

# UCAM-220TT/TB (Thermographics Camera)



## Features

- 160 × 120 resolution in thermal channel, high sensitivity sensor.
- Point, line and area for temperature measurement
- Temperature range: 30°C to 45°C; temperature accuracy: ±0.5 °C
- Reliable temperature exception alarm function
- 3D DNR, image detail enhancement
- Strobe light and audio alarm

## Introduction

UCAM-220TT/TB is Thermographic Turret (TT) / Bullet (TB) Temperature Measurement Camera that is able to measure object's temperature at a high accuracy in real time. It is capable to discover and track people with higher body temperature among the crowded public area, it can be widely used in places such as customs, airport, school and hospital for inspection and quarantine.

## Key Functions

### AI Face Detection

Focus measurement areas on human face to reduce false alarms caused by other heat sources (such as teacups)

### Bi-Spectrum Monitoring

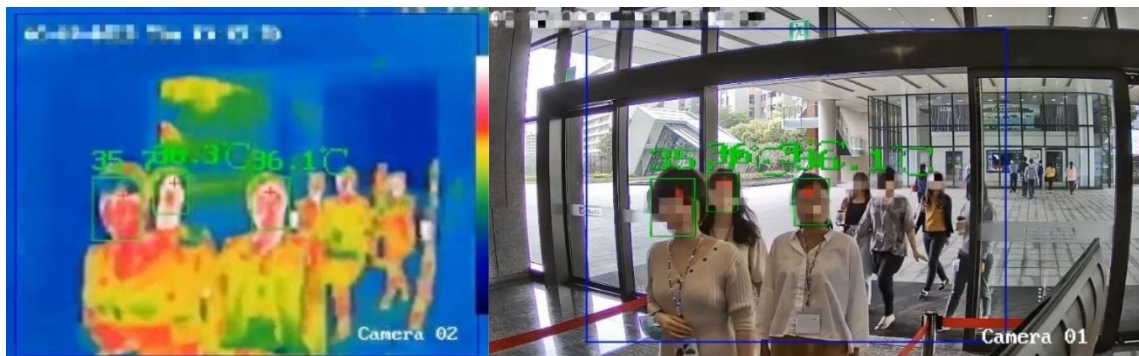
Provide both thermal and optical image channels apart from temperature measurement

### Strobe Light & Audio Alarm

Trigger alarms to notify operators immediately when a person with an elevated body temperature passed by

### Integrated Management Software

UCAM-220TT/TB can be connected to Advantech Fever Manager (FSM) and the CMS software bundled can record the face detected information and identification for further management

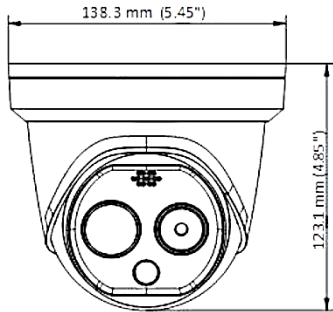


## Specifications

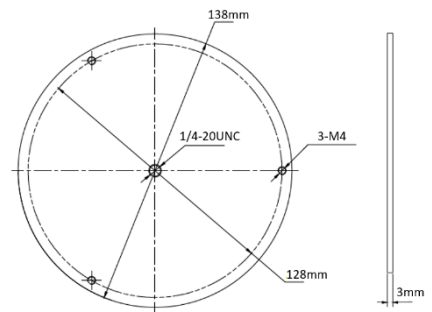
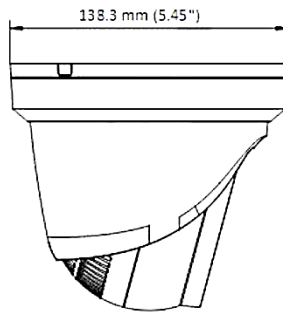
Thermal Module	Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays
	Max. Resolution	160 × 120 (the resolution of output image is 320 × 240)
	Pixel Interval	17 μm
	Response Waveband	8 μm to 14 μm
	NETD (Noise Equivalent Temperature Difference)	≤ 40 mk (@25 °C, F# = 1.1)
	Lens (Focal Length)	3mm / 6mm
	IFOV	5.48 mrad (3mm) / 2.74mrad (6mm)
	Field of View	50° × 37.2° (H × V, 3mm) / 25° × 18.7° (H × V, 6mm)
	Min. Focusing Distance	0.3m (3mm) / 0.6m (6mm)
	Aperture	F 1.1
Frame Rate	8.3 fps(9Hz)	
Optical Module	Max. Image Resolution	2688 × 1520
	Image Sensor	1/2.7" Progressive Scan CMOS
	Min. Illumination	TT: 0.0018 Lux @(F1.6, AGC ON) / TB: 0.005 Lux @(F1.2, AGC ON)
	Shutter Speed	1/3 s to 1/100,000 s
	Lens (Focal Length)	4 mm / 8mm
	Field of View	84.0° × 44.8° (H × V, 4mm) / 39.4° × 22.1° (H × V, 8mm)
	WDR	120 dB
	Day & Night	IR cut filter with auto switch
Image Function	Bi-spectrum Image Fusion	Fusion view of thermal view and overlaid details of the optical channel
	Picture in Picture	Combines details of thermal and optical image PIP, overlay thermal image on optical image
Smart Function	VCA (Video Content Analysis)	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	30°C to +45 °C
	Temperature Accuracy	± 0.5 °C
	Fire Detection	Dynamic fire point detection, up to 10 fire points detectable.
Infrared	IR Distance	Up to 15 m (TT) / 30 m (TB)
	IR Intensity and Angle	Automatically adjusted
Network	Main-Stream	Visible Light: 50Hz: 25fps (2688 × 1520), 25fps (1920 × 1080), 25fps (1280 × 720)
		Visible Light: 60Hz: 30fps (2688 × 1520), 30fps (1920 × 1080), 30fps (1280 × 720)
		Thermal: 1280 × 720, 704 × 576, 640 × 480, 352 × 288, 320 × 240 (8.3 fps(9Hz))
	Sub-stream	Visible Light: 50Hz: 25fps (704 × 576), 25fps (352 × 288), 25fps (176 × 144)
		Visible Light: 60Hz: 30fps (704 × 480), 30fps (352 × 240), 30fps (176 × 120)
		Thermal: 704 × 576, 352 × 288, 320 × 240 (8.3 fps(9Hz))
	Video Compression	H.265/H.264/MJPEG
	Audio Compression	G.711u/G.711a/G.722.1/MP2L2/G.726/PCM
Protocols	IPv4/IPv6, HTTP, HTTPS, 802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTPC, RTP, TCP, UDP, IGMP, ICMP, DHCP, PPPoE	
Simultaneous Live View	Up to 20	
User/Host Level	Up to 32 users, 3 levels: Administrator, Operator, User	
Security Measures	User authentication (ID and PW), MAC address binding, HTTPS encryption, IEEE 802.1x, access control, IP address filtering	
Integration	Alarm Input	1-ch inputs (0-5 VDC)
	Alarm Output	1-ch relay outputs, alarm response actions configurable
	Alarm Action	SD recording/relay output/smart capture/FTP upload/email linkage/audio alarm/white light alarm
	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
	Reset	1, Reset Button
	Communication Interface	1, RJ45 10M/100M self-adaptive Ethernet interface. 1, RS-485 interface
	SD Memory Card	Built-in micro SD card slot, support Micro SD/SDHC/SDXC card (up to 128 GB) Supports manual/alarm recording
	Analog Video Output	1.0 V [p-p]/75 Ω, PAL/NTSC
	Web Browser	IE9+, Chrome 31-44, Firefox 30-51, Safari 5.02+(mac)

General	Power	12 VDC $\pm$ 20%: 0.65 A, max. 7.5 W, two-core terminal block PoE (802.3af, class 3): 42.5 V to 57 V, 0.14 A to 0.22 A, max. 8 W
	Working Temperature/Humidity	Temperature: -20 °C to 50 °C Humidity: 95% or less
	Protection Level	IP66 Standard TVS 6000V lightning protection, surge protection, voltage transient protection
	Dimensions	TT: 138.3 mm $\times$ 138.3 mm $\times$ 123.1 mm (5.45" $\times$ 5.45" $\times$ 4.85") TB: 358.3 mm $\times$ 113.5 mm $\times$ 115.2 mm (14.10" $\times$ 4.47" $\times$ 4.53")
	Weight	TT: 0.94 kg (2.07 lb) TB: 1.76 kg (3.88 lb)

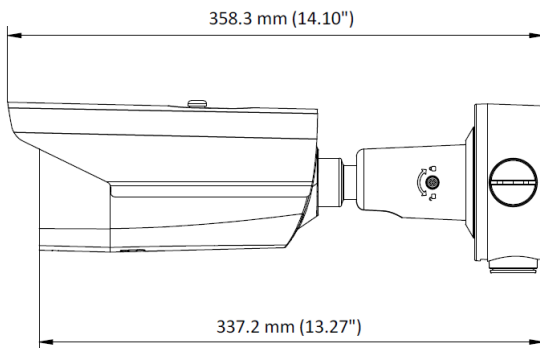
## Dimension Specification



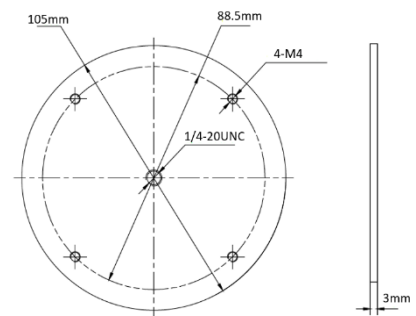
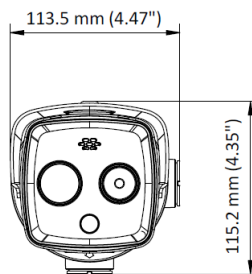
UCAM-220TT



Turret Tripod Adaptor



UCAM-220TB



Bullet Tripod Adaptor

## Ordering Information

P/N	Description
UCAM-220TT-U01	Thermographic Turret Camera (3mm)
UCAM-220TT-U11	Thermographic Turret Camera (3mm) including Tripod adaptor
UCAM-220TT-U02	Thermographic Turret Camera (6mm)
UCAM-220TT-U12	Thermographic Turret Camera (6mm) including Tripod adaptor
UCAM-220TB-U01	Thermographic Bullet Camera (6mm)
UCAM-220TB-U11	Thermographic Bullet Camera (6mm) including Tripod adaptor
96PD-TCTAD	Turret Tripod adaptor
96PD-TCBAD	Bullet Tripod adaptor

# Blackbody (Thermographics Camera Calibration)



## Features

- Supports calibration of thermal device in high accuracy
- Supports different temperature settings
- High accuracy and good stability
- Easy temperature calibration and correction
- Strong ability of anti-interface

## Introduction

As a standard radiation source, black body has been widely used for calibrating infrared light system, measuring material emissivity, measuring parameters of infrared sensor, and transmitting temperature between infrared emitter and thermal device.

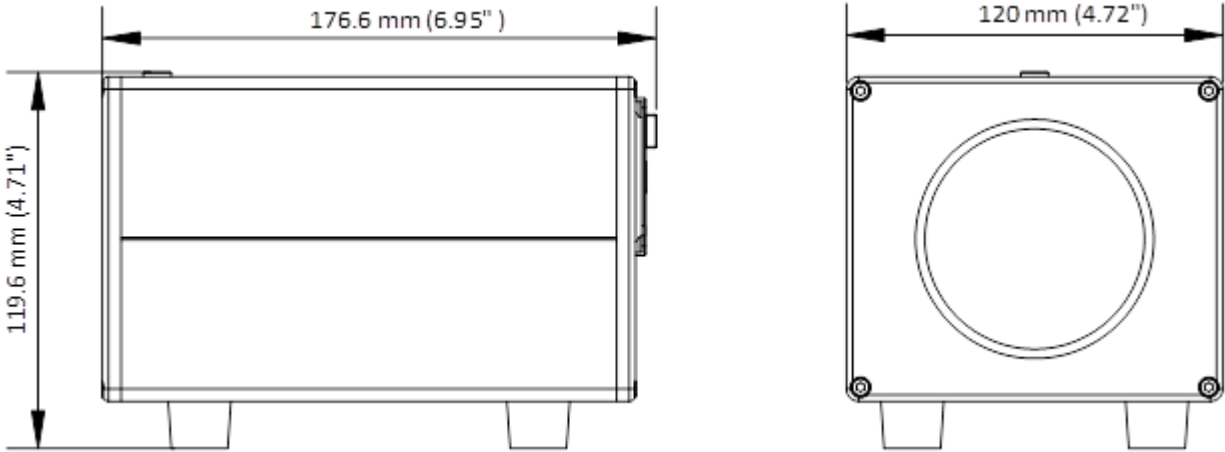
96PD-TCABB is mainly used for the calibration of thermographic device. It helps to measure the temperature in high accuracy

## Specifications

Parameter	Temperature Range	Environment Temperature+5 °C (9 °F), up to 50°C (122 °F)
	Effective Radiating Area	70 mm ×70 mm (2.76" × 2.76")
	Temperature Resolution	0.1 °C (0.18 °F)
	Temperature Accuracy	± 0.1 °C (0.18 °F)
	Temperature Stability	± 0.1 °C/h
	Effective Emissivity	0.97 ± 0.02
	Power Consumption	20 W
	Environment Temperature	0 °C to 40°C (32 °F to 104 °F)
	Weight	1.85 Kg (4.08 lb)
	Dimension	120 mm × 176.6 mm × 119.6 mm (4.72" × 6.95" × 4.71")
	Power	100 VAC to 240 VAC
	Mounting	Mounting on a plane desk or a tripod with 1/4-20UNC Interface

# Blackbody (Thermographic Camera Calibration)

## Dimension



## Ordering Information

P/N	Description
96PD-TCABB	Blackbody for Thermographic Camera Calibration