

# HIGH DEFINITION HIGH-SPEED IR CAN'T BE WRONG



Go Thermal in HD!

## FLIR X8500sc MWIR Science-Grade

High-definition & high-speed infrared – 180 fps at full resolution – 1280 x 1024.  
Record breaking HD IR speeds up to 6,000 fps.

**Experience the Invisible.™**

Contact us for more information or to schedule a demo today.

**HADLAND**  
IMAGING

**West Coast**

1414 Soquel Ave, Suite 200  
Santa Cruz, CA 95062  
USA  
phone: 1-408-203-2727  
[www.hadlandimaging.com](http://www.hadlandimaging.com)

**East Coast**

10 Park Place, Suite 507  
Butler, NJ 07405  
USA  
phone: 1-862-228-2185

**FLIR**

The World's Sixth Sense®

**For more information**

Call 1-888-43HADLAND (1-888-434-2352) or email, [sales@hadlandimaging.com](mailto:sales@hadlandimaging.com)  
about high-speed visible, infrared & Flash X-ray imaging solutions.  
FLIR on the web: [www.flir.com](http://www.flir.com)



FLIR X8500sc HD High-Speed MWIR Camera

- 180 fps full-frame – 1280 x 1024
- Up to 36 seconds of on-camera RAM recording
- Synchronization with other instruments & events
- Full GenICam support over GigE, CXP, & Camera Link interfaces
- Four-position motorized filter wheel

# FLIR X8500sc – HD MWIR Science-Grade

High-definition, high-speed infrared with 180 fps at full resolution – 1280 x 1024. Record breaking HD IR speeds up to 6,000 frames per second.

## Go thermal with true HD high-speed IR imaging.

The **FLIR X8500sc** is a highly sensitive, high-speed, high-definition MWIR camera designed for scientists, researchers, and engineers. It can record 180 fps at a full 1280 x 1024 pixel resolution, for true HD high speed thermal imaging. Windowing allows even faster frame rates of up to 6,000 fps. The X8500sc has all the features needed for research & science: from on-camera RAM/SSD recording to a four-position motorized filter wheel. Plus, by combining HD resolution with high-speed frame rates, researchers can fully image the scene and stop motion on high-speed events – whether they're in the lab or on the test range.

## Tech Specs

### System Overview

<b>Detector Type</b>	FLIR Indium Antimonide (InSb)
<b>Spectral Range</b>	3.0–5.0µm or 1.5–5.0µm
<b>Resolution</b>	1280 x 1024
<b>Detector Pitch (pixel)</b>	12µm²
<b>Thermal Sensitivity/NETD</b>	< 20mK
<b>Well Capacity</b>	11.5M electrons
<b>Operability</b>	> 99.5% (> 99.95% typical)
<b>Sensor Cooling</b>	Closed cycle linear

### Electronics

<b>Readout Type</b>	Snapshot
<b>Readout Modes</b>	Asynchronous integrate while read Asynchronous integrate then read
<b>Synchronization Modes</b>	Genlock, IRIG-B, Sync-in, Sync-out
<b>Image Time Stamp</b>	Internal IRIG-B decoder clock, TSPI accurate time stamp
<b>Integration Time</b>	480ns to 687 sec
<b>Pixel Clock</b>	355MHz
<b>Frame Rate (Full Window)</b>	Programmable; 0.0015Hz to 180Hz
<b>Subwindow Mode</b>	Flexible windowing (steps of 64 columns, 4 rows)
<b>Dynamic Range</b>	14-bit
<b>On-Camera Image Storage</b>	RAM (volatile): 16GB, up to 6,500 frames, full frame SSD (non-volatile): > 4TB
<b>Radiometric Data Streaming</b>	Simultaneous Gigabit Ethernet (GigE Vision), Camera Link, CoaXPress (CXP)
<b>Standard Video</b>	HDMI, SDI, NTSC, PAL
<b>Command &amp; Control</b>	GigE, USB, RS-232, Camera Link, CXP (GenICam protocol supported over GigE, CXP or Camera Link)

### Temperature Measurement

<b>Standard Temperature Range</b>	-4° to 662° F (-20° to 350° C)
<b>Optional Temperature Range</b>	Up to 5,432° F (3,000° C)
<b>Accuracy</b>	± 2% of reading or ± 2° C

### Optics

<b>Camera f/Number</b>	f/2.5 or f/4.1
<b>Available Lenses</b> (Uses FLIR HDC Optics)	3-5µm: 17mm, 25mm, 50mm, 100mm, 200mm Broadband (1-5µm): 25mm, 50mm, 100mm
<b>Close-up Lenses/Microscopes</b>	1x, 4x (3-5µm, requires f/4.1 camera)
<b>Lens Interface</b>	FLIR HDC (4-tab bayonet)
<b>Focus</b>	Manual
<b>Filtering</b>	Filter wheel, standard 1" filters

### Image/Video Presentation

<b>Palettes</b>	Selectable 8-bit
<b>Automatic Gain Control</b>	Manual, Linear, Plateau equalization, ROI, DDE
<b>Overlay</b>	Customizable (IRIG-B, Date, Integration time, Internal temp, Frame rate, Sync mode, Cooler hours)
<b>Video Modes</b>	HD: 720p / 25 / 29.9 / 50 / 59.9 Hz, 1080p / 25 / 29.9 Hz Composite: NTSC, PAL
<b>Digital Zoom</b>	1x, 4x, 4:3

### General

<b>Operating Temperature Range</b>	-4° to 122° F (-20° to 50° C)
<b>Storage Temperature Range</b>	-40° to 176° F (-40° to 80° C)
<b>Shock/Vibration</b>	40 g, 11msec 1/2 sine pulse/4.3 g RMS random vibration, all axes
<b>Power</b>	24VDC (< 50W steady state)
<b>Weight w/handle, w/o lens</b>	14 lbs (6.35 kg)
<b>Size (LWH) w/o handle, lens</b>	9.5 x 6.5 x 6" (241 x 165 x 152 mm)
<b>Mounting</b>	2 x 1/4-20, 1 x 3/8-16, 4 x #10-24,

**BETTER GEAR.  
BETTER RESULTS.**  
We've got the gear you need to get the job done right

**HADLAND**  
IMAGING

#### West Coast

1414 Soquel Ave, Suite 200  
Santa Cruz, CA 95062  
USA  
phone: 1-408-203-2727  
[www.hadlandimaging.com](http://www.hadlandimaging.com)

#### East Coast

10 Park Place, Suite 507  
Butler, NJ 07405  
USA  
phone: 1-862-228-2185



The World's Sixth Sense®

#### For more information

Call **1-888-43HADLAND** (1-888-434-2352) or email, [sales@hadlandimaging.com](mailto:sales@hadlandimaging.com)  
about high-speed visible, infrared & Flash X-ray imaging solutions.  
FLIR on the web: [www.flir.com](http://www.flir.com)