



# FLIR X6570sc

High Speed LWIR Performance Camera

The FLIR X6570sc thermal imaging camera provides superior thermal measurement performance paired with the most advanced connectivity. Whether you need to analyze high-speed processes with microsecond precision or monitor fast temperature spikes, the X6570sc has the integration time and frame speed needed to collect the most accurate data. In addition, the camera's state-of-the-art connectivity and intuitive user experience allow researchers to focus on their experiments instead of the camera controls.

## High Sensitivity Thermal Imaging

The X6570sc is equipped with a cooled mercury cadmium telluride (MCT) detector that's sensitive enough to distinguish temperature differences less than 25 mK (20 mK typical). The camera produces temperature measurements with an accuracy of +/-1% and a wide temperature range that automatically adjusts to best fit the thermal scene. Add an optional filter to the motorized 4-position filter wheel to uncover hidden spectral detail, or attach a close-up lens to resolve details as small as 5  $\mu\text{m}$ .

## Fast Frame Rates

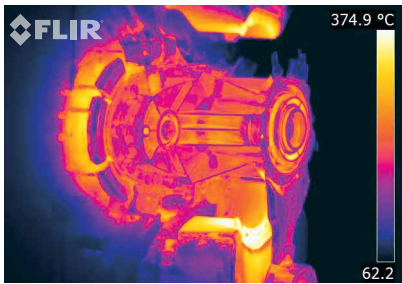
The X6570sc produces 640 x 512 full-frame imagery at speeds up to 234 Hz, with the short, 10  $\mu\text{s}$  integration time needed to accurately measure high-speed processes. User-defined subwindowing allows for even faster frame rates, up to 14,550 Hz. View thermal imagery live on the detachable touchscreen LCD monitor, or stream high-speed 14-bit data to a computer for live viewing, analysis, or recording.

## Connectivity and Compatibility

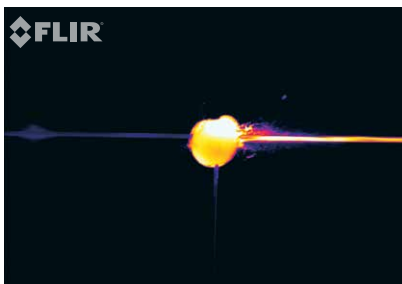
This camera works seamlessly with the supplied FLIR ResearchIR Max software for both viewing and processing thermal data. Connect over Camera Link Medium for full-bandwidth data acquisition, Gigabit Ethernet for simple connectivity, or standard BNC for frequently-used features such as detector sync, acquisition trigger, and analog lockin input. Each user can save camera configurations, including button programming, to the microSD card for fast and flexible exchange between users.

## Key Features:

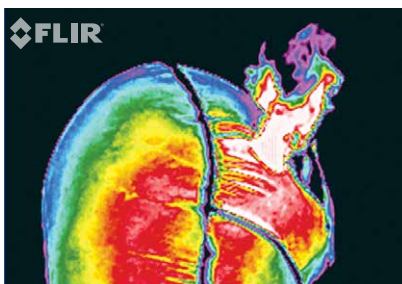
- Mercury cadmium telluride (MCT) detector
- Excellent image quality: 640 x 512 pixels
- Frame rates up to 15,032 with windowing
- Removable touchscreen LCD
- Range of connectivity options including Camera Link and Gigabit Ethernet
- Motorized 4-position filter wheel



Captures crisp, detailed images for R&D applications



High frame rate allows for stop-motion imagery



Fast integration time allows the X6570sc to accurately record rapid temperature shifts

# Specifications

System Overview		X6570sc	
IR Resolution	640 x 512		
Sensor Material	Mercury cadmium telluride (MCT)		
Pitch	15 µm		
Spectral Range	7.7 - 9.3 µm		
Thermal Sensitivity/NETD	< 25 mK (20 mK typical)		
Sensor Cooler Type	Closed cycle (rotary) Stirling cooler		
Operability	> 99%		
Electronics/Imaging			
Synchronization Modes	IRIG-B, Sync In/Out, Trigger In		
Integration Time	10 µs to 20,000 µs		
Max Frame Rate (Full Frame)	234 Hz		
Subwindow Modes	320 x 256 160 x 128 Arbitrary size, down to 160 x 1		
Max Frame Rate (Subwindow Mode)	233 Hz @ 640 x 512 @ 10 µs/ITR 871 Hz @ 320 x 256 @ 10 µs/ITR 2872 Hz @ 160 x 128 @ 10 µs/ITR 14550 Hz @ 160 x 1 @ 10 µs/ITR		
Dynamic Range	14-bit, 16-bit with DRX		
Digital Data Streaming	Simultaneous Gigabit Ethernet and Camera Link Base / Camera Link Medium		
Video Output	DVI 1080p		
Command & Control	Gigabit Ethernet, Camera Link, detachable LCD display, WiFi		
Measurement			
Accuracy	±1°C or ±1% of the reading		
Standard Temperature Range	5°C to 350°C (41°F to 662°F)		
Optics			
Camera f/number	f/2.0		
Available Lenses	12 mm - 44° x 34° - USL Motorized 25 mm - 22° x 17° - USL Motorized 50 mm - 11° x 8.8° - USL Motorized 100 mm - 5.5° x 4.4° - USL Motorized 200 mm - 2.75° x 2.2° - USL Motorized Close up x1 - 9.6 mm x 7.68 mm		
Focus	Manual		
Filtering	4-slot motorized filter wheel		
Image Presentation			
On-Camera Display	Detachable touchscreen LCD display (800 x 480 pixel)		
Analog Palettes	Selectable 8-bit		
Automatic Gain Control	Manual, Linear, ROI		
Display Overlay	Temperature measurement & scale		
Image Analysis	On-camera temperature analysis		
General			
Operating Temperature Range	-20°C to 50°C (-4°F to 122°F)		
Shock / Vibration	Operational 6 ms, 25 g, IEC 68-2-29 Operational 2 g, IEC 68-2-26		
Power	24 VDC		
Weight w/o Lens	4.80 kg (10.58 lbs) with LCD 4.3 kg (9.47 lbs) without LCD		
Size (L x W x H) w/o Lens	23 x 15 x 22 cm (9 x 6 x 8.6 in) with LCD 23 x 15 x 18 cm (9 x 6 x 7 in) w/o LCD		
Mounting	UNC ¼"-20 + 3 x M5 threads		

Specifications are subject to change without notice



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