



**BASHKIA VAU DEJËS**

**SPECIFIKIME TEKNIKE**

**OBJEKTI: FURNIZIM DHE VENDOSJE KAMERA SIGURIE**

## Bullet Network Camera

### Video Management System

#### Camera

Image Sensor	1/2.7" 8Megapixel progressive CMOS
Max. Resolution	3840 (H) × 2160 (V)
ROM	128 MB
RAM	256 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.009 Lux@F2.0
S/N Ratio	>56 dB
Illumination Distance	30 m (98.43 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	1 (IR LED)
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°

#### Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8 mm 3.6 mm
Max. Aperture	F2.0 F2.0
Field of View	2.8 mm: Horizontal 105° × Vertical 56° × Diagonal 125° 3.6 mm: Horizontal 87° × Vertical 47° × Diagonal 104°
Iris Type	Fixed
Close Focus Distance	2.8 mm: 1.0 m (3.3 ft) 3.6 mm: 1.9 m (6.2 ft)
DORI Distance	Lens      Detect      Observe      Recognize      Identify

#### Recommended

	2.8 mm	74.7 m (245.1 ft)	29.9 m (98.1 ft)	14.9 m (48.9 ft)	7.5 m (24.6 ft)
	3.6 mm	106.7 m (350.1 ft)	42.7 m (140.1 ft)	21.3 m (69.6 ft)	10.7 m (35.1 ft)
<b>Smart event</b>					
IVS	Tripwire; intrusion				
<b>Video</b>					
Video Compression	H.265; H.264; H.264B; MJPEG (only supported by the sub stream)				
Smart Codec	Smart H.265+/ Smart H.264+				
Video Frame Rate	Main stream: 3840 × 2160 (1 fps–15 fps) 2688 × 1520 (1 fps–25/30 fps) Sub stream: 704 × 576 (1 fps–25 fps) 704 × 480 (1 fps–30 fps)				
Stream Capability	2 streams				
Resolution	3840 × 2160 (3840 × 2160); 3072 × 2048 (3072 × 2048); 3072 × 1728 (3072 × 1728); 2592 × 1944 (2592 × 1944); 2688 × 1520 (2688 × 1520); 3M (2048 × 1536); 2304 × 1296 (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)				
Bit Rate Control	CBR/VBR				
Video Bit Rate	H.264: 32 kbps–8192 kbps H.265: 12 kbps–8192 kbps				
Day/Night	Auto(ICR)/Color/B/W				
BLC	Yes				
HLC	Yes				
WDR	120 dB				
White Balance	Auto/natural/street lamp/outdoor/manual/regional custom				
Gain Control	Auto/Manual				
Noise Reduction	3D NR				
Motion Detection	OFF/ON (4 areas, rectangular)				
Region of Interest(RoI)	Yes (4 areas)				
Smart Illumination	Yes				
Image Rotation	0°/90°/180°/270° (Supports 90°/270° with 3840 × 2160 resolution and lower.)				
Mirror	Yes				

Privacy Masking 4 areas

### Alarm

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

### Network

Network RJ-45 (10/100 Base-T)

SDK and API Yes

Cyber Security Video encryption; firmware encryption; configuration encryption; Digest; WSSE; account lockout; security logs; IP/MAC filtering; generation and importing of X.509 certification; syslog; HTTPS; 802.1x; trusted boot; trusted execution; trusted upgrade

Protocol IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP ; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; Bonjour

Interoperability ONVIF(Profile S/Profile G/Profile T); CGI; P2P; Milestone; Genetec

User/Host 20

Storage FTP; SFTP; Micro SD Card (support max. 256 GB); NAS

Browser IE  
Chrome  
Firefox

Management Software Smart PSS; DSS; DMSS

Mobile Phone IOS; Android

### Certification

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

### Power

Power Supply 12V DC/PoE (802.3af)

Power Consumption < 5.5W

### Environment

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

Storage Temperature -40°C to +60°C (-40°F to +140°F)

Protection Grade IP67

<b>Structure</b>	
Casing	Metal
Dimensions	166.2 mm × Φ70 mm (6.54" × Φ2.76")
Net Weight	0.48 kg (1.1 lb)
Gross Weight	0.57 kg (1.3 lb)
CPU	Intel Core i5, 64 bits 4 Core Processor
Memory	8 GB
Graphics Card	NVIDIA® GeForce®GT 730
Hard Drive Capacity	200 GB free for DSS Control Client
Ethernet Port	1000 Mbps
<b>Minimum</b>	
CPU	Intel Core i3, 64 bits 4 Core Processor
Memory	4 GB
Graphics Card	Intel® HD Graphics 4400
Hard Drive Capacity	100 GB free for DSS Control Client
Ethernet Port	1000 Mbps
<b>Hardware for Mobile Client</b>	
iPhone	iPhone 5S and above
Android	Resolution: 1280 × 720 and above RAM: 3 GB and above
<b>System</b>	
Main Processor	Intel i5-6600, 64 bits 4 Core Processor
Operating System	Embedded Linux
Memory	8 GB
Motherboard	Embedded board (7 × 24 operation)
Hard Disk Hot swap	Support hot swap and online replacement
Hard Disk Compatibility	SAS/SATA disk
<b>Interface</b>	
Number of Network Ports	4 Ethernet ports (100/1000 Mbps)
RS-485	Reserved
RS-232	Reserved
USB	2 × USB 2.0 on front panel; 2 × USB 3.0 on rear panel
HDMI	3 HDMI ports
VGA	1 VGA port

<b>Storage</b>	
HDD Installation	Support 15 HDDs (3.5") for video or picture storage (8 TB per HDD)
Storage	Up to 200 TB per server
HDD Mode	Single; raid 0/1/5/6/10
Bandwidth of Video Storage per Server	600 Mbps
<b>Other</b>	
Power	Maximum power 315W; stable power 210W
Working Environment Temperature	0°C to 40°C (32°F to 104°F)
Working Environment Humidity	10%–80% (RH) (non-condensation)
Storage Environment Temperature	-20°C to +70°C (-4°F to +158°F)
Storage Environment Humidity	5%–90% (RH) (non-condensation)
Working Altitude	0 m–5000 m (0 ft–16,404.2 ft)
Weight (Without Package)	19.1 kg (42.1 lb)
Dimension	444.8 mm × 133.2 mm × 522.2 mm (17.5" × 5.24" × 20.6")
Installation Method	Standard 19-inch rack mount
Secondary Development	Platform SDK provided
<b>Organization, User and Role</b>	
Organization	10 hierarchies, 999 organizations per hierarchy
Role (User Permission)	100
User	50 online users and 200 total users
User for VDP Mobile APP	500 online users and 5,000 total users
<b>Performance Specification</b>	
Performance Specification	
<b>Total Device</b>	
Total Device	2,000 devices
<b>Video Device and Channel</b>	
Total Video Device and Channel	500 devices; 1,000 channels
Auto-Register	500 devices; 1,000 channels
ONVIF	200 devices; 400 channels
ANPR Device	64 channels (6 pairs for entrance and exit)

Face Recognition Channel	100 channels
Object Detection Channel	20 channels
Heatmap Channel	64 channels
People Counting Channel	100 channels
<b>ACS Device</b>	
Access Control	200 IPs; 512 Doors
VDP	2,000 IPs (Unit VTO no more than 200)
<b>Alarm Device</b>	
Alarm Controller	10 IPs; 100 channels
<b>Media Transmission Server</b>	
Video Input per Server	600 Mbps
Video Output per Server	600 Mbps
<b>Playback and Download</b>	
Playback Bandwidth per Server	100 Mbps
Download Task	5
Maximum Record Plan	100
<b>Alarm</b>	
Alarm Rules	200
<b>Map</b>	
Hierarchy	8 hierarchies
Submap	32 per hierarchy
Map Size of Raster Map	14.7 MB
Spots per Map (e.g. Camera Alarm Input)	Up to 300 (GIS and Raster)
<b>Face Recognition</b>	
Face Library	50
Total Persons for Face Library	5,000
Face Images Imported Each Time	1,000
<b>ANPR</b>	
Vehicle Blocklist	100
<b>Data Information</b>	
Alarm Records	5,000,000 <sup>1</sup>
Face Snapshot Records	5,000,000 <sup>1</sup>
Number Plate Recognition Records	5,000,000 <sup>1</sup>

Violation Records	5,000,000 <sup>1</sup>
Average Speed Records	5,000,000 <sup>1</sup>
People Counting Records	5,000,000 <sup>1</sup>
Heatmap Records	5,000,000 <sup>1</sup>
Video Intercom Records	5,000,000 <sup>1</sup>
Log	5,000,000 <sup>1</sup>
<b>Personnel Management</b>	
Person	5,000
Card	5,000
Face	5,000
Fingerprint	5,000
Total Event	240 per second <sup>2</sup>
<b>Event without Picture</b>	
Alarm without Picture	240 per second <sup>2</sup>
Alarm Controller Event	40 per second <sup>2</sup>
Access Control Event	16 per second <sup>2</sup>
Total Event	240 per second <sup>2</sup>
<b>Event without Picture</b>	
Alarm without Picture	240 per second <sup>2</sup>
Alarm Controller Event	40 per second <sup>2</sup>
Access Control Event	16 per second <sup>2</sup>
<b>Event with Picture (for ANPR)</b>	
ANPR	12 per second (12 per 3 s for entrance and exit ) <sup>2</sup>
<b>Event with Picture (for others)</b>	
Alarm with Picture	40 per second <sup>2</sup>
Face Capture	120 per second <sup>2</sup>
Object Detection	40 per second <sup>2</sup>
<b>Distributed System</b>	
<b>Server Number</b>	
Number of Sub Server	Up to 5
<b>Device and Channel</b>	
<b>Total Device Number</b>	
Total Device Number	5,000 devices



<b>Video Device and Channel</b>	
Total Number of Video Devices and Channels	2,500 devices; 5,000 channels
Auto-register	2,500 devices; 5,000 channels
ONVIF	400 devices; 800 channels
ANPR Device	320 channels
Face Recognition Channel	500 channels
Object Detection Channel	100 channels
Heatmap Channel	320 channels
People Counting Channel	500 channels
<b>ACS Device</b>	
Access Control	500 IPs; 2,500 doors
<b>Event</b>	
Total Event	480 per second <sup>2</sup>
<b>Event without Picture</b>	
Alarm without Picture	480 per second <sup>2</sup>
Access Control Event	96 per second <sup>2</sup>
<b>Event with Picture (for ANPR)</b>	
ANPR Event	120 per second (120 per 3 s for entrance and exit) <sup>2</sup>
<b>Event with Picture (for others)</b>	
Alarm with Picture	120 per second <sup>2</sup>
Face Capture	280 per second <sup>2</sup>
Object Detection	80 per second <sup>2</sup>

## 10-Port Desktop Switch me 8 Port PoE

Data Transmission Port	Port 1–8: 8 × RJ-45 10/100 Mbps (PoE) Port 9: 1 × RJ-45 10/100/1000 Mbps (uplink) Port 10: 1 × SFP 1000 Mbps (uplink)
Power Supply	48 V - 57 V DC
Operating Temperature	-30 °C to +65 °C (-22 °F to +149 °F)
Operating Humidity	5% – 95% (RH)
Power Consumption	Idling: 3 W Full load: 96 W

<b>Performance</b>	
Capacity	7.6 Gbps
Packet Forwarding Rate	4.17 Mbps
Packet Buffer Memory	1 Mbit
MAC Table Size	8K
Communication Standard	IEEE802.3/IEEE802.3u/IEEE802.3X/IEEE 802.3ab/IEEE 802.3z
<b>PoE</b>	
PoE Standard	IEEE802.3af/ IEEE802.3at/ Hi-PoE/ IEEE802.3bt
PoE Power	Port 1-2 ≤ 90 W, Port 3-8 ≤ 30W, total≤ 96 W
Power Consumption Management	Yes
PoE Pin Assignment	1, 2, 4, 5 (V+), 3, 6, 7, 8 (V-)
Long Distance PoE	250 m long distance PoE transmission
<b>General</b>	
Lightning Protection	Air discharge: 8 kV Contact discharge: 6 kV
ESD Protection	Common mode: 4kV Differential mode: 2kV
Net Weight	0.54 kg
Gross Weight	1.35 kg
Product Dimensions	150 mm × 100 mm × 42 mm (5.91" × 3.94" × 1.65")

<b>Transmission Performance:</b>		
<b>Switch power supply voltage 53V. CAT5E/CAT6. Max. DC resistance &lt; 10Ω/100m</b>		
Cable(m)	Load Capacity(W)	Bandwidth(Mbps)
<b>IEEE802.3bt 90W</b>		
100	71.3	100
150	62	10
200	51	10
250	40	10
<b>Hi-PoE 60W</b>		
100	53	100
150	50	10
200	47	10

250	37	10
IEEE802.3at 30W		
100	25.5	100
150	25.5	10
200	25.5	10
250	25.5	10

## ANPR Kamera

Basic	
Illuminator Number	6 IR illuminators, brightness adjustable
Image Sensor	1/2.8" CMOS
Image Resolution	1920 × 1080 (OSD black strip excluded)
Video Resolution	Main stream: 1080P (1920 × 1080)/720P (1280 × 720) Sub stream: 720P (1280 × 720)/D1 (704 × 576, 704 × 480)/CIF (352 × 288, 352 × 240)
Video Frame Rate	PAL: Main stream (1920 × 1080@25fps, 1280 × 720@25fps), sub stream (1280 × 720@25fps, 704 × 576@25fps, 352 × 288@25fps) NTSC: Main stream (1920 × 1080@30fps, 1280 × 720@30fps), sub stream (1280 × 720@30fps, 704 × 408@30fps, 352 × 240@30fps)
Bit Rate	H.264B: 32Kbps–32768Kbps H.264M: 32Kbps–32768Kbps H.264H: 32Kbps–32768Kbps H.265: 32Kbps–32768Kbps MJPEG: 512Kbps–65536Kbps
Video Compression	H.264B/H.264M/H.264H/H.265/MJPEG
Picture Encoding Format	JPEG
Noise Reduction	3DNR
White Balance	Full auto, auto color temperature range, customized color temperature
Electronic Shutter Speed	1/50–1/10000, auto or manual
WDR	96 db
Edge Enhancement	Yes
Exposure Mode	Full auto, customized auto, customized
Iris Control	Auto iris (W: 1.6–T: 3.3)
Performance	

Trigger Mode	Video detection; I/O coil; video detection and I/O coil
Shutter	Single shutter
Storage	1 built-in TF card port. Supports Kingston 16G, 32G, 64G, and 128G; Dahua 16G, 32G, 64G, and 128G; SanDisk 16G, 32G, 64G, and 128G
Image Tampering Prevention	Yes. Video/picture can be checked through watermark and verification
Field of View	Horizontal: 108.1° (W)–30.3° (T); Vertical: 56.3° (W)–17.1° (T); Diagonal: 130.9° (W)–34.8° (T)
Illumination Distance	12 m (39.37 ft)
Capture Range	3 m–6 m (9.84 ft–19.69 ft)
Detected Lane Width	3 m –4 m (9.84 ft–13.12 ft)
Min Ambient Illuminance	0.002 Lux. Illuminator is designed with the camera for illumination
Max Speed that the Camera Detects	30 km/h
Alarm Event	Alarm in the case of no storage card, not enough storage space, storage card error, network disconnection, IP conflict, and illegal access
Security	Authorized username and password, MAC address binding, HTTPS encryption, IEEE 802.1x, and network access control
OSD Overlay	Supports overlay of time, address (position of channel), lane (number/direction), plate (number and color), vehicle (speed, color, type)
Automatic Network Replenishment (ANR)	Yes. Platform/FTP
Auto Registration	Yes
<b>Intelligence</b>	
Vehicle Detection	Vehicle capture rate $\geq 99\%$
Vehicle Recognition	Supports recognizing vehicle type, vehicle logo, vehicle series, vehicle color, license plate, features of driver and front-seat passenger, and vehicle without plate. Vehicle recognition rate $\geq 95\%$
Video Metadata	Yes
Intelligent Track Frame	Intelligent frame display. Supports displaying vehicle plate and vehicle path
<b>Port</b>	
Lens Mount	$\Phi 14$

Analog Output	1
Network	1 100/1000M Ethernet port (RJ-45)
RS-485	2
RS-232	1
Alarm Input	3, optocoupler input (on-off input)
Alarm Output	3 ports. 2-channel optocoupler output, 1-channel relay output, which can connect to devices such as barriers
Audio Input	1-channel RCA port
Audio Output	1-channel RCA port
<b>General</b>	
Power Supply	12V DC, 24V AC, PoE+
Power Consumption	<20W
Operating Temperature	-30°C to +65°C (-22°F to +149 °F)
Operating Humidity	10%RH-90%RH (no condensation)
Casing	Metal and plastic
Protection Grade	IP67
Dimensions	486.7 mm × 124.3 mm × 185.5 mm (19.16" × 4.89" × 7.30") (L × W × H)
Net Weight	1.9 kg (4.19 lb)
Gross Weight	3.3 kg (7.28 lb)
Installation	Installed with bracket
Lens	3.2 mm -10.5 mm
<b>Certification</b>	
CE, FCC	Yes
RoHS	Yes

## Switch 24-port 10 Poe 100 Mbps + 2-port Gigabit I Menaxhueshem

<b>Performance</b>	
Layer	Layer 2
Managed	Yes
Switching Capacity	8.8 Gbps
Packet Forwarding Rate	6.55 Mpps
Packet Buffer Memory	2.75 Mbit
MAC Table Size	4K

Communication Standard	IEEE802.3; IEEE802.3u; IEEE802.3x; IEEE 802.3ab; IEEE 802.3z
<b>Hardware Feature</b>	
Standard Power Supply	Yes
PoE	Yes
Ethernet Port	24
Optical Port	2
Ethernet Port Rate	100 Mbps
Optical Port Rate	1 Gbps
Number of Bussiness Card Slots	Port 1-24: 24 × RJ-45 10 M/100 M (PoE) Port 25-26: 2 × RJ-45 10 M/100 M/1000 M (uplink) Port 25-26: 2 × SFP 1000 M (uplink) (combo)
Debugging	Console × 1
Power Supply	100V–240V AC
Operating Temperature	–10 °C to +55 ° (14 °F to 131 °F)
Operating Humidity	10% RH–90% RH
Power Consumption	Idling: 10W Full load: 240W
<b>PoE</b>	
PoE Standard	IEEE802.3af/ IEEE802.3at/ Hi-PoE/IEEE802.3bt
PoE Budget	Port 1-2 ≤ 90W, Port 3-24 ≤ 30W, total ≤ 240W
PoE Pin Assignment	1, 2, 4, 5 (V+), 3, 6, 7, 8 (V-)
PoE Management	Power consumption management Power on and power off Power down for overload Green PoE Legacy support
Long Distance PoE Transmission	250 m long-distance power supply
<b>Function</b>	
Spanning Tree Protocol	IEEE 802.1d (STP); 802.1w (RSTP)
VLAN	IEEE802.1q Standard VLAN
Flow Control	Support IEEE 802.3x (full duplex flow control) and back pressure flow control (half duplex)
Link Aggregation	Static; LACP
Port Mirroring	One-to-one; multiple-to-one

Multicast	GMP snooping based on port
DHCP	DHCP client
Security	Hardware supports IP and MAC binding based on port, MAC filtering based on port, and IEEE802.1x port authentication
QoS	High and low priority WRR 802.1P DSCP Priority based on protocol
<b>General</b>	
ESD	Air discharge: 8kV Contact discharge: 6kV
Thunder-proof	Common mode: 4kV Differential mode: 2kV
Dimensions	440 mm × 300 mm × 44 mm (17.32" × 11.81" × 1.73") (L × W × H)
Packaging Dimensions	Packing box: 527 mm × 412 mm × 110 mm (20.75" × 16.22" × 4.33") (L × W × H) Protective box: 584 mm × 549 mm × 446 mm (22.99" × 21.61" × 17.56") (L × W × H)

## Network PTZ Kamera

<b>Camera</b>	
Image Sensor	1/2.8" CMOS
Pixel	2 MP
Max. Resolution	1920 (H) × 1080 (V)
ROM	256 MB
RAM	1 GB
Electronic Shutter Speed	1/1 s–1/30000 s
Scanning System	Progressive
Min. Illumination	Color: 0.005 lux@F1.6 B/W: 0.0005 lux@F1.6 0 lux (IR light on)

Illumination Distance	100 m (328.08 ft)			
Illuminator On/Off Control	Zoom Prio; Manual; Smart IR; Off			
Illuminator Number	6 (IR light)			
<b>Lens</b>				
Focal Length	4.8 mm–120 mm			
Max. Aperture	F1.6–F3.5			
Field of View	H: 62.8°–2.6°; V: 33.2°–1.7°; D: 67.3°–3.9°			
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 m (5429.79 ft)	654 m (2145.67 ft)	331 m (1085.96 ft)	165 m (541.34 ft)
<b>PTZ</b>				
Pan/Tilt Range	Pan: 0° to 360° endless Tilt: –15° to +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			
Preset	300			
Tour	8 (up to 32 presets per tour)			
Pattern	5			
Scan	5			
Speed Adjustment	Yes			
Power-off Memory	Yes			
Idle Motion	Preset; Pattern; Tour; Scan			
Protocol	DH-SDPelco-P/D (auto recognition)			
<b>General Intelligence</b>				
Event Trigger	Motion detection, video tampering, scene changing, network disconnection, IP address conflict, illegal access, and storage anomaly			



IVS	Object abandoned; object missing
<b>Artificial Intelligence</b>	
Smart Capture	Support human, motor vehicle and non-motor vehicle image capture.
Perimeter Protection	Tripwire and intrusion. Support alarm triggering by target types (human and vehicle). Support filtering false alarms caused by animals, rustling leaves, bright lights, etc.
Face Detection	Yes
SMD PLUS	Yes
<b>Video</b>	
Compression	Smart H.265+; H.265; Smart H.264+; H.264B; H.264M; H.264H; MJPEG (Sub Stream)
Streaming Capability	3 streams
Resolution	1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240)
Frame Rate	Main stream: 1080p/1.3 M/720p (1–50/60 fps) Sub stream 1: D1/CIF (1–25/30 fps) Sub stream 2: 1080 p/1.3M/720p/D1/CIF (1–25/30 fps)"
Bit Rate Control	CBR; VBR
Bit Rate	Default resolution of the main stream: H.264: 32 Kbps–8192 Kbps H.265: 32 Kbps–8192 Kbps
Day/Night	Auto (ICR); Color; B/W
BLC	Yes
WDR	120 dB
HLC	Yes
White Balance	Auto; Indoor; Outdoor; Tracking; Manual; Sodium Lamp; Natural Light; Street Lamp
Gain Control	Auto; Manual
Noise Reduction	2D; 3D
Motion Detection	Yes
Region of Interest (RoI)	Yes
Defog	Electronic
Flip	180°
Privacy Masking	Up to 24 areas, and up to 8 areas in the same view

S/N Ratio	≥ 55 dB
<b>Audio</b>	
Compression	G.711a; G.711Mu; G.726; AAC; MPEG2-Layer2; G722.1
<b>Network</b>	
Ethernet	RJ-45 (10/100 Base-T)
Protocol	HTTP; HTTPS; IPv4; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; IPv6; 802.1x; Qos; FTP; UPnP; ICMP; SNMP; SNMP v1/v2c/v3 (MIB-2); IGMP; ARP; RTCP; RTP; PPPoE; RTMP; TCP
Interoperability	ONVIF (Profile S&G&T); CGI
Streaming Method	Unicast; Multicast
User/Host	20 (total bandwidth: 64 MB)
Storage	Imou Cloud; FTP; Micro SD card (max. 512 GB); NAS
Browser	IE7 and later versions; Chrome; Firefox; Safari
Management Software	Smart PSS; DSS; IVSS; Configtool; NVR; Smart Player; Imou
Mobile Phone	IOS; Android
<b>Certification</b>	
Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014 UL: UL60950-1+CAN/CSA C22.2, No. 60950-1
<b>Port</b>	
Audio Input	1
Audio Output	1
Alarm Input	2 (on-off value input: 0–5 VDC)
Alarm Output	1
Alarm Linkage	Capture; preset; tour; pattern; recording; triggering on-off value output; audio; sending email
Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; encoder state detection; memory card state detection; memory space detection; power exception detection
<b>Power</b>	
Power Supply	12 VDC/3A±10% PoE+ (802.3at)
Power Consumption	Basic: 9W Max.: 23W

Environment	
Operating Temperature	-40°C to +70°C (-40°F to +158°F)
Operating Humidity	≤ 95%
Protection	IP66; TVS 6000V lightning proof; surge protection; voltage transient protection
Structure	
Casing	Aluminum alloy ADC12
Dimensions	160 mm × Φ295 mm (6.30" × Φ11.61")
Net Weight	3 kg (6.61 lb)
Gross Weight	4.2 kg (9.26 lb)

## Hard Disk

Specifications 20TB

Standard Model Numbers

1 ST8000VX004 ST8000VX0022 ST6000VX001 ST6000VX0023 ST4000VX007

SkyHawk™ Health Management Included Yes Yes Yes Yes Yes

Interface SATA 6 Gb/s SATA 6 Gb/s SATA 6 Gb/s SATA 6 Gb/s SATA 6 Gb/s

Recording Technology CMR CMR CMR CMR CMR

Features and Performance

Drive Bays Supported Up to 16 Up to 16 Up to 16 Up to 16 Up to 16

Cameras Supported Up to 64 Up to 64 Up to 64 Up to 64 Up to 64

RV Sensors Yes Yes Yes Yes Yes

Max Sustained Transfer Rate OD (MB/s) 210MB/s 210MB/s 180MB/s 195MB/s 190MB/s

Cache (MB) 256 256 256 256 64

Reliability/Data Integrity

Tarnish Resistant Yes Yes Yes Yes Yes

Load/Unload Cycles 300,000 300,000 300,000 300,000 300,000

Non-recoverable Read Errors Rate, Max 1 per 10E15 1 per 10E15 1 per 10E14 1 per 10E15 1 per 10E14

Power-On Hours per year 8,760 8,760 8,760 8,760 8,760

Workload Rate Limit (WRL)

2 180 180 180 180 180

Mean Time Between Failures (MTBF) (hours) 1,000,000 hr 1,000,000 hr 1,000,000 hr 1,000,000 hr 1,000,000 hr

Warranty, Limited (years)

Power Management

Startup Current, Typical (12V, A) 1.8 2 1.8 2 1.8

Average Operating Power (W) 8.73 W 9 W 5 W 9 W 5.5 W

Idling Average (W) 7.06 W 7.6 W 3.4 W 7.2 W 3.2 W

Standby Mode/Sleep Mode, Typical (W) 0.96/0.96 0.6/0.6 0.25/0.25 0.6/0.6 0.25/0.25

Voltage Tolerance (5 V) +10/-5% ±5% ±5% ±5% ±5%

Voltage Tolerance (12 V) ±10% ±10% ±10% ±10% ±10%

Environmental/Temperature

Operating (ambient, min °C) 5 5 0 5 0

Operating (drive case, max °C)

4 70 70 70 70 70

Non-operating (ambient, min °C) -40 -40 -40 -40 -40

Physical

Height (mm/in, max) 26.11 mm/1.028 in 26.11 mm/1.028 in 26.11 mm/1.028 in 26.11 mm/1.028 in 26.11 mm/1.028 in

Width (mm/in, max) 101.85 mm/4.01 in 101.85 mm/4.01 in 101.85 mm/4.01 in 101.85 mm/4.01 in 101.85 mm/4.01 in

Depth (mm/in, max) 146.99 mm/5.787 in 146.99 mm/5.787 in 146.99 mm/5.787 in 146.99 mm/5.787 in 146.99 mm/5.787 in

Weight (lb/g) 716 g/1.579 lb 780 g/1.72 lb 610 g/1.345 lb 705 g/1.55 lb 608 g/1.34 lb

Carton Unit Quantity 20 20 20 20 20

## Bullet Network Kamera

### Technical Specification

#### Camera

Image Sensor 1/2.9" 6Megapixel progressive scan CMOS

Effective Pixels 3072(H)x2048(V)

RAM/ROM 512MB/32MB

Scanning System Progressive

Electronic Shutter Speed Auto/Manual, 1/3~1/100000s

#### Minimum Illumination

0.03Lux/F1.4 (Color,1/3s,30IRE)

0.3Lux/F1.4 (Color,1/30s,30IRE)

0Lux/F1.4(IR on)

S/N Ratio More than 50dB

IR Distance Distance up to 50m (164ft)

IR On/Off Control Auto/ Manual

IR LEDs 4

Lens Lens Type Motorized/ Auto Iris(DC)

Mount Type Board-in

Focal Length 2.7mm~13.5mm

Max. Aperture F1.4

Angle of View H:91°~27° , V:58°~18°

Optical Zoom 5x

Focus Control Motorized

Close Focus Distance 0.3m

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

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

Intelligence

IVS Tripwire, Intrusion, Object Abandoned/Missing

Advanced Intelligent Functions Face Detection

Video

Compression H.265+/H.265/H.264+/H.264

Streaming Capability 3 Streams

Resolution

6M(3072×2048)/5M(3072×1728)/ 5M(2592×1944)/

4M(2688×1520)/ 3M(2048×1536)/ 3M(2304×1296)/

1080P(1920×1080)/1.3M(1280×960)/

720P(1280×720)/ D1(704×576/704×480)/

VGA(640×480)/ CIF(352×288/352×240)

Frame Rate

Main Stream: 6M(1~20fps)/4M(1~25/30fps)

Sub Stream: D1(1~25/30fps)

Third Stream: 720P(1~25/30fps)

Bit Rate Control CBR/VBR

Bit Rate H.264: 24K ~ 10240Kbps H.265: 14K ~ 9984Kbps

Day/Night Auto(ICR) / Color / B/W

BLC Mode BLC / HLC / WDR

White Balance Auto/Natural/Street Lamp/Outdoor/Manual

Gain Control Auto/Manual

Noise Reduction 3D DNR

Motion Detetion Off / On (4 Zone, Rectangle)

Region of Interest Off / On (4 Zone)

Electronic Image Stabilization

(EIS) N/A

Smart IR Support

Defog N/A

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; UDP; SMTP;

FTP; DHCP; DNS; DDNS; PPPOE; IPv4/v6; QoS;

UPnP;NTP; Bonjour; 802.1x; Multicast; ICMP;

IGMP; SNMP

Interoperability ONVIF, PSIA, CGI

Streaming Method Unicast / Multicast

Max. User Access 10 Users /20 Users

Edge Storage

NAS

Local PC for instant recording

Mirco SD card 128GB

Web Viewer IE, Chrome, Firefox, Safari

Management Software Smart PSS, DSS, Easy4ip

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 1/1 channel In/Out

RS485 N/A

Alarm 2 channel In: 5mA 5VDC

1 channel Out: 300mA 12VDC

## Electrical

Power Supply DC12V, PoE (802.3af)(Class 0)

Power Consumption <12.95W

Eco Savvy 3.0 | DH-IPC-HFW5631E-ZE

## Ordering Information

Type Part Number Description

6MP camera

DH-IPC HFW5631EP-ZE 6MP IR Bullet Network Camera, WDR, PAL

DH-IPC HFW5631EN-ZE

6MP IR Bullet Network Camera, WDR,

NTSC

IPC-HFW5631EPZE 6MP IR Bullet Network Camera, WDR, PAL

IPC-HFW5631ENZE

6MP IR Bullet Network Camera, WDR,

## **Bullet Network Kamera me Alarm te Integuar**

Camera



Image Sensor	1/2.7"5Megapixel progressive CMOS				
Max. Resolution	2592 (H) × 1944 (V)				
ROM	128 MB				
RAM	512 MB				
Scanning System	Progressive				
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s				
Min. Illumination	0.003 Lux @ F1.0				
S/N Ratio	> 56 dB				
Illumination Distance	40 m (131.2 ft)				
Illuminator On/Off Control	Auto/Manual				
Illuminator Number	2 (Warm light)				
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°				
<b>Lens</b>					
Lens Type	Fixed-focal				
Mount Type	M12				
Focal Length	2.8 mm; 3.6 mm; 6 mm				
Max. Aperture	F1.0				
Field of View	2.8 mm: Horizontal 98° × Vertical 71° × Diagonal 129° 3.6 mm: Horizontal 77° × Vertical 56° × Diagonal 101° 6 mm: Horizontal 53° × Vertical 40° × Diagonal 66°				
Iris Type	Fixed				
Close Focus Distance	2.8 mm: 1.2 m (3.9 ft) 3.6 mm: 2.1 m (6.9 ft) 6 mm: 4.5 m (14.8 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	67.4 m (221.1 ft)	27 m (88.6 ft)	13.5 m (44.3 ft)	6.7 m (22.0 ft)
	3.6 mm	80.0 m (262.5 ft)	32.0 m (105.0 ft)	16.0 m (52.5 ft)	8.0 m (26.2 ft)
	6 mm	120.0 m (393.7 ft)	48.0 m (157.5 ft)	24.0 m (78.7 ft)	12.0 m (39.4 ft)

<b>Professional, intelligent</b>	
IVS (Perimeter Protection)	Tripwire; intrusion (support the classification and accurate detection of vehicle and human)
Intelligent Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos.
<b>Video</b>	
Video Compression	H.265; H.264; H.264H; H.264B; MJPEG (only supported by the sub stream)
Smart Codec	Smart H.265+/Smart H.264+
Video Frame Rate	Main stream: 2592 × 1944 @1-20 fps/ 2688 × 1520 @1-25/30 fps Sub stream: 704 × 576 @1-25 fps/704 × 480 @ 1-20fps Third stream: 1920 × 1080 @1-25/30 fps
Stream Capability	3 streams
Resolution	5M (2592 × 1944); 4M (2688 × 1520); 4M (2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (354 × 288/354 × 240)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 32 kbps–8192 kbps H.265: 12 kbps–8192 kbps
Day/Night	Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
Scene Self-adaptation (SSA)	Yes
White Balance	Auto/natural/street lamp/outdoor/manual/regional custom
Gain Control	Auto/Manual
Noise Reduction	3D NR
Motion Detection	OFF/ON (4 areas)
Region of Interest (RoI)	Yes (4 areas)
Smart Illumination	Yes
Image Rotation	0°/90°/180°/270° (Support with 2592×1944 resolution and lower)
Mirror	Yes
Privacy Masking	4 areas

<b>Audio</b>	
Built-in MIC	Yes
Audio Compression	PCM; G.711a; G.711Mu; G.726; G.723
<b>Alarm</b>	
Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; scene changing; audio detection; voltage detection; external alarm; SMD; safety exception; light alarm; sound alarm (11 built-in sounds and custom voices importing)
<b>Network</b>	
Network	RJ-45 (10/100 Base-T)
SDK and API	Yes
Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; SNMP
Cyber Security	Video encryption; firmware encryption; configuration encryption; Digest; WSSE; account lockout; security logs; IP/MAC filtering; generation and importing of X.509 certification; syslog; HTTPS; 802.1x; trusted boot; trusted execution; trusted upgrade
Interoperability	ONVIF( Profile S/Profile G/Profile T); CGI; Milestone; Genetec; P2P
User/Host	20 (Total bandwidth: 80 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 G); NAS
Browser	IE: IE8 and later Chrome Firefox Safari: Safari 12 and later
Management Software	Smart PSS; DSS; DMSS
Mobile Phone	IOS; Android
<b>Certification</b>	
Certification	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B
<b>Port</b>	
Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)
Alarm Input	1 channel in: 5mA 3V–5V DC

Alarm Output	1 channel out: 300mA 12V DC
<b>Power</b>	
Power Supply	12V DC/PoE (802.3af)
Power Consumption	Basic power consumption: 2W (12V DC); 2.6W (PoE) Max. power consumption (H.265 + warm light + IVS + sound alarm + red and blue lights flash): 7.5W (12V DC); 8.8W (PoE)
<b>Environment</b>	
Operating Conditions	-40°C to +60°C (-40°F to +140°F)/Less than 95% RH
Storage Conditions	-40°C to +60°C (-40°F to +140°F)
Protection Grade	IP67
<b>Structure</b>	
Casing	Metal + plastic
Dimensions	288.4 mm × 94.4 mm × 84.7 mm (11.4" × 3.7" × 3.3") (L × W × H)
Net Weight	1.0 kg (2.2 lb)
Gross Weight	1.23 kg (2.7 lb)

## Media Konverter Gigabit

Item	Specification
Standards	IEEE802.3 , IEEE802.3u ,IEEE802.3x
Data rate	10/100/1000Mbps
Operating wavelength	850±20nm, 1310±25nm, 1550±25nm
Transmit distance	Multi-mode: 2km,5km Single-mode: 25km,40km,60km,80km,120km
Fiber interface	SC,FC,ST Fiber converter
Fiber type	Multi-mode: 50/125um or 62.5/125um Single-mode: 9/125um
RJ45 port	UTP-1000ohm Cat.5 cable up to 20km
Internal power supply	AC100~240V/50~60Hz/0.2A for standalone

Power consumption	5W
Operation temperature	0 ~ 60 °C
Storage temperature	10 ~ 70 °C
Humidity	5 ~ 95%(Non-condensing)
EMI and safety	CE,FCC Class A
Dimension	100(W)*80(D)*25(H)mm (2U)
Weight	0.2kg

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Operation temperature	0 ~ 60 °C
Storage temperature	10 ~ 70 °C
Humidity	5 ~ 95%(Non-condensing)
EMI and safety	CE,FCC Class A
Dimension	100(W)*80(D)*25(H)mm (2U)
Weight	0.2kg

## Bazament Per Kamera

<b>Model</b>	<b>DH-PFA134</b>
<b>General</b>	
Material	Aluminum & SECC
Dimension	Φ90.0mmx35.0mm (Φ3.54"x1.38")
Inch Thread	M20(G1/2")
Load Bearing	1.0kg(2.2lb)
Weight	0.26kg(0.57lb)
Color	White
Operating Temperature	-40°C~+60°C(-40°F~+140°F)
Humidity	0~90% RH
Applicable Model	Please see "Accessory Selection"