FLIR T400-Series

Excellent ergonomics and extensive communication possibilities

The FLIR T400-Series offers a good performance at an affordable price. Excellent ergonomics and easy communication makes the FLIR T400-Series a truly user-friendly camera for the beginner and advanced user. With extensive communication possibilities including Wi-Fi and MeterLink (Bluetooth). The latest technology integrated in the camera allows for fast image processing and storage.

320 x 240 pixel resolution
The T400-Series has a thermal image resolution of 320 x 240 pixels.

Camera sensitivity
The FLIR T400-series has a thermal sensitivity of < 45 mK.

High quality visual camera
Both models in the FLIR T400-Series have an integrated 3.1 Mpixel digital camera. Field of view adapts to IR lens.

Measurement range
The T400-series can measure temperatures up to +1200°C.

Interchangeable infrared lenses
The T400-Series features a standard 25° lens and optional 6°, 15°, 45° and 90° lenses.

Flexible interfaces
The T400-Series is equipped with standard video, USB outputs as well as a removable SD card.

MPEG-4 video
Create visual and infrared non radiometric MPEG-4 video files.

Thermal Fusion
Merges visual and thermal images to offer better analysis.

Temperature sound, image alarms
Make surveying easier and faster.

Picture-in-Picture
Create an infrared overlay on your visual image. Scalable, moveable and resizable.

Text and voice annotations
Text comments can be made from a pre-defined list or using the touch screen. A headset can be connected to make voice annotations.

Sketch annotations
Use the touch screen as pen and paper to add sketch annotations.

Image sketch (FLIR T440)
Indicate problem areas directly on the thermal image.

Radiometric IR video streaming
16 bit radiometric IR video can be streamed to a PC (via USB) running the FLIR software.

Image storage
FLIR uses a non proprietary radiometric JPEG image format that allows for post processing and report writing with Microsoft Word® based FLIR software.

Touch screen
3.5" LCD touch screen brings interactivity and user comfort to a new level.

Measurement Modes
Measurement spots, area with auto hot/cold spot indication, isotherms, ΔT calculation.*

Copy to USB
Transfer on board images or reports directly from the thermal imaging camera to a USB stick.

Instant reports
Create instant reports directly in camera, easily copy report to USB.

Multi Spectral Dynamic Imaging (MSX®)
The innovative MSX® feature produces an image more rich in every detail than ever before.

Compass
The direction in which the camera is looking is automatically added to every image.

*Features dependant on camera model, please check technical specifications for more details.

Connect to smartphone or tablet via Wi-Fi, using the FLIR Tools mobile app (Apple iOS and Android) for processing and sharing results as well as for remote control.
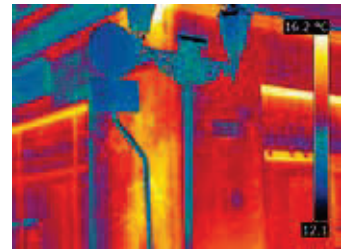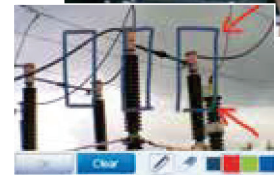
Thermal Fusion

Visual image

Thermal image

Thermal Fusion image

Multi Spectral Dynamic Imaging (MSX®)

MSX® allows seeing even more detail on the thermal image.

SD-card
USB
mini USB
Video output

Ergonomic design
Easy-to-use controls
Tiltable lens unit
Laser pointer
Flashlight
Visual camera
Interchangeable infrared lens

Image sketch

Multifunctional LCD touch screen allows sketching and marking directly on the screen.

Picture-in-Picture
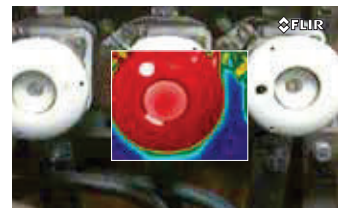
FLIR T400-Series camera model comparison

MeterLink

FLIR T420	**FLIR T440**
Temperature range: -20°C to +650°C	Temperature range: -20°C to +1,200°C
2x, 4x digital zoom	2x, 4x, 8x digital zoom
MSX®	MSX®
	Image sketch on IR and visual
	Live line profile
	Measurement presets

METER LiNK **Bluetooth**

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FLIR T400-Series

Technical specifications

Camera specific

	FLIR T420	FLIR T440
Imaging performance		
Zoom	2x, 4x digital zoom	2x, 4x, 8x digital zoom
Measurement		
Object temperature range	−20°C to +650°C in 2 ranges: -20°C to +120°C or 0°C to +650°C	−20°C to +1200°C in 3 ranges: -20°C to +120°C or 0°C to +650°C +250ºC to +1200ºC
Image presentation		
MSX®	IR image with MSX®	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

General

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)	1.39 mrad
Image frequency	60 Hz
Focus	Automatic (one shot) or manual
Focal Plane Array (FPA)	Uncooled microbolometer
Image presentation	
Picture in Picture	Resizable and movable 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	
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
Compass	Camera direction automatically added to every image

Digital camera	
Built-in digital camera	3.1 Mpixel (2048 × 1536 pixels), and LED light
Digital camera, FOV match	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

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
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 (2 ea.), Battery charger, Lens cap, Printed documentation, FLIR Tools™ download card, Headset, Memory card, Power supply incl. multi-plugs, Sunshield, Neckstrap, USB cable, User documentation CD-ROM, Video cable

YEAR 2 FULL PRODUCT WARRANTY*

YEAR 10 DETECTOR WARRANTY*

*After product registration on www.flir.com

FLIR T400-Series

Accessories

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   [1910490]
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.

Storage

Memory card SD   [T911173]
Capture images on the go with your camera.

Adaptor, SD memory card to USB   [1910475]
Allows to transfer the images from the SD card to a PC.

Cables

Video cable   [1910582]
This cable can be used to transfer the images of the T/B-Series thermal imaging
cameras to a monitor.

USB cable Std-A <-> Mini-B   [1910423]
USB cable to connect the camera with a computer, using the USB protocol.

Extended measurement ranges

High temperature option to +1,200°C   [T197000]
Allow to measure temperatures of up to +1,200°C with the camera.

Headsets

Bluetooth® headset   [T197771]
Headset with Bluetooth® for wireless connection with the thermal imaging
camera, including microphone.

Lenses

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.

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.

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

Miscellaneous

Hard transport case [T198370]
Rugged, watertight plastic shipping case. Holds all items securely. The case can be locked with padlocks and features a breather valve to prevent pressure build-up in airplane cargo holds.

Neck strap [1124544]
Ties the camera around your neck so that it is protected against falling.

Pouch [T911048]
Soft pouch to protect the camera. Possible to attach to tool belt.

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™