumption	Max. 12W (12V DC, IR on)

Environmental

Operating Conditions	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 95% RH * Start up should be done at above-40°C (-40°F)
Storage Conditions	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 95% RH
Ingress Protection &Vandal Resistance	IP67

Construction

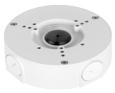
Casing	Aluminium
Dimensions	ϕ90.4mm×210mm (ϕ3.6"×8.3")
Net Weight	0.55kg (1.21lb)
Gross Weight	0.70kg (1.54lb)

Ordering Information

Type	Part Number	Description
5MP Camera	DH-HAC-HFW1500RP-Z-IRE6-A	5MP HDCVI IR Bullet Camera, PAL
	DH-HAC-HFW1500RN-Z-IRE6-A	5MP HDCVI IR Bullet Camera, NTSC
Accessories	PFA130-E	Junction box (For use alone or with PFA152-E pole mount)
	PFA152-E	Pole mount (For use with PFA130-E junction box)
	PFM800-E	Passive HDCVI Balun
	PFM800-4K	Passive Video Balun
	PFM800B-4K	Passive Video Balun
	PFM321	12V 1A Power Adapter
	PFM320D-015	12V 1.5A Power Adapter
	PFM300	12V 2A Power Adapter
	PFM820	UTC Controller

Accessories

Optional:



PFA130-E
Junction box



PFA152-E
Pole mount



PFM800-E
Passive HDCVI Balun



PFM800-4K
Passive Video Balun



PFM800B-4K
Passive Video Balun



PFM321
12V 1A Power Adapter



PFM320D-015
Power Adapter

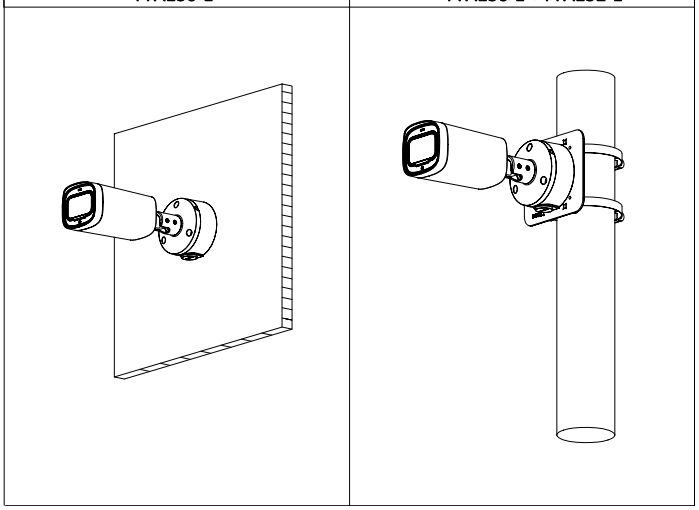


PFM300
12V 2A Power Adapter

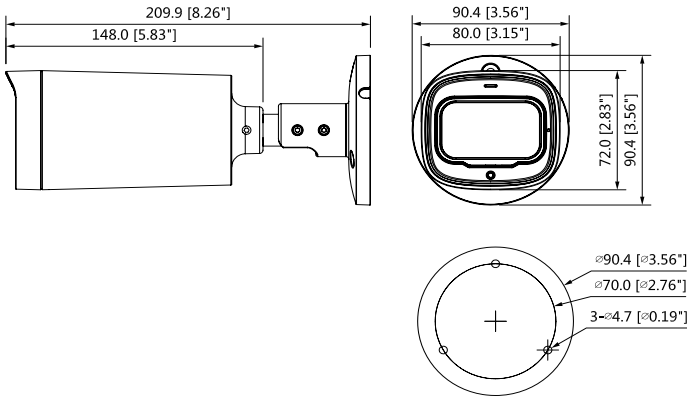


PFM820
UTC Controller

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



Dimensions (mm/inch)



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DH-HAC-HFW1500D

5MP Starlight HDCVI IR Bullet Camera



* The parameters and datasheets below can only be applied to 1500-S2 series.

· Max 25 fps@5MP (16:9 video output)

· CVI/CVBS/AHD/TVI switchable

· 3.6 mm fixed lens (6 mm, 8 mm optional)

· Max. IR length 80 m, Smart IR

· IP67, 12V DC



System Overview

Experience 5MP full HD video and the simplicity of using existing cabling infrastructure with HDCVI. The Lite series 5MP HDCVI camera features a compact design and offers a high quality image at a friendly price. It offers various motorized/fixed lens models with a multi-language OSD and HD/SD switchable output. Its structural flexibility and high cost-performance make the camera an ideal choice for SMB solutions.

Functions

4 Signals over 1 Coaxial Cable

HDCVI technology supports 4 signals to be transmitted over 1 coaxial cable simultaneously, i.e. video, audio*, data and power. Dual-way data transmission allows the HDCVI camera to interact with the XVR, such as sending control signal or triggering alarm. Moreover, HDCVI technology supports PoC for construction flexibility.

* Audio input is available for some models of HDCVI cameras.

Long Distance Transmission

HDCVI technology guarantees real-time transmission at long distance without any loss. It supports up to 700 m for 5MP HD video through coaxial cable, and up to 300 m through UTP cable.*

*Actual results verified by real-scene testing in Dahua's test laboratory.

Simplicity

HDCVI technology inherits the born feature of simplicity from traditional analog surveillance system, making itself a best choice for investment protection. HDCVI system can seamlessly upgrade the traditional analog system without replacing existing coaxial cabling. The plug and play approach enables full HD video surveillance without the hassle of configuring a network.

Smart IR

The camera is designed with IR LED illumination for best lowlight performance. Smart IR is a technology to ensure brightness uniformity in B/W image under low illumination. Dahua's unique Smart IR adjusts to the intensity of camera's infrared LEDs to compensate for the distance of an object, and prevents IR LEDs from overexposing images as the object comes closer to the camera.

Multi-formats

The camera supports multiple video formats including HDCVI, CVBS and other two common HD analog formats in the market. The four formats can be switched over through OSD menu. This feature makes the camera compatible with most end users' existing HD/SD DVRs.

Multi-language OSD

OSD menu provides multiple image adjustments and function settings to meet the requirements of different monitoring scenes. The OSD menu includes configurations such as backlight mode, day/night, white balance, privacy mask and motion detect. The camera supports 11 languages for OSD menu, namely, Chinese, English, French, German, Spanish, Portuguese, Italian, Japanese, Korean, Russian and Polish.

Protection

The camera's outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with IP67 ranking, making it suitable for indoor or outdoor environments.
With working temperature range of –40 °C to +60 °C (–40 °F to +140 °F), the camera is designed for extreme temperature environments.
Supporting ±30% input voltage tolerance, this camera suits even the most unstable power supply conditions. Its 4kV lightning rating provides protection against the camera and its structure from the effects of lightning.

Technical Specification

Camera

Image Sensor	1/2.7 inch CMOS
Max. Resolution	2880 (H) × 1620 (V)
Pixel	5MP
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/25 s–1/100,000 s NTSC: 1/30 s–1/100,000 s
S/N Ratio	> 65 dB
Min. Illumination	0.005 Lux/F1.6, 30IRE, 0 Lux IR on
Illumination Distance	80 m (262.5 ft)
Illumination On/Off Control	Auto; manual
Illuminator Number	2
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–87° Rotation: 0°–360°

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	3.6 mm; 6 mm; 8 mm
Max. Aperture	F1.6
Field of View	3.6 mm: 109° × 92° × 48° (diagonal × horizontal × vertical) 6 mm: 65° × 57° × 30° (diagonal × horizontal × vertical) 8 mm: 48° × 43° × 24° (diagonal × horizontal × vertical)
Iris Type	Fixed iris
Close Focus Distance	3.6 mm: 1.6 m (5.2 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 m (105.0 ft)	16 m (52.5 ft)	8 m (26.2 ft)
	6 mm	120 m (393.7 ft)	48 m (157.5 ft)	24 m (78.7 ft)	12 m (39.4 m)
	8 mm	150.4m (493.4 ft)	60.2 m (197.5 ft)	30.1 m (98.8 ft)	15 m (49.2 ft)

Video

Frame Rate	CVI: PAL: 5M@25 fps; 4M@25 fps; 1080P@25 fps; NTSC: 5M@25 fps; 4M@30 fps; 1080P@30 fps AHD: PAL: 4M@25 fps; NTSC: 4M@30 fps TVI: PAL: 4M@25 fps; NTSC: 4M@30 fps CVBS: PAL: 960H; NTSC: 960H
Resolution	5M (2880 × 1620); 4M (2560 × 1440); 1080P (1920 × 1080); 960 H (960 × 576/960 × 480)
Day/Night	Auto switch by ICR
BLC	BLC/HLC/DWDR
WDR	DWDR
White Balance	Auto; manual
Gain Control	Auto; manual
Noise Reduction	2D NR
Smart IR	Yes
Mirror	Off/On
Privacy Masking	Off/On (8 areas, rectangle)

Certifications

Certifications	CE (EN 55032:2015, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 55024:2010+A1:2015, EN 55035:2017, EN 50130-4:2011+A1:2014, EN 62368-1:2014+A11:2017) FCC (CFR 47 FCC Part 15 subpartB, ANSI C63.4-2014) UL (UL60950-1+CAN/CSA C22.2 No.60950-1)

Port

Video Output	Video output choices of CVI/TVI/AHD/CVBS by one BNC port

Power

Power Supply	12V ±30% DC
Power Consumption	Max 4.9W (12V DC, IR on)

Environment

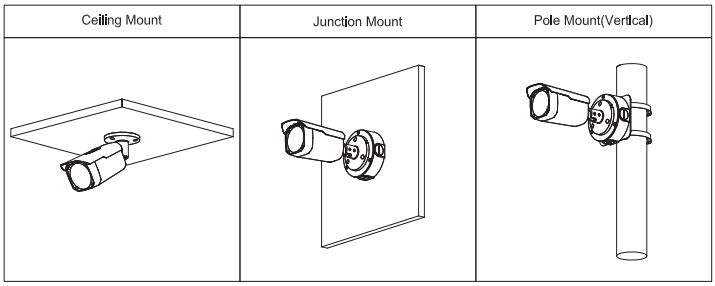
Operating Temperature	–40°C to +60°C (–40°F to 140°F); < 95% (non-condensation)
Storage Temperature	–40°C to +60°C (–40°F to 140°F); < 95% (non-condensation)
Protection Grade	IP67

Structure

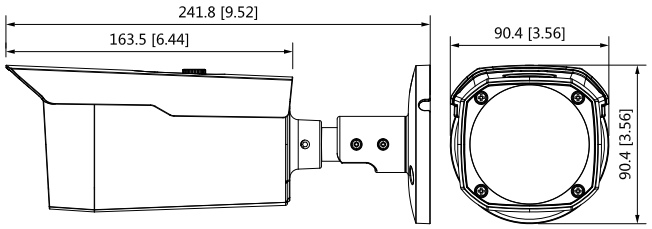
Casing	Mental throughout the whole casing
Camera Dimensions	241.8 mm × 90.4 mm × 90.4 mm (9.52" × 3.56" × 3.56")
Net Weight	0.59 kg (1.30 lb)
Gross Weight	0.87 kg (1.92 lb)

Ordering Information

Type	Part Number	Description
5MP Camera	DH-HAC-HFW1500DP 3.6 mm	5MP HDCVI IR Bullet Camera
	DH-HAC-HFW1500DN 3.6 mm	
	DH-HAC-HFW1500DP 6 mm	
	DH-HAC-HFW1500DN 6 mm	
	DH-HAC-HFW1500DP 8 mm	
	DH-HAC-HFW1500DN 8 mm	
Accessories	PFA135	Junction Box
	PFA130-E	IP66 Junction Box (For use alone or with PFA152-E pole mount)
	PFA152-E	Pole Mount Bracket (For use with PFA130-E junction box)
	PFM800-4K	Passive HDCVI Balun
	PFM321D	12V 1A Power Adapter
	PFM904	Integrated Mount Tester



Dimensions (mm[inch])



Accessories

Optional:



PFA135
Junction Box



PFA130-E
IP66 Junction Box (For use alone or with PFA152-E pole mount)



PFA152-E
Pole Mount Bracket (For use with PFA130-E junction box)



PFM800-4K
Passive HDCVI Balun



PFM321D
12V 1A Power Adapter



PFM904
Integrated Mount Tester

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ZD32-4K

Monitores LED UHD profesionales



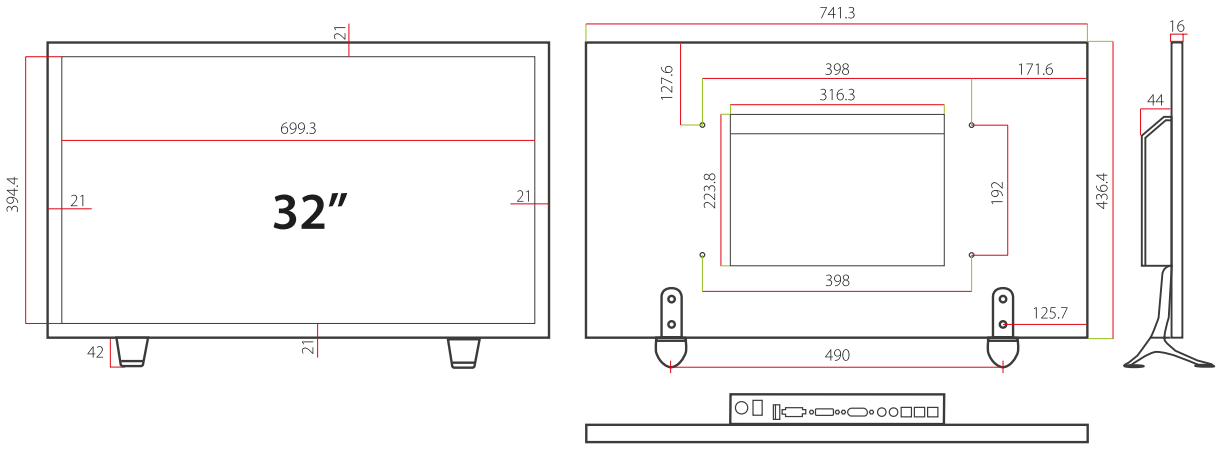
- Monitor UHD de 32 pulgadas
- Tecnología de retroiluminación LED con ultra HD 3840 x 2160
- 16,7 millones de colores muestran imágenes perfectamente
- Múltiples interfaces: HDMI, VGA, DVI, BNC
- Altavoz Incorporada
- Amplio ángulo de visión: Horizontal 170°, Vertical 160°
- Compatibilidad con HDMI hasta 4K
- Detección de entrada de señal automática
- Motor inteligente para fase/posición de imagen/ calibración de color
- Carcasa metalica

Especificiaciones

Modelo	ZD32-4K
Tamaño Pantalla	32"
Material de Bisel	Metal
Tipo de Display	LED
Resolución	3840 * 2160
Brillo	500cd / m^2
Contraste	3000:1
Tiempo de respuesta	5ms
Color	16.7 M
Ángulo de visión	Horizontal 170° / Vertical 160°
Entradas de vídeo	1*HDMI, 1*VGA, 1*DVI, 2*BNC
Entradas de audio	1*HDMI
Altavoz	Si

Tipo de montaje	Desktop/Wall mount
Fuente de alimentación	AC100~240V 50~60Hz
Consumo	50W
Peso neto	6.8kg
Peso bruto	7.6kg
Dimensión del paquete (L*W*H)	820 * 510 * 168 (mm)

Dimensiones (mm)



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ZD27-2K

Monitor LED FHD profesional





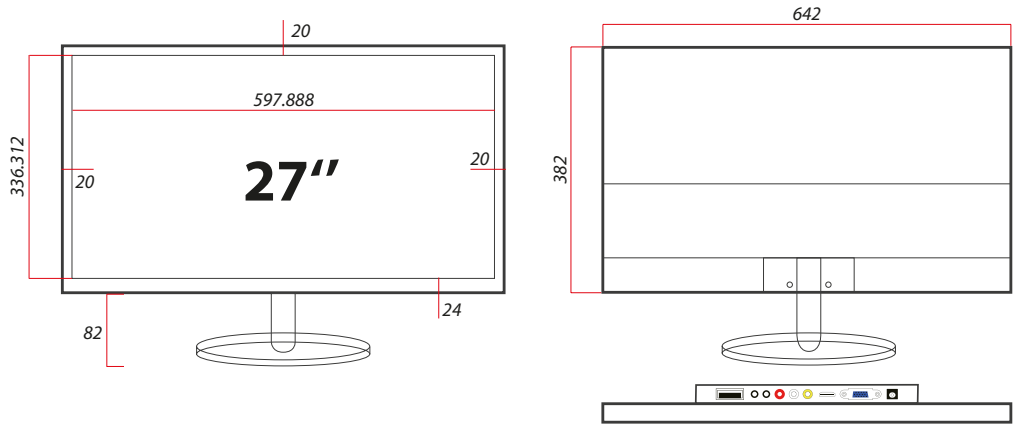
- Monitor FHD de 27 pulgadas
- Tecnología de retroiluminación LED con Full HD 1920 * 1080
- 16,7 millones de colores muestran imágenes perfectamente
- Múltiples interfaces: HDMI, VGA, RCA
- Altavoz incorporada
- Ángulo de visión amplio: Horizontal 170 °, Vertical 160 °
- Soporte HDMI hasta 1080p
- Detección automática de entrada de señal
- Motor inteligente para fase / posición de imagen / calibración de color
- Carcasa de plastico

Especificaciones

Modelo	ZD27-2K
Tamaño Pantalla	27"
Material del bisel	Plastico
Tipo de Pantalla	LED
Resolución	1920 * 1080
Brillo	450cd / m^2
Contraste	3000:1
Tiempo de respuesta	5ms
Color	16.7-millon
Ángulo de visión	Horizontal 170° / Vertical 160°
Interfaz	1*HDMI, 1*VGA, 1*RCA, 1* Entrada de Audio, 1* Salida de auriculares
USB	1*Puerto USB , soporta2K, MP4

Altavoz	Si
Tipo de montaje	Montaje en escritorio/pared
Fuente de alimentación	12V/5A
Consumo	36W
Peso neto	5kg
Peso Bruto	6.3kg
Dimensión del paquete (L*W*H)	690 * 515 * 103 (mm)

Dimensiones (mm)



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DH-PFB203W

Water-proof Wall Mount Bracket



Features

- Aesthetic design
- Water-proof wall mount bracket
- Material: aluminum & SECC

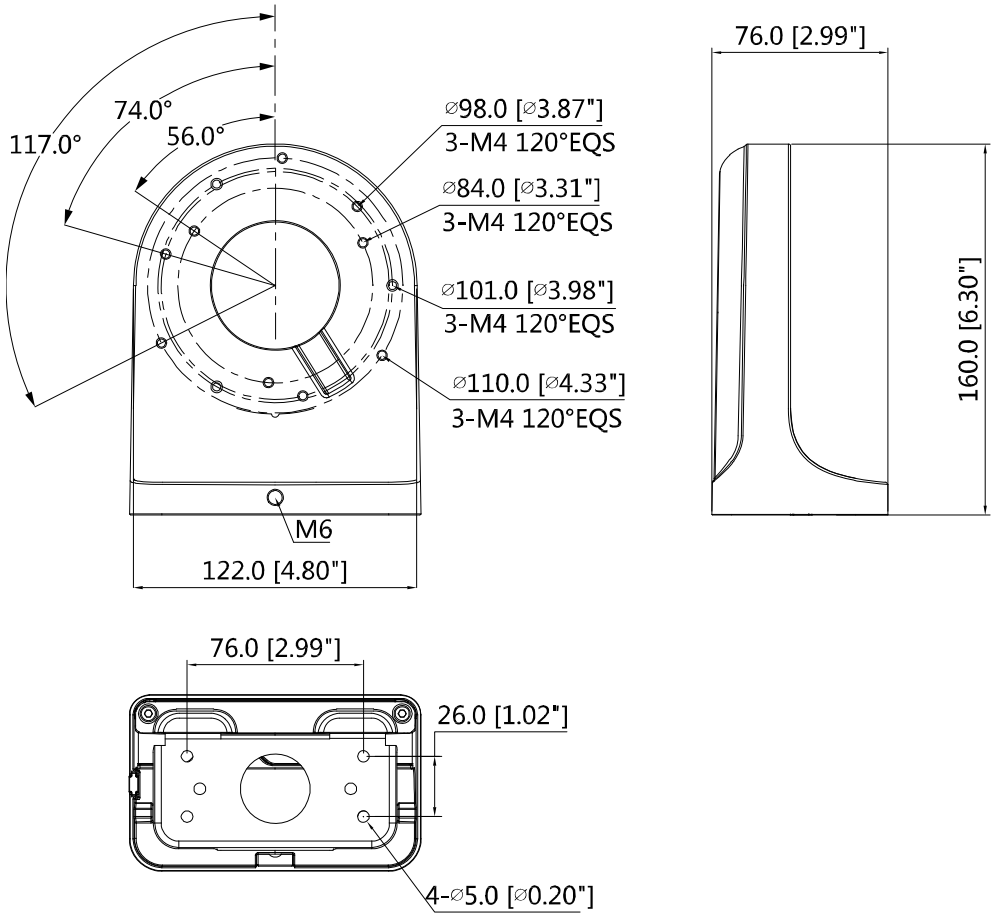
Technical Specifications

Model	DH-PFB203W
General	
Material	Aluminum & SECC
Dimension(WxHxD)	160mmx122mmx76mm (6.30"x4.80"x2.99")
Weight	0.5kg(1.1lb)
Load Bearing	1kg(2.2lb)
Color	White
Operating Temperature	-40℃~+60℃(-40℉~+140℉)
Humidity	<90% RH
Applicable Model	Please see "Accessory Selection"

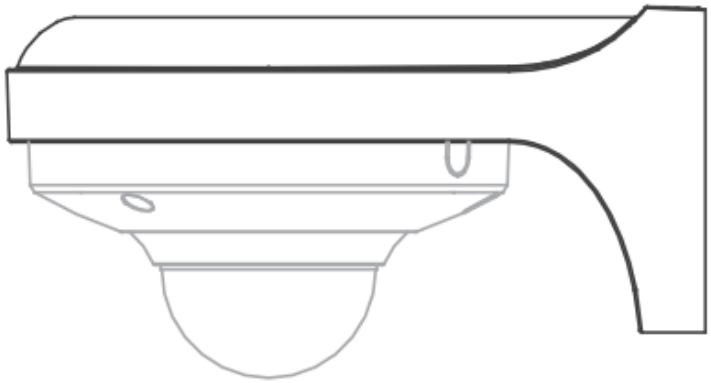
Order Information

Type	Part Number	Description
Camera Mount	DH-PFB203W	Wall mount bracket
	PFB203W	Wall mount bracket

Dimensions (mm/inch)



Application



Package Information

- Wall mount bracket *1
- M4 screw *3
- ST4 screw *4
- Plastic anchor *4
- Wrench *1

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