IKEGAWA

IK-B4731AT-F

Thermal Imaging Security Bullet Network Camera

Key Features

- VOx uncooled focal plane detector with 384×288 resolution

- NETD ≤ 40mK

- 9/15/25/35/50mm fixed thermal lens

- Support human/vehicle detection

- Support fire point detection and smoker detection

- Intelligent Analytics: intrusion, single line crossing, double line crossing, loitering, wrong-way, people counting, enter area, leave area

- Support 3 temperature measurement rule types (spot, line, area)

- Temperature range: -20°C to 150°C (-4°F to 302°F), Accuracy: ±2°C / ±2%

- Support 12VDC/24VAC/PoE power supply

- NDAA Compliance, IP66

Specification

Thermal Module

Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays
Resolution	Sensor is 384×288. Image can be scaled up to 1280×720
Pixel Pitch	17 µm
NETD	≤ 40mK
Spectral Range	8 to 14 µm
Focus Control	Fixed lens (Focus-Free)
Focal Length	9 mm, 15 mm, 25 mm, 35 mm, 50 mm
Aperture	F1.0
Field of View (FOV)	9 mm, H: 37°, V: 28° 15 mm, H: 28°, V: 21° 25 mm, H: 14°, V: 11° 35 mm, H: 10°, V: 8° 50 mm, H: 7.4°, V: 5.6°

Intelligent Analytics

Smart Detection	Human and Vehicle detection, Fire point detection, and Smoker detection.
Intelligent Analysis	Intrusion, Single line crossing, Double line crossing, Loitering, Wrong-way, Enter area, and Leave area (these functions support accurate detection of human / vehicles)
People counting	Support

Thermal Function

Temperature Range	-20°C to 150°C (-4°F to 302°F) or 0°C to 550°C (32°F to 1022°F)
Accuracy	±2°C / ±2%
Temperature Detection	3 temperature measurement rule types, 20 rules in total, 1 full screen, 19 others (spot, areas, line).
Temperature Alarm	Temperature difference alarm, Threshold alarm, Temperature rise alarm
Temperature Display	Display in the lower left corner; follow the cursor display of the highest temperature, lowest temperature or average temperature
Response Time	≤ 30ms

Video and Audio

Main Stream	1280×720, 704×576, 384×288 @25fps
Sub Stream	704×576, 384×288, 352×240 @25fps
Bit Rate Control	CBR/VBR
Bit Rate	Main stream: 100 Kbps to 8 Mbps, Sub stream: 100 Kbps to 6 Mbps
Region of Interest	Off/On (8 Zone, Rectangle)
Audio Compression	G.711 A-law, G.711 µ-law, PCM
Audio Bit Rate	64 Kbps (G.711), 128 Kbps (PCM)

Image

Image Setting	Brightness, Contrast, Sharpness
Mirror	Horizontal / Vertical / Horizontal + Vertical
Pseudo-color Setting	Up to 17 colors (White-hot / Black-hot / Rainbow / Iron red / HSV /Bone / Cool / Copper / Fire-hot / Pink / Spring / Summer / Autumn / Winter / Jet / Flame / Rose -Bengal)
FFC Control	Auto / Manual
Noise Reduction	2D/3D DNR
OSD	Up to 8 OSD
Privacy Masking	Up to 4 areas
Event	
Alarm Triggers	IVS, Temperature anomaly, Motion detection, Alarm Input, Disk alarm, Network alarm, Abnormal sound detection
Alarm Events	Alarm record, Alarm output, FTP upload, SMTP upload, Audible alarm output
Network	
Protocols	IPv4/IPv6, HTTP/HTTPS, DNS, DDNS, DHCP, PPPoE, RTSP/ RTCP/RTP, TCP/UDP, NTP, ARP, UPnP, FTP, SMTP, QoS, ICMP, IGMP, SMTP, 802.1x, SNMP, Multicast
Interoperability	ONVIF (Profile S/T/G/M), SDK, CGI
User/Host Level	Up to 10 users, 3 levels: Administrator, Operator, Media user
Security	IP address filter, encrypted HTTPS, Illegal login lock, IEEE 802.1x
Web Viewer	<IE11, Chrome, Firefox, Microsoft Edge
Interface	
Network Interface	1 Ethernet (10/100 Base-T) RJ-45 Connector
Built-in Microphone	Support
Built-in Speaker	Support
Audio Interface	1ch Audio In, 1ch Audio Out
Alarm Interface	2ch Alarm In, 2ch Alarm Out
BNC Interface	1ch (CVBS output)
Control Interface	1ch RS-485
SD Card Slot	Built-in, up to 1TB
Reset Button	Support
General	
Language	English, Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian. Default: English
Power Supply	12VDC/24VAC/PoE (802.3af)
Power Consumption	Max 4.5W
Working Temperature/Humidity	-40°C to 60°C (-40°F to 140°F), Humidity: ≤90% RH (non-condensing)
Operating Humidity	0 to 90% RH
Certifications	CE-EMC (EN 55032:2015+A1:2020, EN 55035:2017+A11:2020, EN 50130-4:2011+A1:2014, EN IEC 61000-6-3:2021, EN IEC 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A2:2021) FCC (FCC 47 CFR 15, Subpart B, ANSI C63.4-2014)

Ingress Protection	IP66
Material	Metal
Dimensions	φ120.5 × 315.9 ~ 352.6 mm (φ4.74" × 12.44" ~ 13.88")
Net Weight	1.62 kg (3.57 lb) with 9mm lens

DRI Distance Table

Focal Length	9 mm	15 mm	25 mm	35 mm	50 mm
Detection Distance (Humans: 1.8×0.5m)	265 m (869.4 ft)	441 m (1,446.9 ft)	735 m (2,411.4 ft)	1,029 m (3,376.0 ft)	1,471 m (4,826.1 ft)
Detection Distance (Vehicles: 4×1.5m)	812 m (2,664 ft)	1,353 m (4,439 ft)	2,255 m (7,398.3 ft)	3,157 m (10,357.6 ft)	4,510 m (14,796.6 ft)
Recognition Distance (Humans: 1.8×0.5m)	66 m (216.5 ft)	110 m (360.9 ft)	184 m (603.7 ft)	257 m (843.2 ft)	368 m (1,207.4 ft)
Recognition Distance (Vehicles: 4×1.5m)	203 m (666 ft)	338 m (1,109 ft)	564 m (1,850.4 ft)	789 m (2,588.6 ft)	1,127 m (3,697.5 ft)
Identification Distance (Humans: 1.8×0.5m)	33 m (108.3 ft)	55 m (180.4 ft)	92 m (301.8 ft)	129 m (423.2 ft)	184 m (603.7 ft)
Identification Range (Vehicles: 4×1.5m)	101 m (331.4 ft)	169 m (554.5 ft)	282 m (925.2 ft)	395 m (1,296 ft)	564 m (1,850.4 ft)

Note: The table is only for reference and the performance may vary according to different environment.
Note: The optimal detection, recognition, and identification distances are calculated according to Johnson's Criteria.
Detection Range: In order to distinguish an object from the background, the object must be covered by 1.5 or more pixels.
Recognition Range: In order to classify the object (animal, human, vehicle, etc.), the object must be covered by 6 or more pixels.
Identification Range: In order to identify the object and describe it in details, the object must be covered by 12 or more pixels.
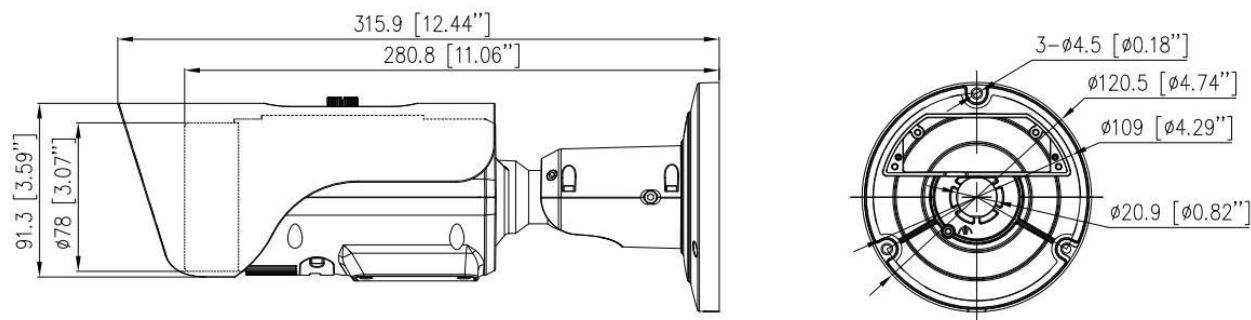
Smart Detection Range Table

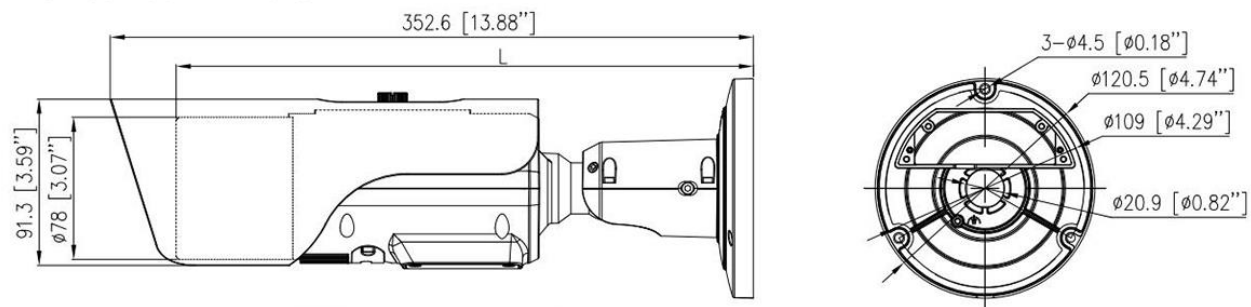| Focal Length	9 mm	15 mm	25 mm	35 mm	50 mm
Temperature Measurement (Object: 1 × 1m)	106 m (347.8 ft)	176 m (577.4 ft)	294 m (964.6 ft)	412 m (1,351.7 ft)	588 m (1,929.1 ft)
Temperature Measurement (Object: 0.2 × 0.2m)	21 m (68.9 ft)	35 m (114.8 ft)	59 m (193.6 ft)	82 m (269 ft)	118 m (616.8 ft)
Fire Detection (Object: 1 × 1m)	265 m (869.4 ft)	441 m (1,446.9 ft)	735 m (2,411.4 ft)	1,029 m (3,376 ft)	1,471 m (4,826.1 ft)
Fire Detection (Object: 0.2 × 0.2m)	53 m (173.9 ft)	88 m (288.7 ft)	147 m (482.3 ft)	206 m (675.9 ft)	294 m (964.6 ft)

Note: The table is for reference only. The distances within it are subject to actual conditions including atmospheric conditions, target size, the installation site, and more.

Dimensions (mm)

F9/F15 mm Lens

F25/F35/F50 mm Lens

Accessories

Optional:

IK-AJ45G Junction Box	IK-AP01A Pole Mount	IK-ACR02A Corner Mount