Crimson Industrial Vision

FLIR T400-Series specifications

	FLIR T420	FLIR T440
Imaging performance		
Zoom	1–4× continuous, digital zoom, including panning	1–**8×** continuous, digital zoom, including panning
Measurement		
Object temperature range	–20°C to +650°C in 3 ranges: -20°C to +120°C or 0°C to +350°C +200ºC to +650ºC	–20°C to **+1200°C** in 3 ranges: -20°C to +120°C or 0°C to +350°C **+200ºC to +1200ºC**
Image presentation		
MSX	N/A	**IR image with MSX**
Image sketch	N/A	**On IR and visual image**
Measurement analysis		
Profile	N/A	**1 live line**
Measurement presets	N/A	**Yes**

Imaging Performance	
Thermal sensitivity/NETD	<45 mK at 30°C
IR resolution	320 × 240 pixels
Field of view (FOV) / Minimum focus distance	25° × 19° / 0.4 m
Spectral range	7.5 - 13 µm
Spatial resolution (IFOV)	1.36 mrad
Image frequency	60 Hz
Focus	Automatic (one shot) or manual
Focal Plane Array (FPA)	Uncooled microbolometer
Image presentation	
Picture in Picture	Scalable IR area on visual image
Display	Built-in touch screen, 3.5" color LCD, 320 x 240 pixels
Image modes	IR image, visual image, thermal fusion, picture in picture, thumbnail gallery
Thermal fusion	IR image shown above, below or within temp interval on visual image
Measurement	
Accuracy	±2°C or ±2% of reading

Measurement analysis

Crimson Industrial Vision

FLIR T400-Series specifications

Difference temperature	Delta temperature between measurement functions or reference temperature
Spotmeter	5
Area	5 boxes with max./min./average
Isotherm	Detect high/low temperature/interval
Automatic hot / cold detection	Auto hot or cold spotmeter markers within area
Measurement function alarm	Audible/visual alarms (above/below) on any selected measurement function
Emissivity correction	Variable from 0.01 to 1.0 or selected from list of materials
Measurement corrections	Reflected temperature, optics transmission and atmospheric transmission
External optics/windows correction	Automatic, based on inputs of optics/window transmission and temperature

Setup

Color palettes	Arctic, Gray, Iron, Lava, Rainbow and Rainbow HC
Set-up commands	User programmable button, local adaptation of units, language, date and time formats

Storage of images

Image storage	Standard JPEG - including measurement data, on memory card
Image storage mode	IR/visual images, simultaneous storage of IR and visual images
Periodic image storage	7 seconds to 24 hours (IR) 14 seconds to 24 hours (IR and visual)

Image annotations

Voice	60 seconds (via Bluetooth)
Text	Text from predefined list or soft keyboard on touch screen
MeterLink	Connect Extech Clamp Meter EX845 or Moisture Meter MO297 via Bluetooth
Sketch	From touch screen
Report generation	- Instant Report (.pdf file) in camera including IR and visual images - Separate PC software with extensive report generation

Digital camera

Built-in digital camera	3.1 Mpixel (2048 × 1536 pixels), and LED light
Digital camera, FOV	Adapts to the IR lens

Laser Pointer

Laser	Semiconductor AlGaInP diode laser, Class 2, activated by dedicated button
Laser alignment	Position is displayed automatically on the IR image

Crimson Industrial Vision

FLIR T400-Series specifications

Video streaming

Non-radiometric IR or visual video recording	MPEG4 to memory card
Radiometric IR video streaming	Full dynamic to PC using USB
Non-radiometric IR or visual video streaming	Uncompressed colorized video using USB

Power System

Battery time	Rechargeable Lithium-ion battery, field replaceable
Battery operating time	4 hours
Charging system	In camera, AC adaptor, 2-bay charger or 12 V from a vehicle
Power management	Automatic shutdown and sleep mode (user selectable)

Environmental specifications

Operating temperature range	-15 °C to +50 °C
Storage temperature range	-40 °C to +70 °C
Humidity (operating and storage)	IEC 60068-2-30/24 h 95% relative humidity +25 °C to +40 °C / 2 cycles
EMC	- ETSI EN 301 489-1 (radio) - ETSI EN 301 489-17 - EN 61000-6-2 (Immunity) - EN 61000-6-3 (Emission) - FCC 47 CFR Part 15 B (Emission) - ICES-003
Radio spectrum	ETSI EN 300 328 FCC Part 15.247 RSS-210
Bump	25 g (IEC 60068-2-29)
Vibration	2 g (IEC 60068-2-6)
Encapsulation	IP 54 (IEC 60529)
Safety	EN/UL/CSA/PSE 60950-1

Data communication interfaces

Interfaces	USB-mini, USB-A, Bluetooth, Wi-Fi, composite video
USB	USB-A: Connect external USB device (copy to memory stick) USB Mini-B: Data transfer to and from PC/streaming
Bluetooth	Communication with headset and external sensors
Wi-Fi	Connects directly to smart phones or tablet PCs for image transfer or via local network

Radio

Wi-Fi	Standard: 802.11 b/g Frequency range: 2412-2462 MHz Max output power: 15 dBm

Crimson Industrial Vision

FLIR T400-Series specifications

Bluetooth	Frequency range: 2402-2480 MHz

Physical characteristics

Camera weight, incl. battery	0.88 kg
Camera size (L × W × H)	106 × 201 × 125 mm
Shipping size	180 x 500 x 360 mm
Shipping weight	5.6 kg
Tripod	UNC 1/4" - 20 (adapter needed)

Standard package

FLIR T420 or T440: Hard transport case, Thermal imaging camera with lens, Battery, Battery charger, Bluetooth® USB micro adaptor, Calibration certificate, FLIR Tools™ PC software CD-ROM, Headset, Memory card with adaptor, Power supply incl. multi-plugs, Printed Getting Started Guide, Sunshield, USB cable, User documentation CD-ROM, Video cable, Warranty extension card or Registration card

Accessories:

Lens cap [1196818]

Lens cap for the camera

Lens 10 mm, 45° field of view incl. case [1196960]

Sometimes there isn't enough room to step back and see the whole picture. This wide angle lens has a field of view almost double than the one of the standard 25° lens. Perfect for wide or tall targets such as electrical panels or paper machinery.

Lens 30 mm, 15° field of view, incl. case [1196961]

When the target in question is a distance away it may be useful to use a telescope lens. The 15° lens is a popular lens accessory and provides almost 2X magnification compared to the 25° lens. Ideal for small or distant targets such as overhead power lines.

Lens 76 mm, 6° field of view, incl. case and mounting support [T197408]

For maximum magnification, the 6° lens is the only choice. This optic provides almost 3.5X magnification compared to the 25° lens and is ideally suited for inspection of overhead power lines. Due to the weight of this lens, a tripod is recommended.

Lens 4 mm, 90° field of view, incl. case and mounting support [T197412]

Sometimes there isn't enough room to step back and see the whole picture. This wide angle lens has a field of view almost four times the one of the standard 25° lens.This wide angle lens is perfect for wide or tall targets such as electrical panels or paper machinery.

Close-up lens 4x incl. case [T197215]

Crimson Industrial Vision

FLIR T400-Series specifications


The close-up lens provides a 4X magnification and is ideal for development purposes like looking at PCB´s or small electronic components

Close-up lens 2x incl. case [T197214]

The close-up lens provides a 2X magnification and is ideal for development purposes like looking at PCB´s or small electronic components.

Power

Battery [1196398]

Extra battery that will allow you to spend extra time in the field doing inspections.

2-bay battery charger, incl. power supply with multi-plugs [T197650]

This 2 bay battery charger is used for charging FLIR Systems' camera batteries.

Cigarette lighter adaptor kit, 12 V DC, 1.2 m [1196497]

Can be used to power the camera from the cigarette lighter socket in a car.

Power supply incl. Multi-plugs [T910750]

Combined power supply, including multi plugs and battery charger to charge the battery when it is inside or outside of the camera.

Battery package [T197667]

A complete battery package consisting of three standard products: a battery, 2-bay battery charger including power supply with multi-plugs and a cigarette lighter adaptor kit.

Neck strap [1124544]

Ties the camera around your neck so that it is protected against falling.

Pouch [1124545]

Soft pouch to protect the camera.

Tool belt [T911093]

Tool belt for thermal imaging camera pouches.

Sun shield [1123970]

Snap-on sunshield to increase visibility of the LCD display.

Extech Clamp meter EX845 [T910972]

Can be connected to the thermal imaging camera through MeterLink™

Extech Moisture meter MO297 [T910973]

Can be connected to the thermal imaging camera through MeterLink™

To discuss your requirements, arrange a demonstration or purchase a FLIR T-Series camera please call 01892 539503 or email us at info@crimsoniv.co.uk
Crimson Industrial Vision is a fully authorised FLIR Systems Reseller.