TKH FUSION

A camera for real-time elevated temperature detection

D E S C R I P T I O N

The TKH Fusion is an elevated temperature detection kit which detects, from a distance, whether a person has a higher than normal body temperature. The TKH Security elevated temperature detection kit consists of a dual spectrum smart IP-camera and a black-body. The dual spectrum camera is fitted with a thermal sensor, based on an uncooled microbolometer, to measure temperatures and a high-grade full-HD optical sensor to view the captured images. The camera is fully ONVIF Profile S compliant for interoperability with TKH Sense or other 3rd party VMS systems.

F E A T U R E S

Dual spectrum IP-camera

Accurate black-body for calibration

High Accuracy up to 0.3 °C

Detection distance 3 to 5 m

None intrusive, none contact temperature measurement

Built-in detection algorithms

Smart face/body detection

Compact aesthetic design

ONVIF profile S and G compliant

Thermal Module

Detector type	Uncooled IRFPA Microbolometer
Effective pixels	400x300
Pixel size	17um
Thermal sensitivity(NETD)	40mK@F1.0, 300K
Spectral range	8-14um
Lens	Fixed 8mm, F1.0
Focus	Manual
Field of view	46° (H) x 35.3°(V)
Image setting	Polarity LUT/DVE/Mirror/3DNR/Brightness/Contrast/ROI
Color palettes	Up to 17 modes including Black-Heat/White-Heat/Rainbow/Iron-Red

Optical Module

Image sensor	1/2.8 Sony CMOS
Effective pixels	1920x1080
Minimum scene illumination	0.01 lux (color), 0.001 lux (b/w);
Shutter speed	1/5 - 1/20,000 s
Lens	2.7 to 12.0 mm, F1.6
Lens type	motorized zoom
Horizontal field of view	105° (wide) to 32°(tele)
Wide dynamic range	120dB
S/N Ratio	More than 55dB

Video

Compression algorithm(s)	H.265, H.264; MJPEG
Main stream	Thermal: 720x576 (D1) @25/30fps
	Visible: 1920x1080 @25/30fps,1280x720 @25/30fps
Sub stream	Thermal: 352x288 (CIF) @25/30fps
	Visible: 720x576 (D1) @25/30fps, 640x480 (VGA) @25/30fps, 352x288 (CIF) @25/30fps
Video output	Thermal: 110 Kbps 6 Mbps
	Visible: 200 Kbps 18 Mbps
Compression bit rate control	Constant bit rate (CBR), variable bit rate (VBR)
Privacy masks	4 masks
Mirror	Support
Defog	Support
Image Enhance	Support
Number of video output streams	Up to 10 (RTSP)
Streaming Method	Unicast

Analytics

Behavior analytics	Smart Body Detection, Perimeter, Single Virtual Fences, Double Virtual Fences, Object Left, Object Removed.
Alarm trigger	Motion detection, Temperature alarm, disk alarm, Over Temperature alarm

Body Temperature Detection

Specs

Body Temperature Detection

Accuracy	0.3 °C
Response Time	Less than 30ms
Temperature Measurement Range	-20 °C ~ 60 °C (-4°F ~ 140°F)

Audio & Alarm

Two-way audio	Line in / line out
Compression	G.711, AMR, RAW_PCM(Optional)
Alarm input	2x
Alarm output	2x
Serial port	RS-485, 2-wire
Protocols	Pelco D

Network

Interface(s)	10/100 Mb Ethernet
Network protocols	IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, SMTP, IGMP, ICMP, SNMP
	UPnP, DHCP, PPPoE
Security	802.1x, Watermark, IP address filtering
API	ONVIF (Profile S, Profile G)
Connector type	RJ-45

Management

Supported browsers	Internet Explorer 11+, Chrome, Firefox
Password levels	User and Administrator
Storage options	Micro SD card (128 GB max); NAS

Power

Power	12 Vdc / 802.3af PoE class 0
Power consumption	< 10 W
Connector type	2 pin terminal block

Environmental

Operating temperature	-30 °C to +60 °C (-22 °F to +140°F)
Relative humidity	10% to 90%, no condensation
Ingress Protection	IP66
Dimensions (camera body)	212 x 182 x 136mm (8.34 x 7.16 x 5.35 In)
Weight	2.1 kg (4.6 lbs)

Black Body

Temperature range	5 °C to 50 °C
Temperature resolution	0.1 °C
Accuracy	+/- 0.2 °C @ 40 °C
Temperature stability	+/- 0.1 to 0.2 °C per 30 minutes
Emissive Area	70mm x 70mm

Specs

Black Body

Effective emissivity	0.97 +/- 0.02
Operating temperature	0°C to 40°C
Relative humidity	0% to 80%, no condensation
Power	220VAC 50Hz 50W
Dimensions	110 x 120 x 180mm (4.33 x 4.72 x 7.08 In)
Weight	1.8kg (4 lbs)

Order Information

TKH Fusion	Body temperature camera with 2 ceiling mounts, 1ry warranty
TKH Fusion Extra Warranty	Additional 1 year Warranty

182.0

136.0

212.0

117

∅6.55

86

212

234

95

66

60

88