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Harris Township

SINCE 1909



NEIGHBORS, SHORES & MORE

www.harristownshipmn.org

Mission Statement:

The Harris Town Board strives to enhance the quality of life, protect the environment, and maintain economic stability for the residents of their community.

WORK SESSION
JULY 31, 2019, 7:00 p.m.
AGENDA

- 1. Security**
 - a. Jodie Stewart, Stewart Sound Systems**

- 2. Adjourn**

HARRIS TOWNSHIP

VIDEO SURVEILLANCE SYSTEMS

1. 8-CHANNEL 4K NVR RECORDER WITH 16TB
2. OUTDOOR AUTO TRACKING 1080p PTZ CAMERA
3. OUTDOOR 1080p 5MP BULLET CAMERAS
4. OUTDOOR 1080p 6MP DOME CAMERAS
5. NIGHTTIME VISION ON ALL CAMERAS

STEWART SOUND SYSTEMS LLC

703 Birch Street
Crosby, MN. 56441
218-851-6459

stewartsoundsystems@charter.net

Stewart Sound Systems LLC

703 Birch Street
Crosby, MN 56441

ESTIMATE

DATE 7/29/2019
ESTIMATE# 2791
REP
PHONE 218-851-6459

stewartsoundsystems@charter.net

Harris Township
20876 Wendigo Park Rd.
Grand Rapids, MN. 55744
Attn: Ken Haubrich

PROJECT		HARRIS TOWNSHIP		
QTY	ITEM	DESCRIPTION	PRICE	TOTAL
===== PRELIMINARY ESTIMATE =====				
1	NVR302A-08/...	NVR RECORDER/ ENS Lite Series 8-channel 4K & H.264 Network Video Recorder/ H.265 and H.264 Codec Decoding/ Max 200Mbps Incoming Bandwidth/ Up to 8MP Resolution for Preview and Playback/ HDMI and VGA Simultaneous Video Output/ 8 PoE (power over ethernet) Camera Ports/ 16TB, 2 x 8TB Hard Drives	919.10	919.10
1	ST-LB03	ENS DVR Lock Box with Fan/ Dimensions: 21" x 21" x 8"/ Camlock with 2 Keys/ Steel Construction/ Removable Lid/ 120V AC Fan/ Rubber Feet	113.10	113.10
1	PDN59U225H-1	AUTO TRACKING PTZ CAMERA ENS StarLight IR PTZ Network Camera/ Auto Tracking/ 25x Optical Zoom/ 1/2.8" STARVIS CMOS Video Sensor/ 492-feet IR Night Time Vision in StarLight Color/ 1920p x 1080p, 2 Megapixels/ -40F to +158F Operating Temperature/ IP66 Waterproof Rating	570.70	570.70
1	PFA150	ENS Pole Mount for PTZ Camera Arm or Direct Mounting/ White/ Neat and Integrated Design	26.00	26.00
1	PFA120	ENS Aluminum Junction Box with Conduit Access Ports/ White/ Neat and Integrated Design	19.50	19.50
2	HNC3V151T-I...	BULLET CAMERA WITH MOTORIZED ZOOM ENS StarLight IR Bullet Network Camera/ 2.7-13.5mm Varifocal Lens/ 1/2.7" STARVIS CMOS Video Sensor/ 197-feet IR Night Time Vision in StarLight Color/ 2592p x 1944p, 5 Megapixels/ -22F to +140F Operating Temperature/ IP67 Waterproof Rating	188.50	377.00
2	PFA135	ENS Aluminum Junction Box with Conduit Access Ports/ White/ Neat and Integrated Design	14.30	28.60
2	HNC5V261E-I...	DOME CAMERA WITH MOTORIZED ZOOM ENS StarLight IR Dome Network Camera/ 2.7-13.5mm Varifocal Lens/ 1/2.9" STARVIS CMOS Video Sensor/ 197-feet IR Night Time Vision in StarLight Color/ 3072p x 2048p, 6 Megapixels/ -22F to +140F Operating Temperature/ IP67 Waterproof Rating	271.22	542.44
2	PFB302S	ENS Wall Mount Arm Bracket/ Aluminum in White/ Neat and Integrated Design/ Junction Box Function	36.40	72.80
2	PFA101	ENS Mount Adapter/ Aluminum in White/ Neat and Integrated Design	14.30	28.60
2	PFA138	ENS Round Aluminum Junction Box with Conduit Access Ports/ White/ Neat and Integrated Design	22.10	44.20

EQUIPMENT AND SHIPPING MUST BE PAID IN ADVANCE
THANK YOU!

Subtotal

Tax (6.875%)

TOTAL

Stewart Sound Systems LLC

703 Birch Street
Crosby, MN 56441

ESTIMATE

DATE 7/29/2019
ESTIMATE# 2791
REP
PHONE 218-851-6459

stewartsoundsystems@charter.net

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Grand Rapids, MN. 55744
Attn: Ken Haubrich

PROJECT		HARRIS TOWNSHIP		
QTY	ITEM	DESCRIPTION	PRICE	TOTAL
1	OR1500LCDR...	UNINTERRUPTED POWER SUPPLY CyberPower 1500VA-900W UPS/ 18-minute Half Load, 6-minute Full Load/ Surge Protection/ Rack Mount or Tower Convertible	410.80	410.80
2	CAT6-DB	CABLING Cat6 Outdoor Direct Burial Cable/ 23AWG/ 600Mhz/ CMX Rating/ 1000-foot Spool	244.255	488.51
1	RENTAL	BOOM LIFT RENTAL Rental of Towable Articulated Boom Lift/ Daily Rate	285.12	285.12
1	RENTAL	Rental of Trencher/ Daily Rate	231.98	231.98
	SHIPPING	Shipping, Receiving & Insurance	84.50	84.50
	MISC	Misc. Hardware, Connectors, Wire, Cable, Conduit, Fasteners, Labels, Unknowns, Etc. Necessary to Complete Job.	600.00	600.00
	LABOR	Labor Cost for Consultation, Assembly, Installation, Programming & Testing/ 2 people/ Incudes Office Time, Drive Time and Lodging	5,100.00	5,100.00

EQUIPMENT AND SHIPPING MUST BE PAID IN ADVANCE
THANK YOU!

Subtotal	\$9,942.95
Tax (6.875%)	\$0.00
TOTAL	\$9,942.95

NVR302A-08-8P-4KS2

8 Channel 1U 8PoE 4K&H.265 Lite Network Video Recorder



- H.265/H.264 codec decoding
- Max 200Mbps Incoming Bandwidth
- Up to 8MP Resolution for Preview and Playback
- HDMI/VGA simultaneous video output
- Support IPC UPnP, 8PoE ports
- Support ANR technology to enhance the storage reliability when the network break down



System Overview

This NVR series is the first Lite series NVRs which can support 4K and H.265. And, it has the most reasonable price and best quality. This Lite NVR provides up to 8MP resolution. For applications where details are critical for identification, it provides a powerful image performance 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.

Designed as a cost-effective, easy installation, this NVR is ideal for a wide range of applications such as public safety, water conservancy, transportation, city centers, education, and financial institutions.

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 2.4, enabling interoperability when combined with IP cameras.

Functions

4K Resolution

The NVR supports 4K ultra HD resolution (3840 x 2160) for recording, live viewing and playback.

Intelligent Video System (Optional)

Working with built-in intelligent video analytics IP cameras, the NVR has the ability to detect and analyze moving objects for improved video surveillance. The NVR 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, People Counting, ideal for business intelligence, and Face Detection, for searching or identification of individuals.

Smart Add

With the Smart Add function, the installation of IP system is as easy as an analog system, no matter the NVR with or without a PoE switch embedded. It should be noted that the NVR has to be in the same router as cameras.

ANR (Automatic Network Replenishment Technology)

Video record in SD card in IP cameras when the network breaks down, and after the network recovered, the video will be transferred to NVR and then recorded in it.

Easy4ip

You can monitor at anytime and anywhere with Easy4ip. With this function, you can manage your devices more convenient.



Technical Specification

System

Main Processor	Quad-core embedded processor
Operating System	Embedded LINUX

Display

Interface	1 HDMI, 1 VGA
Resolution	3840×2160, 1920×1080, 1280×1024, 1280×720, 1024×768
Multi-screen Display	1/4/8/9
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording

Video Detection and Alarm

Trigger Events	Recording, PTZ, Tour, Alarm out, Video Push, Email, FTP, Snapshot, Buzzer & Screen tips
Video Detection	Motion Detection, MD Zones: 396(22×18), Video Loss & Tampering
Alarm input	4 Channel, Low Level Effective, Green Terminal Interface
Relay Output	2 Channel, NO/NC Programmable, Green Terminal Interface

Playback and Backup

Playback	1/4/8
Search Mode	Time/Date, Alarm, MD & Exact search (accurate to second), Smart search
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 III Port, Up to 6 TB capacity for each HDD
HDD Mode	Single
eSATA	N/A

Auxiliary Interface

USB	2 USB Ports (1 USB2.0, 1 USB3.0)
RS232	N/A
RS485	N/A

Third-party Support

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

IP Camera Input	8 Channel
Two-way Talk	1 Channel Input, 1 Channel Output, RCA

Recording

Compression	H.265/H.264
Resolution	8Mp/ 6Mp/ 5Mp/ 4Mp/ 3Mp/ 1080P/ 1.3Mp/ 720P etc.
Record Rate	200Mbps
Bit Rate	16Kbps ~ 20Mbps Per Channel
Record Mode	Manual, Schedule (Regular, Continuous), MD (Video detection: Motion Detection, Tampering, Video Loss), Stop
Record Interval	1 ~ 120 min (default: 60 min), Pre-record: 1 ~ 30 sec, Post-record: 10 ~ 300 sec

Network

Interface	1 RJ-45 Port (10/100/1000Mbps)
Ethernet Port	1 Independent 1000Mbps Ethernet Port
PoE	8 ports (IEEE802.3at/af)
Network Function	HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, IP Search (Support Dahua IP camera, DVR, NVS, etc.), Easy4ip
Max. User Access	128 users
Smart Phone	iPhone, iPad, Android
Interoperability	ONVIF 2.4, CGI Conformant

Electrical

Power Supply	AC100V ~ 240V, 50 ~ 60 Hz
Power Consumption	NVR: <9.6W (Without HDD) PoE: Max 25.5w for single port, 80w in total

Environmental

Operating Conditions	-10°C ~ +55°C (+14°F ~ +131°F), 86 ~ 106kpa
Storage Conditions	-20°C ~ +70°C (-4°F ~ +158°F), 0 ~ 90% RH

Construction

Dimensions	1U, 375mm×327.5mm×53mm (14.8" x 12.9" x 2.1")
Net Weight	2.6kg (5.7lb) (without HDD)
Gross Weight	4kg(8.8lb)(without HDD)

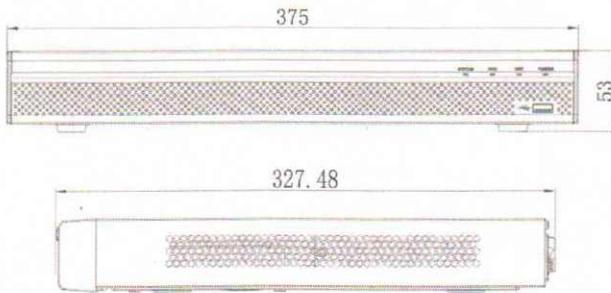
Certifications

CE	EN55032, EN55024, EN50130-4, EN60950-1
FCC	Part 15 Subpart B, ANSI C63.4-2014
UL	UL60950-1+CAN/CSA C22.2 No.60950-1

Ordering Information

Type	Part Number	Description
8 Channel NVR	NVR302A-08-8P-4KS2	8 Channel 1U 8PoE 4K&H.265 Lite Network Video Recorder
Accessories	N/A	N/A

Dimensions (mm)



PDN59U225HI

2MP 25x Starlight IR PTZ Network Camera



- 1/2.8" 2Megapixel STARVIS™ CMOS
- Powerful 25x optical zoom
- Starlight technology
- H.265 Encoding
- Max. 50/60fps@1080P
- Auto-tracking and IVS
- Support PoE+
- IR distance up to 150m
- IP66



System Overview

Featuring powerful optical zoom and accurate pan/tilt/zoom performance, this camera can provide large monitoring range and great detail. The camera has very excellent low light performance due to adopting the latest starlight technology. The camera is equipped with smooth control, high quality image and good protection, which make it can meet most of the requirements of video surveillance applications.

Functions

Starlight Technology

For challenging low-light applications, the 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.

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.

Auto-tracking

This feature controls the pan/tilt/zoom actions of the camera to automatically track an object in motion and to keep it in the scene. The tracking action can be triggered manually or automatically by defined rules. Once a rule is triggered, the camera can zoom in and track the defined target automatically.

Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.

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 cameras operate in extreme temperature environments, rated for use in temperatures from -40 °C to +70 °C (-40 °F to +158 °F) with 95% humidity. Subjected to rigorous dust and water immersion tests and certified to the IP66 Ingress Protection rating makes it suitable for demanding outdoor applications.

Protection

This camera suits even the harsh conditions for outdoor applications. TVS 6KV lightning protection rating provides lightning protection, surge protection and voltage transient protection.

Interoperability

The camera conforms to the ONVIF (Open Network Video Interface Forum) and PSIA (Physical Security Interoperability Alliance) specifications, ensuring interoperability between network video products regardless of manufacturer.

Technical Specification

Camera

Image Sensor	1/2.8" STARVIS™ CMOS
Effective Pixels	1920(H) x 1080(V), 2 Megapixels
RAM/ROM	1024M/128M
Scanning System	Progressive
Electronic Shutter Speed	1/1s~1/30,000s
Minimum Illumination	Color: 0.005Lux@F1.6; 0Lux@F1.6 (IR on)
S/N Ratio	More than 55dB
IR Distance	Distance up to 150m (492ft)
IR On/Off Control	Auto/Manual
IR LEDs	4

Lens

Focal Length	4.8mm~120mm
Max. Aperture	F1.6 ~ F4.4
Angle of View	H: 62.8° ~ 2.6°
Optical Zoom	25x
Focus Control	Auto/Manual
Close Focus Distance	100mm~ 1000mm

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.

Detect	Observe	Recognize	Identify
1613m(5292ft)	646m(2119ft)	323m(1060ft)	161m(528ft)

PTZ

Pan/Tilt Range	Pan: 0° ~ 360° endless; Tilt: -15° ~ 90°, auto flip 180°
Manual Control Speed	Pan: 0.1° ~ 300° /s; Tilt: 0.1° ~ 200° /s
Preset Speed	Pan: 400° /s; Tilt: 300° /s
Presets	300
PTZ Mode	5 Pattern, 8 Tour, Auto Pan ,Auto Scan
Speed Setup	Human-oriented focal Length/ speed adaptation
Power up Action	Auto restore to previous PTZ and lens status after power failure
Idle Motion	Activate Preset/ Scan/ Tour/ Pattern if there is no command in the specified period
Protocol	DH-SD

Intelligence

Auto Tracking	Support
IVS	Tripwire, Intrusion, Abandoned/Missing, Face Detection, Heat Map

Video

Compression	H.265+/H.265/H.264+/H.264
Streaming Capability	3 Streams
Resolution	1080P(1920x1080)/1.3M(1280x960)/720P(1280x720)/D1(704x576/704x480)/CIF(352x288/352x240)
Frame Rate	Main stream: 1080P/1.3M/720P(1~50/60fps) Sub stream1: D1/CIF(1 ~ 25/30fps) Sub stream2: 1080P/1.3M/720P/D1/CIF (1~25/30fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.265/H.264: 448K ~ 8192Kbps
Day/Night	Auto(ICR) / Color / B/W
Backlight Compensation	BLC / HLC / WDR (120dB)
White Balance	Auto, ATW, Indoor, Outdoor, Manual
Gain Control	Auto / Manual
Noise Reduction	Ultra DNR (2D/3D)
Motion Detection	Support
Region of Interest	Support
Electronic Image Stabilization (EIS)	Support
Defog	Support
Digital Zoom	16x
Flip	180°
Privacy Masking	Up to 24 areas

Audio

Compression	G.711a/G.711Mu/AAC/G.722 / G.726/G.729/ MPEG2-L2
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Network

Ethernet	RJ-45 (10Base-T/100Base-TX)
Protocol	IPv4/IPv6,HTTP,HTTPS,SSL,TCP/IP, UDP,UPnP, ICMP,IGMP,SNMP,RTSP,RTP, SMTP, NTP,DHCP, DNS,PPPOE,DDNS,FTP, IP Filter,QoS,Bonjour,802.1x
Interoperability	ONVIF, PSIA, CGI
Streaming Method	Unicast / Multicast
Max. User Access	20 users
Edge Storage	NAS (Network Attached Storage),Local PC for instant recording, Micro SD card 128GB
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	Smart PSS, DSS
Smart Phone	IOS, Android

Certifications

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

Video Interface	N/A
RS485	N/A
Audio I/O	1/1
Alarm I/O	2/1

Electrical

Power Supply	AC24V/3A(±10%), PoE+(802.3at)
Power Consumption	13W,23W (IR on)

Environmental

Operating Conditions	-40°C ~ 70°C (-40°F ~ +158°F) / Less than 95% RH
Ingress Protection	IP66
Vandal Resistance	N/A

Construction

Casing	Metal
Dimensions	Φ186(mm) x 309(mm)
Net Weight	3.5kg(7.72lb)
Gross Weight	6.8kg(14.99lb)

Ordering Information

Type	Part Number	Description
2MP PTZ Camera	PDN59U225HI	2MP 25x Starlight IR PTZ Network Camera, WDR, NTSC
Accessories	PFB300S	Wall Mount
	PFA110	Mount Adapter
	AC24V/3A	Power Adapter
	PFA140	Power Box
	PFB300C	Ceiling Mount
	PFA120	Water-proof Junction Box
	PFA150	Pole Mount
	PFA151	Corner Mount
PFB303S	Parapet Mount	

Accessories

Included:



PFB300S
Wall Mount



PFA110
Mount Adapter



AC24V/3A
Power Adapter

Optional:



PFA140
Power Box



PFB300C
Ceiling Mount



PFA120
Junction Box



PFA150
Pole Mount



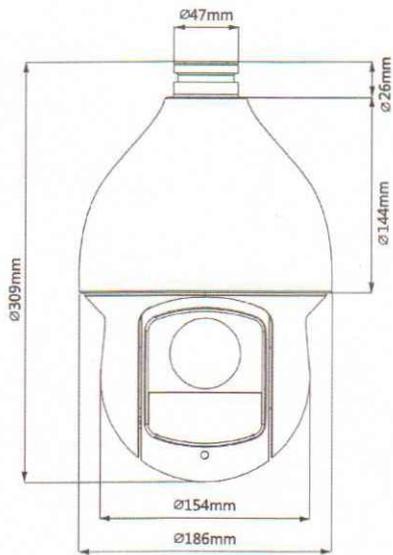
PFA151
Corner Mount



PFB303S
Parapet Mount

Ceiling Mount	Junction Mount
PFA110 + PFB300C	PFA110 + PFB300S + PFA120
Power Box Mount	Pole Mount
PFA110 + PFB300S + PFA140	PFA110 + PFB300S + PFA150
Corner Mount	Parapet Mount
PFA110 + PFB300S + PFA151	PFA110 + PFB303S

Dimensions (mm)



HNC3V151T-IR-ZS

5MP WDR IR Bullet Network Camera



- 1/2.7" 5Megapixel progressive CMOS
- H.265 & H.264 dual-stream encoding
- 15fps@5M(2592×1944)&25/30fps@3M(2304×1296)
- WDR(120dB), Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- Micro SD card slot, up to 128GB
- 2.7~13.5mm varifocal lens
- Max IR LEDs Length 60m
- IP67, PoE+



System Overview

The IR Megapixel Vari-focal camera delivers 5MP resolution with a 2.7mm ~ 13.5mm varifocal lens. The camera's elegant blend of aesthetics combined with a range of easy mounting solutions provides an excellent choice for a variety of small to mid-size applications at an affordable price.

Functions

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

Smart Codec is the optimized implementation of standard video compression (H.265 & H.264) that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart Codec technology reduces bit rate and storage requirements by up to 70% when compared to the standard video compression.

Intelligent Video analysis (IVS)

Dahua camera is equipped with a built-in intelligent analytic algorithm based on video, which can realize intelligent functions like Tripwire and Intrusion, to quickly and accurately respond to monitoring events in specific area, It can enhance monitoring efficiency. In addition, the camera supports intelligent tamper detection, which is to generate warning message via detecting dramatic scene change and to guarantee effective video surveillance.

Wide Dynamic Range (WDR)

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.

Smart IR Technology

With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts the intensity of camera's infrared LEDs to compensate the distance of an object. Smart IR technology prevents IR LEDs from whitening out images as they come closer to the camera. The camera's integrated infrared illumination provides high performance in extreme low-light environments up to 60m (197ft).

Protection (IP67, wide voltage)

The camera allows for ±25% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 2KV lightning rating provides effective protection for both the camera and its structure against lightning. Subjected and certified to rigorous dust and immersion tests (IP67), the camera is the choice for installation in even the most unforgiving environments.

Environmental

Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -30° C to +60° C (-22° F to +140° F) with 95% humidity.

Image flip

Capturing unnecessary data such as surrounding hallway walls can increase storage requirements without any added value. The image flip feature allows the camera's image to be rotated in 90° increments for better video optimization.

Interoperability

The camera conforms to the ONVIF (Open Network Video Interface Forum) specifications, ensuring interoperability between network video products regardless of manufacturer.



Technical Specification

Camera	
Image Sensor	1/2.7" 5Megapixel progressive CMOS
Effective Pixels	2592(H) x1944(V)
RAM/ROM	512MB/32MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual, 1/3~1/100000s
Minimum Illumination	0.02Lux/F1.6(Color,1/3s,30IRE) 0.2Lux/F1.6(Color,1/30s,30IRE) 0Lux/F1.6(IR on)
S/N Ratio	More than 50dB
IR Distance	Distance up to 60m(197ft)
IR On/Off Control	Auto/ Manual
IR LEDs	4

Lens					
Lens Type	Motorized(-ZS), Manual(-VFS)				
Mount Type	Board-in				
Focal Length	2.7mm~13.5mm				
Max. Aperture	F1.4				
Angle of View	H:95°~27°, V:70°~20°				
Focus Control	Motorized(-ZS), Manual(-VFS)				
Close Focus Distance	0.3m				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	64m(210ft)	26m(85ft)	13m(43ft)	6m(20ft)
	T	222m(728ft)	89m(292ft)	44m(144ft)	22m(72ft)

PTZ	
Pan/Tilt Range	Pan:0° ~360° ;Tilt:0° ~90° ;Rotation:0° ~360°

Intelligence	
Event Trigger	Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly
IVS	Tripwire, Intrusion

Video	
Compression	H.265/H.264/MJPEG(Sub Stream)
Smart Codec	Support H.265+/H.264+
Streaming Capability	2 Streams
Resolution	5M(2592x1944)/4M(2688x1520)/3M(2304x1296/2048x1536)/1080P(1920x1080)/720P(1280x720)/D1(704x576/704x480)/VGA(640x480)/CIF(352x288/352x240)
Frame Rate	Main Stream: 5M (1 ~ 15fps)/3M(1 ~ 25/30fps)
	Sub Stream: D1/CIF(1 ~ 25/30fps)
Bit Rate Control	CBR/VBR

Bit Rate	H.265: 12K ~ 8448Kbps H.264: 32K ~ 10240Kbps
Day/Night	Auto(ICR) / Color / B/W
BLC Mode	BLC / HLC / WDR(120dB)
White Balance	Auto/Natural/Street Lamp/Outdoor/Manual
Gain Control	Auto/Manual
Noise Reduction	3D DNR
Motion Detection	Off / On (4 Zone, Rectangle)
Region of Interest	Off / On (4 Zone)
Electronic Image Stabilization(EIS)	N/A
Smart IR	Support
Digital Zoom	16x
Flip	0°/90°/180°/270°
Mirror	Off / On
Privacy Masking	Off / On (4 Area, Rectangle)

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

Network	
Ethernet	RJ-45 (10/100Base-T)
Protocol	HTTP;HTTPS;TCP;ARP;RTSP;RTP;RTCP;UDP;SMTP; FTP;DHCP;DNS;DDNS;PPPoE;IPV4/V6;QoS;UPnP; NTP;Bonjour;IEEE 802.1X;Multicast;IGMP; TLS;SNMP
Interoperability	ONVIF Profile S&G, API
Streaming Method	Unicast / Multicast
Max. User Access	10 Users / 20 Users
Edge Storage	NAS Local PC for instant recording Micro SD Card 128GB
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	Smart PSS, DSS, DMSS
Smart Phone	iOS, Android

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

Interface	
Video Interface	N/A
Audio Interface	N/A
RS485	N/A
Alarm	N/A

Electrical	
Power Supply	DC12V,PoE+ (IEEE 802.3at)(Class 4)
Power Consumption	<15W(-ZS), <13W(-VFS)

Environmental

Operating Conditions	-30° C ~ +60° C (-22° F ~ +140° F) / Less than 95% RH
Storage Conditions	-30° C ~ +60° C (-22° F ~ +140° F) / Less than 95% RH
Ingress Protection	IP67
Vandal Resistance	N/A

Construction

Casing	Metal
Dimensions	244.1mm×79mm×75.9mm (9.61"×3.11"×2.99")
Net Weight	0.815kg (1.80lb)
Gross Weight	1.08kg (2.38lb)

Accessories

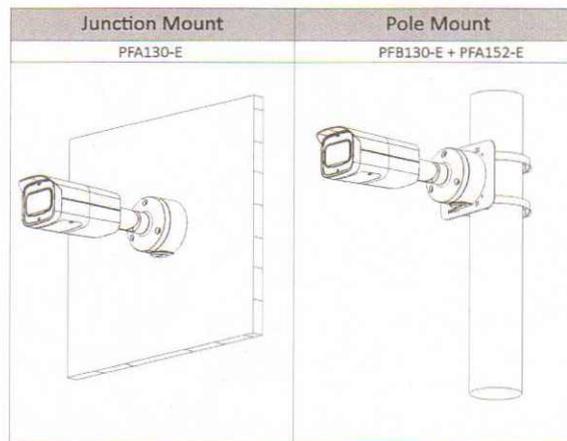
Optional:



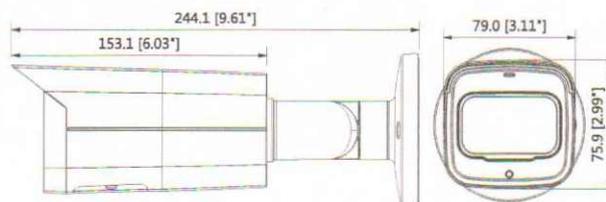
PFA130-E
Junction Box



PFA152-E
Pole Mount



Dimensions (mm/inch)



HNC5V261E-IR-ZE

6MP WDR IR Dome Network Camera



- 1/2.9" 6Megapixel progressive scan STARVIS™ CMOS
- H.265&H.264 dual-stream encoding
- 20fps@6M(3072×2048),25/30fps@4M(2688×1520)
- Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 2.7mm ~13.5mm motorized lens
- Max. IR LEDs Length 50m
- Micro SD card memory, IP67,IK10, PoE+



System Overview

With upgraded H.265 encoding technology, Eco-savvy series brings high efficient video compression capability. It can save bandwidth and storage. Meanwhile, the series features starlight, smart IR technology and intelligent image analysis techniques. This series supports reminder function, meanwhile fully protected from dust and water, certified to IP67 and vandal resistant to IK10 standard.

Functions

ePoE technology

The ePoE technology , designed internally, adopts advanced 2D-PAM3 coding modulation from physical layer, and realizes full duplex transmission over 800 meters at the speed of 10Mbps, or 300 meters at the speed of 100Mbps via Cat 5 or coaxial cable media. Besides, it supports PoE and PoC power supply technology which has greatly simplified construction and wiring. The ePoE technology offer a new way to accomplish long distance transmission between IP camera and network switch. It allows more flexible surveillance system design, improves reliability and saves construction and wiring cost.

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.

Intelligent Video System (IVS)

IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for Tripwire violations, intrusion detection, and abandoned or missing objects. A camera with IVS quickly and accurately responds to monitoring events in a specific area. In addition to scene

analytics, the camera supports face detection to quickly capture a face and upload the image to a server. The camera also offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

Protection(IP67, IK10, wide voltage)

The camera allows for ±30% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 6KV lightning rating provides effective protection for both the camera and its structure against lightning. Subjected and certified to rigorous dust and immersion tests (IP67) and impact tests (IK10), the camera is the choice for installation in even the most unforgiving environments.

Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.



Technical Specification					
Camera		Day/Night	Auto(ICR) / Color / B/W		
Image Sensor	1/2.9" 5Megapixel, progressive scan CMOS	BLC Mode	BLC / HLC / WDR		
Effective Pixels	3072(H)x2048(V)	White Balance	Auto/Natural/Street Lamp/Outdoor/Manual		
RAM/ROM	512MB/32MB	Gain Control	Auto/Manual		
Scanning System	Progressive	Noise Reduction	3D DNR		
Electronic Shutter Speed	Auto/Manual, 1/3~1/100000s	Motion Detetion	Off / On (4 Zone, Rectangle)		
Minimum Illumination	0.03Lux/F1.4 (Color,1/3s,30IRE) 0.3Lux/F1.4 (Color,1/30s,30IRE) 0Lux/F1.4(IR on)	Region of Interest	Off / On (4 Zone)		
S/N Ratio	More than 50dB	Electronic Image Stabilization (EIS)	N/A		
IR Distance	Distance up to 50m (164ft)	Smart IR	Support		
IR On/Off Control	Auto/ Manual	Defog	N/A		
IR LEDs	3	Digital Zoom	16x		
Lens		Flip	0°/90°/180°/270°		
Lens Type	Motorized/ Auto Iris(DC)	Mirror	Off / On		
Mount Type	Board-in	Privacy Masking	Off / On (4 Area, Rectangle)		
Focal Length	2.7mm~13.5mm	Audio			
Max. Aperture	F1.4	Compression	G.711a/G.711Mu/ AAC/G.726		
Angle of View	H:91°~27°, V:58°~18°	Network			
Optical Zoom	5x	Ethernet	RJ-45 (10/100Base-T)		
Focus Control	Motorized	Protocol	HTTP; HTTPS; TCP; ARP; RTSP; RTP; UDP; SMTP; FTP; DHCP; DNS; DDNS; PPPOE; IPv4/v6; QoS; UPnP;NTP; Bonjour; 802.1x; Multicast; ICMP; IGMP; SNMP		
Close Focus Distance	0.3m	Interoperability	ONVIF, PSIA, CGI		
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	79m(259ft)	32m(105ft)	16m(52ft)	8m(41ft)
	T	256m(840ft)	102m(334ft)	51m(167ft)	25m(84ft)
Pan/Tilt/Rotation		Streaming Method	Unicast / Multicast		
Pan/Tilt/Rotation Range	Pan:0°~355°; Tilt:0°~65°; Rotation:0°~355°	Max. User Access	10 Users /20 Users		
Intelligence		Edge Storage	NAS Local PC for instant recording Mirco SD card 128GB		
IVS	Tripwire, intrusion, Object Abandoned/Missing	Web Viewer	IE, Chrome, Firefox, Safari		
Advanced Intelligent Functions	Face Detection	Management Software	Smart PSS, DSS, Easy4ip		
Video		Smart Phone	IOS, Android		
Compression	H.265+/H.265/H.264+/H.264	Certifications			
Streaming Capability	3 Streams	Certifications	CE (EN 60950:2000) UL:UL60950-1 FCC: FCC Part 15 Subpart B		
Resolution	6M(3072x2048)/5M(3072x1728)/ 5M(2592x1944)/ 4M(2688x1520)/ 3M(2048x1536)/ 3M(2304x1296)/ 1080P(1920x1080)/1.3M(1280x960)/ 720P(1280x720)/ D1(704x576/704x480)/ VGA(640x480)/ CIF(352x288/352x240)	Interface			
Frame Rate	Main Stream: 6M(1~20fps)/4M(1~25/30fps) Sub Stream: D1(1~25/30fps) Third Stream: 720P(1~25/30fps)	Video Interface	1 Port(For adjustment only)		
Bit Rate Control	CBR/VBR	Audio Interface	1/1 channel In/Out		
Bit Rate	H.264: 24K ~ 10240Kbps H.265: 14K ~ 9984Kbps	RS485	N/A		
		Alarm	1 channel In: 5mA 5VDC 1 channel Out: 300mA 12VDC		
		Electrical			
		Power Supply	DC12V, AC24V, PoE+(802.3at)(Class 4)		
		Power Consumption	<15W		

Environmental

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Vandal Resistance	IK10

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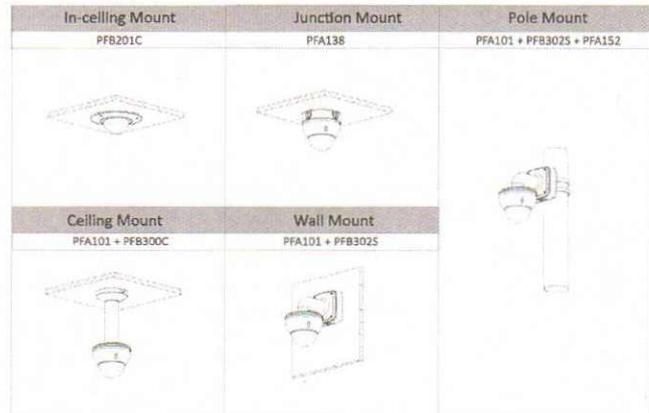
Casing	Metal
Dimensions	Φ159.1mm×117.9mm (6.26"×4.64")
Net Weight	0.95kg (2.09lb)
Gross Weight	1.20kg (2.65lb)

Ordering Information

Type	Part Number	Description	
6MP camera	HNC5V261E-IR-ZE	6MP IR Dome Network Camera, WDR, NTSC	
	PFB302S	Wall mount	
	PFA138	Junction box	
	PFB201C	In-ceiling mount	
	Accessories (optional)	PFA101	Mount adapter
		PFB300C	Ceiling mount
		PFA152-E	Pole mount
	LR1002	ePoE Over Coax Converter	

Accessories

Optional:



Dimensions (mm/inch)

