Thermal Imaging Camera

Temperature detection

256 × 192 resolution

−20˚C to 150˚C (−4˚F to 302˚F)

VCA AI DEEP Learning

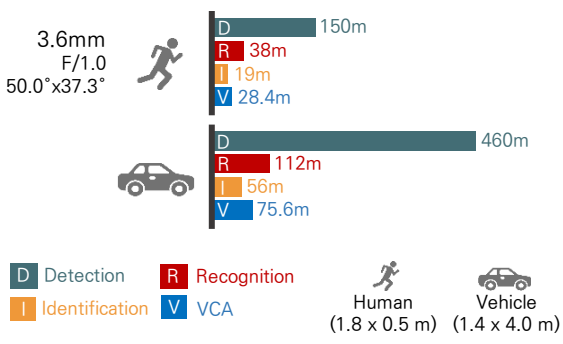
line crossing, intrusion,

region entrance, and region exiting

Applicable to a wide variety of environments

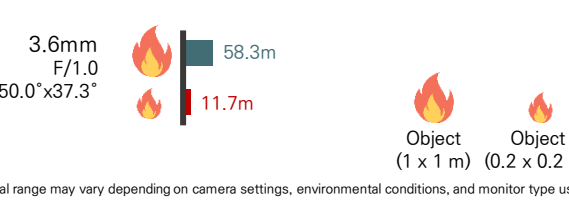
construction sites, manufacturing workshops, parking lots, etc

Lens DRI



* Actual range may vary depending on camera settings, environmental conditions, and monitor type used.

Fire Detection Distance



* Actual range may vary depending on camera settings, environmental conditions, and monitor type used.

VIVAKO

Thermal Imaging Camera
VVK-FD4F

ONVIF Profile S Compliant

Feature

- 256 × 192 resolution, 12 μm
- NETD < 40 mK (25°C, F1.0)
- Video content analysis: vehicle/human classification
- -20°C to 150°C (-4°F to 302°F), ± 8°C (± 14.4°F)
- Fire detection & VCA AI DEEP Learning
- 3 temperature measurement rule types, 21 rules in total
- DDE, AGC, 3D DNR
- 2 Alarm IN/OUT

Dimension

(mm)

Specification

Thermal Module			
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays, 256 x 192, 12 μm Pixel Pitch		
Spectral Range	8 μm ~ 14 μm		
NETD	< 40 mK (25°C, F1.0)		
Focal Length	3.6 mm		
Field of View	50.0° x 37.3°	Aperture	F1.0
Digital Zoom	x2, x4		
Optical Module			
Image Sensor	1/2.7" Progressive Scan CMOS, 2688 × 1520		
Min. Illumination	Color: 0.0176 Lux @ (F2.25, AGC ON) B/W: 0.0035 Lux @ (F2.25, AGC ON)		
Shutter Speed	1 s to 1/100,000 s		
Focal Length	4.3 mm		
Field of View	84.0° x 43.1°	Aperture	F1.6
WDR	120 dB		
Smart Function			
VCA	4 VCA rule types (line crossing, intrusion, region entrance, and region exiting), up to 8 VCA rules in total		
Temperature Measurement	3 temperature measurement rule types, 21 rules in total (10 points, 10 areas, and 1 line)		
Temperature Range	-20°C to 150°C (-4°F to 302°F)		
Temperature Accuracy	± 8°C (± 14.4°F)		
Network			
Protocols	CGI, RTSP, IPv4/IPv6, HTTP, HTTPS, 802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, PPPoE, Bonjour, SFTP, SRTP		
ONVIF	Yes		
Video and Audio			
Video Compression	Main Stream: H.265/H.264 Sub-Stream: H.265/H.264/MJPEG		
Main Stream	Thermal: 30 fps (1280 x 720, 704 x 576, 640 x 512, 320 x 240) Optical: 30 fps (2688 x 1520, 1920 x 1080, 1280 x 720)		
Sub-stream	Thermal: 30 fps (704 x 576, 640 x 512, 320 x 240) Optical: 30 fps (704 x 480, 352 x 240)		
Audio Compression	G.722.1/G.711ulaw/G.711alaw/MP2L2/G.726/PCM		
Interface			
Alarm Input	2, alarm input		
Alarm Output	2, alarm output		
Audio Input	1, 3.5 mm Mic in/Line in interface Line input: 2 to 2.4 V [p-p], Output impedance: 1 KΩ ± 10%		
Audio Output	Linear level, impedance: 600 Ω		
Communication Interface	1, RJ45 10 M/100 M Self-adaptive Ethernet interface		
General			
Power Consumption	12VDC ±25%: 0.5A, Max. 6, PoE (IEEE802.3at)		
Working Temperature/ Humidity	Temperature: -40°C to 65°C (-40°F to 149°F) Humidity: 95% or less		
Protection Level	IP66 Standard		
Dimensions	138.3mm x 138.3mm x 123.1mm		
Weight	940g (2.07 lb)		

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※ Design and specifications are subject to change without notice.

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Smart Funcion

1) **Line Crossing**

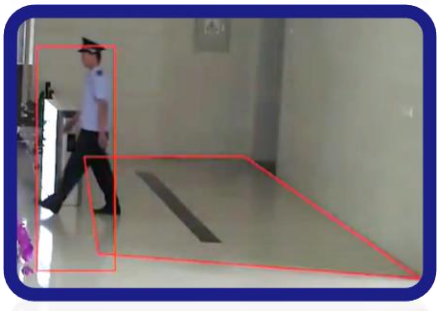
Line crossing detection function detects people, vehicles, or other objects which **cross a pre-defined virtual line**. It's ideal for fence detection, property monitoring and parking areas that should not be entered.

2) **Intrusion**

Intrusion detection is like region detection in that it tracks subjects within a specified area. The difference here is that it will only trigger when **a subject has remained within the zone for a pre-defined amount of time**. It's ideal for monitoring hazardous areas, customs locations, danger zones and restricted areas of concern.

3) **Region Entrance**

An alarm will be triggered when **objects enter the pre-defined regions**. It’s ideal in situations where you want to keep an eye on who is entering and exiting specific restricted areas within a room or to monitor people arriving and leaving your premises outside your entrance.



4) **Region Exiting**

Region exiting detection function is to make sure that **objects won't exit the area that is being monitored**. Any exiting of people or objects will trigger an alarm.

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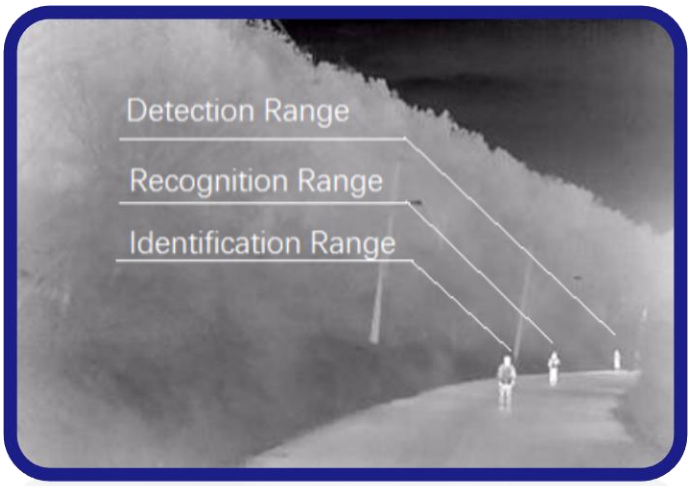
DRI Range Table

* The table is only for reference and the performance may vary according to different environment.

- **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.



Detection Range (Vehicles: 1.4 × 4.0 m)	Detection Range (Humans: 1.8 × 0.5 m)	Recognition Range (Vehicles: 1.4 × 4.0 m)	Recognition Range (Humans: 1.8 × 0.5 m)	Identification Range (Vehicles: 1.4 × 4.0 m)	Identification Range (Humans: 1.8 × 0.5 m)
460 m	150 m	112 m	38 m	56 m	19 m

Smart Function Table

* The table is only for reference and the performance may vary according to different environment.

VCA Range (Vehicles: 1.4 × 4.0 m)	VCA Range (Humans: 1.8 × 0.5 m)	Temperature Measurement (Object: 0.2 × 0.2 m)	Temperature Measurement (Object: 1 × 1 m)
75.6 m	28.4 m	11.7 m	58.3 m