

# FLIR T650sc / T630sc

## Portable Thermal Imaging Cameras

The T650sc / T630sc Series infrared cameras offer thermal and visual imagery, spot size resolution, and reliable temperature measurement accuracy—all at an affordable cost. Technicians, engineers, and scientists will appreciate features including a built-in digital camera, voice annotation, laser target locator, GPS, and much more. The tiltable IR unit gives you great flexibility and allows you to conduct your experiments fast and in a comfortable position.

### EXCELLENT IMAGE QUALITY AND THERMAL SENSITIVITY

The T650sc / T630sc cameras are equipped with an uncooled Vanadium Oxide (VoX) microbolometer detector that produces thermal images of 640 x 480 Pixels. They generate crisp and clear detailed images that are easy to interpret, resulting in reliable imaging with high accuracy.

### TOUCH SCREEN

The high quality LCD touch screen presents sharp and bright images and brings interactivity and user comfort to a new level. In combination with the large backlit buttons and joystick the cameras are very easy to use.

### RADIOMETRIC RECORDING

The T650sc / T630sc allow for full dynamic video streaming to a PC using USB or to mobile devices using Wi-Fi. They can also create visual and thermal non radiometric MPEG-4 video files. The T650sc can record radiometric IR sequences in real-time directly on the camera. These sequences contain all temperature data and can be post analyzed during playback on the camera or PC.

### RICH FEATURE SET

The T650sc / T630sc come with features like Multi Spectral Dynamic Imaging (MSX), auto-image rotation, image sketch and autofocus. They are equipped with Auto Hot/ Cold Spot & Audible/Visual Alarms. On-screen emissivity tables, up to 5 temperature measurement spots, and Delta T functionality mean you can quickly acquire and easily compare temperature data.

### SOFTWARE

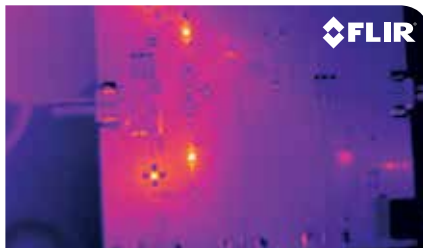
FLIR T650sc / T630sc cameras work seamlessly together with FLIR ResearchIR Max software enabling intuitive viewing, recording and advanced processing of the thermal data provided by the camera.

### MATHWORKS® MATLAB

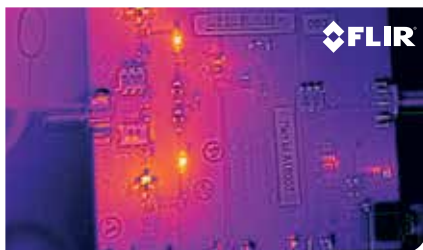
Control the T650sc / T630sc and capture data directly into MathWorks® MATLAB software for advanced image analysis and enhancement.

### KEY FEATURES

- THERMAL AND VISUAL CAMERA
- VOX UNCOOLED MICROBOLOMETER: 640 X 480 PIXELS
- MEASURES TEMPERATURES UP TO +2,000 °C
- ACCURACY OF +/- 1 °C
- MULTI-SPECTRAL DYNAMIC IMAGING (MSX)
- SOFTWARE INCLUDED



Thermal image without MSX.



Thermal image without MSX. MSX allows seeing even more detail on the thermal image.



## Imaging Specifications

System Overview	T650sc	T630sc
Detector Type	Uncooled Microbolometer	
Spectral Range	7.5 – 13.0 $\mu\text{m}$	
Resolution	640 x 480	
Detector Pitch 25 $\mu\text{m}$	17 $\mu\text{m}$	
NETD	<20 mK	<40 mK
Electronics / Imaging		
Time Constant	<8 ms	
Frame Rate	30 Hz	
Dynamic Range	14-bit	
Digital Data Streaming	Real-time Radiometric = USB to PC Real-time Non-radiometric = MPEG via USB to PC	
On Camera Radiometric Recording	Real-time Temperature Calibrated Movie Recording at 30Hz to SD card	No
Analog Video	DVI over HDMI	
GSP	Location data stores with every image	
Command & Control	USB, WiFi	
Measurement		
Standard Temperature Range	-40°C to 2,000°C -40°F to 3632°F	-40°C to 650°C -40°F to 1202°F
Accuracy	+/- 1 °C +/- 1% (limited range)	+/- 2 °C +/- 2% (limited range)
Optics		
Camera f/#	f/1.0, Integrated Lens 18 mm (25°)	
Available Lenses	88.9 mm (7°), 41.3 mm (15°), 24.6 mm (25°), 13.1 mm (45°), 6.5 mm (80°)	
Close-up Lenses / Microscopes	Close-up (25 $\mu\text{m}$ ), (50 $\mu\text{m}$ ), (100 $\mu\text{m}$ )	
Focus	Continuous Automatic or Manual (Motorized and tactile)	
Image Presentation		
On-Camera Display	Touch Screen/4.3 in LCD Display (1024 x 600) LCD Viewfinder (800 x 600)	
Auto-Orientation Keeps Onscreen Temperature Data	Keeps Onscreen Temperature Data Upright in Portrait or Landscape	
Automatic Gain Control	Manual, Linear, Histogram, DDE	
Image Analysis	Spot Meters, Areas, Auto Hot / Cold Detection, Difference Temp, Isotherms, Alarms	Spot Meters, Areas, Auto Hot / Cold Detection, Difference Temp, Isotherms, Alarms
Image Annotations	60 Sec Voice, Text, 4 x Markers, Sketch	
Visible Image	5.0 Megapixel from Integrated Visible Camera	
MSX® Enhancement/ Picture in Picture	Adds Visible Detail to Thermal/P-i-P Overlays Thermal on Visible Image	
General		
Operating Temperature Range	-15°C to 50°C (5°F to 122°F)	
Storage Temperature Range	-40°C to 70°C (-40°F to 158°F)	
Encapsulation	IP 54 (IEC 60529)	
Bump / Vibration	25 g (IEC 60068-2-29) / 2 g (IEC 60068-2-6)	
Power AC Adapter 90-260 VAC, 50/60 Hz	AC Adapter 90-260 VAC, 50/60 Hz or 12 V from a Vehicle	
Battery System	Li Ion, 4 Hours Operating Time	
Weight w/ Battery	1.3 kg (2.87 lb)	
Size (L x W x H)	143 x 195 x 95 mm (4.2 x 7.9 x 4.9 in)	
Mounting	¼"-20	



**PORTLAND**  
Corporate Headquarters  
FLIR Systems, Inc.  
27700 SW Parkway Ave.  
Wilsonville, OR 97070  
USA  
PH: +1 866.477.3687

#### BELGIUM

FLIR Systems Trading  
Belgium BVBA  
Luxemburgstraat 2  
2321 Meer  
Belgium  
PH: +32 (0) 3665 5100

#### SWEDEN

FLIR Systems AB  
Antennvägen 6,  
PO Box 7376  
SE-187 66 Täby  
Sweden  
PH: +46 (0)8 753 25 00

www.flir.com  
NASDAQ: FLIR

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#### NASHUA

FLIR Systems, Inc.  
9 Townsend West  
Nashua, NH 06063  
USA  
PH: +1 603.324.7611

#### UK

FLIR Systems UK  
2 Kings Hill Avenue  
Kings Hill  
West Malling - Kent  
ME19 4AQ  
United Kingdom  
PH: +44 (0)1732 220 011



Edificio Antalia  
Albasanz, 16  
28037 MADRID  
Tel.91 567 97 00  
Fax:91 570 26 61

Torre Mapfre-Vila Olímpica  
Marina, 16 - Planta 11-C 2  
08005 BARCELONA  
Tel.93 459 42 50  
Fax:93 459 42 62

