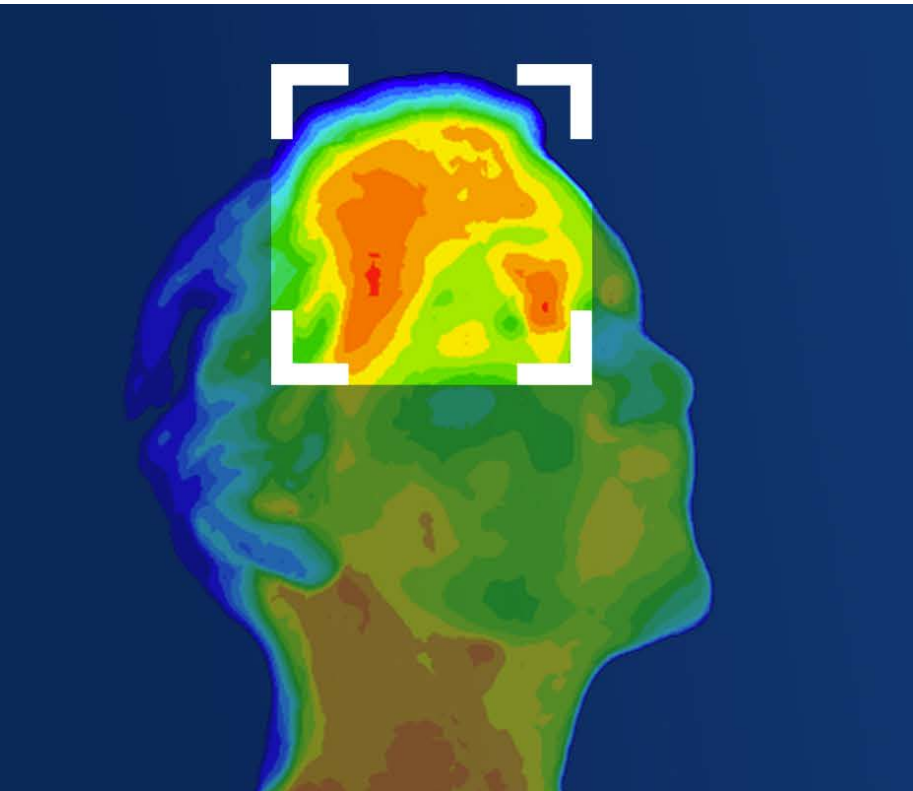# Illustra Pro Thermal EST Camera
Elevated Skin Temperature Screening Solution

Key Features

- Dual Image Sensor with thermal detector
- Up to 5MP resolution 2592 × 1944 with visible imager, 384 x 288 resolution with thermal imager
- True day / night
- Built in IR & white light illuminator
- True WDR, up to 120dB
- Smart facial temperature detection
- Alarm trigger by temperature anomaly
- High accuracy with blackbody calibration
- Built-in sound-light alarm
- 1CH audio input; 1CH built-in speaker
- PoE or 12VDC powered
- IP66 rating for outdoor application

What is the Smart Temperature Screening Solution?

The Illustra elevated skin temperature screening solution comprises of a dual sensor, one Thermal the other Color, camera and a temperature calibration device known as a Blackbody.

Using advanced face detection technology and in conjunction with the dual sensors, the camera will measure the temperature of a person's forehead whilst the blackbody provides the constant temperature reference point. Should someone in the field of view be detected with a skin temperature above a predetermined level, an operator can be alerted to this fact through a variety of possible methods ranging from alerts in the VMS, events in a Access Control system, via a connected light/sounder to the camera, or even through a web browser connection.

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The IEC standards for accuracy are at the heart of the development of the Illustra elevated skin temperature screening solution, and, to achieve this, the innovative technology within the camera measures the forehead temperature at multiple points as opposed to a single point approach. High accuracy brings with it the benefit of reducing false alarms to a minimum, which in turn results in fewer disruptions and increased flow of staff and visitors.

Safe, contactless and accurate

The Illustra Pro Thermal EST Camera, being contactless and therefore non-invasive, is ideal for deployment at controlled entrances to areas and facilities where initial skin temperature screening is needed for staff and visitors. With a ±0.3°C (±0.54°F) accuracy tolerance and an effective distance of 2 to 6 meters (6.5 to 19.7 feet), this elevated skin temperature screening solution provides a high degree of flexibility to meet the individual situational awareness requirements of a wide variety of installations.

Specifications

Dual Imager Camera	
Thermal Camera	
Detector Type	Amorphous-silicon Bolometers
Pixel Pitch	17μm
Infrared Spectral Range	8~14μm
Effective Pixels	384 × 288
Noise Equivalent Temperature Difference	<35mK
Thermal Response Time	≈40ms
Lens Type	Fixed
Focal Length	12mm@F1.0
Field of View	Horizonta 29.7°, Vertical 22.5°
Visible Camera	
Imager	1 / 2.7" 5MP Progressive CMOS
Effective Pixels	2592 x 1944
Min. Illumination	Color 0.012 Lux @ F2.0 B/W 0.0012 Lux @F2.0, 0 Lux with IR
Shutter Speed	1/30 s ~ 1 / 10,0000 s
S/N Ratio	≥52 dB
Lens Type	Fixed
Focal Length	8mm
Field of View	Horizontal 38°,Vertical 27.5°
Lens Mount	M12
Video	
Video Compression	H.264 / H.265 / MJPEG
H.264 Compression Standard	Base Line / Main Profile / High Profile
H.265 Compression Standard	Main Profile @Leve4.1 High Tier
Resolution	**Visible** 5MP (2592x1944), 4MP (2592×1520), 2560x1440, 3MP (2304×1296),1080P (1920×1080), 720P (1280×720), D1 (720x576), 480x240, CIF (352x240) **Thermal** 704x576 (Upscaled from 384x288)
Max.Frame Rate	Visible: 30fps @ all resolution. Thermal: 30fps @ 704x576 (Upscaled)
Video Bit Rate	64 Kbps ~ 5 Mbps
Multiple Streaming	Triple stream

Main Stream	**Visible** 60Hz:30fps, 50Hz:25fps @ 2592x1944, 2592x1520, 2304x1296, 1920x1080, 1280x720 **Thermal** 60Hz:30fps, 50Hz:25fps @ 704x576 (Upscaled from 384x288)
Second Stream	**Visible** 60Hz:30fps, 50Hz:25fps @ 1280x720,704x480,352x240
Third Stream	**Visible** 60Hz:30fps, 50Hz:25fps @ 704x576,480x240,352x288
Bitrate Control	VBR / CBR
Quality Control	5 levels under VBR; Freely adjustable under CBR
Image Setting	ROI, Saturation, Brightness, Chroma, Contrast, Wide Dynamic, Sharpen, NR.

Audio

Audio Communication	1CH audio input; 1CH built-in speaker
Audio Compression Format	G .711A, G.711U
Audio Bit Rate	128Kbps

Operational

Day & Night	True Day/Night with Auto IR Cut Filter
Backlight Compensation	BLC/HLC
Wide Dynamic Range	True WDR, 120dB
Effective IR Distance	20M
Digital Noise Reduction	2D/3D DNR
Digital Zoom	Yes
Video Privacy	4 zones video mask
Smart Codec	8 zones ROI
Display Mode	Visible only, Picture-in-picture, Dual Window
Intelligent Video Analytics	**Visible Camera** Line crossing direction, Object Abandoned / Removed, Enter an area, Motion detection **Thermal Camera** Elevated Skin Temperature Detection
Alarm Triggers	Alarm in, Intelligent video analytics, Network disconnect, SD card full, SD card error
Backfilling	iAPI3
Supported Languages	English (US), Italian, Portuguese, Russian, Spanish

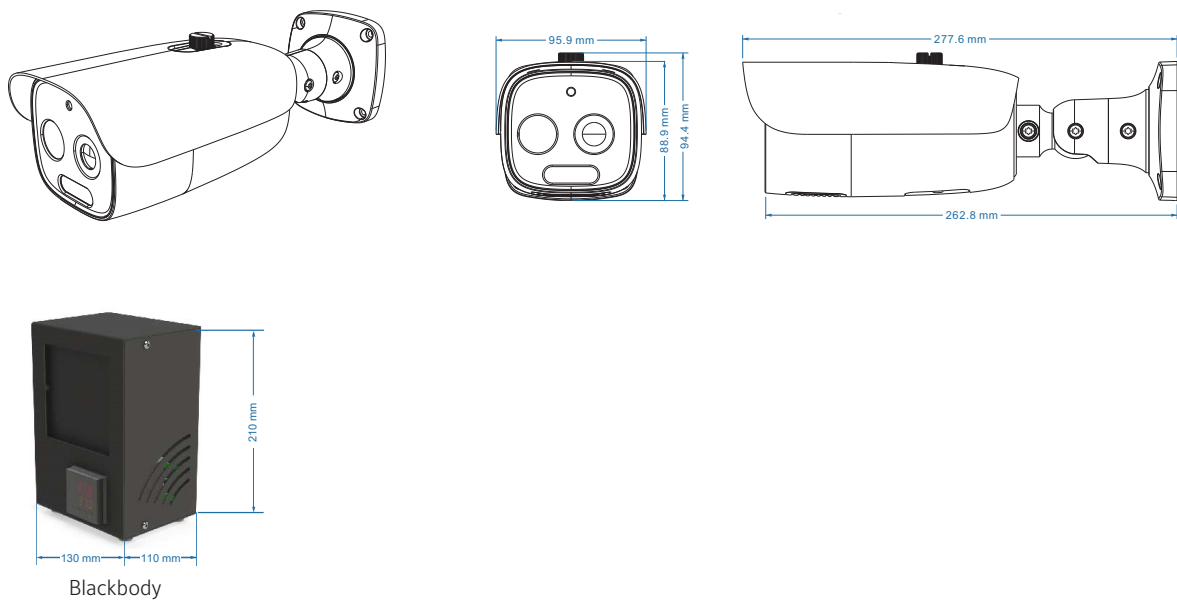## Temperature Detection

Detection mode	Multiple point forehead skin temperature detection
Detection preset	Single Face (in accordance with IEC standards)
Effective Distance	2~6M
Temperature alarm	Over temperature / Temperature anomaly
Response Time	Less than 50ms
Calibration	Automatic calibration with blackbody
Accuracy	±0.3°C (±0.54°F with blackbody calibration)

Network

Network Protocol	TCP / IP, UDP, DHCP, NTP, RTSP, PPPoE, DDNS, SMTP, FTP, SNMP, UPnP, Unicast, Multicast
Cyber Security	HTTPS / IP Filter / IEEE 802.1X / Blacklist & white list / account security
Online Connection	Support simultaneous monitoring for up to 10 users
API	ONVIF, iAPI3

Interface	
Network	RJ45
Audio	1CH audio input; 1CH built-in speaker
Alarm	Alarm in/out, Built-in sound-light alarm
Hardware Reset	Supported
Environmental	
Operating Temperature	0°C ~ 35°C (32°F ~ 95°F)
Operating Humidity	10 % ~ 90 % relative humidity
Ingress Protection	IP66
Vandal Resistance	-
General	
Power Supply	DC12V / PoE
Power Consumption	<9W
Dimensions (LxWxH)	10.94 inches (278mm) x 3.78 inches (96mm) x 3.50 inches (89mm)
Material	Metals
Net Weight	Approx. 2.6lbs, 1.2Kg
Installation	Wall mounting, Ceiling mounting, Tripod mounting
Certification	Certification testing is pending for major markets, including North America and the European Union.

Dimensions

Blackbody

Blackbody Calibrator	
Temperature Range	20.0°C to 70.0°C (68°F to 158°F)
Emissive Area	100mm x 100mm
Display Resolution	0.01°C (0.0018°F)
Radiance temperature expanded uncertainty	± 0.25°C between 33°C and 40°C (± 0.45°F between 91.4°F and 104°C)
Stability	± 0.05°C (± 0.09°F)
Emissivity	0.96
Power Supply	110 -240 VAC compatible. 50/60 Hz.
Net Weight	Less than 2kg
Calibration Certificate	24 months from manufacturing

Ordering Information

Model	Description
IPT05-B29-BND03	Dual imager temperature detection camera, Visible/Thermal, 5MP/384*288, 8mm/12mm, 20M IR, sound-light alarm, Alarm/Audio, Micro SD, DC/PoE, IP66, with Additional Blackbody

Accessories

Model	Description
IATR-ISTR	Illustra Pro Thermal EST Camera or Black Body Tripod Mount - 1/4"-20
IBJB-TIS-WB-A	Illustra Pro Thermal EST Back Box Mount
IBJB-TIS-WB-B	Illustra Pro Thermal EST Back Box With Side Conduit Opening
IBPN-TIS-WB	Illustra Pro Thermal EST Ceiling Pendant Mount (Requires a Back Box IBJB-TIS-WB-A or IBJB-TIS-WB-B)
IBPM-TIS-0	Illustra Pro Thermal EST Pole Mounting Box with Straps (Requires a Back Box IBJB-TIS-WB-A or IBJB-TIS-WB-B)
IBCM-TIS-0	Illustra Pro Thermal EST Corner Mount (Requires a Back Box IBJB-TIS-WB-A or IBJB-TIS-WB-B)

Important Notice: Elevated body temperatures identified by the Ilustra Pro Thermal EST should be confirmed with secondary evaluation methods, such as contact thermometers. Temperature measurements should not be solely or primarily relied upon to diagnose or exclude a diagnosis of COVID-19, or any other disease. The Tyco Illustra Pro Thermal EST does not cause and cannot eliminate or prevent occurrences of the events that it is intended to detect or avert.

The product is only available in jurisdictions where it is qualified for import, sale and use. Please check with your sales representative for product availability in your jurisdiction.

Contact Your Representative +1 303-670-1099

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About Johnson Controls

Johnson Controls is a global diversified technology and multi-industrial leader serving a wide range of customers in more than 150 countries. Our 120,000 employees create intelligent buildings, efficient energy solutions, integrated infrastructure and next generation transportation systems that work seamlessly together to deliver on the promise of smart cities and communities. Our commitment to sustainability dates back to our roots in 1885, with the invention of the first electric room thermostat.

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