FLIR X8580-HS SLS™

High Definition LWIR
Science-Grade Camera

Key Features:

- **Full Frame Rate Streaming** Experience unmatched image clarity and speed with 10 GigE, CXP 2.1, and CameraLink Full high-speed interfaces.
- **Extended SSD Recording** Capture more than two hours of detailed thermal events directly to a removable 4 TB SSD with zero dropped frames.
- **Seamless Data Integration** Effortlessly transfer full recordings from SSD to computer, ensuring your thermal data is always ready for analysis.
- **Precise Timing System** Proprietary triggering, synchronization, and accurate IRIG time stamping system that ensures precise, on-time recording.

Main Applications:

- PCB and electronic component testing
- Non-destructive testing
- Target signature
- Radiometry
- Stress mapping

www.FLIR.com/X8580HS-SLS

SPECIFICATIONS

	X8581HS SLS	X8583HS SLS
Part #	29761-281	29761-283
Detector		
Detector Type	Strained-Layer Superlattice	
Spectral Range	7.5 µm (lower), 11.5 – 12.5 µm (upper)	7.5 µm (lower), 11.5 – 12.5 µm (upper)
Camera f/#	f/2.5	f/4.0
Resolution	1280 × 1024	
Detector Pitch	12 µm	
Thermal Sensitivity/NETD, typical	40 mK typical	
Operability	≥98% (≥99% typical)	
Sensor Cooling	Linear Sterling Cooler	
Electronics		
Readout Type	Snapshot	
Readout Modes	Asynchronous Integrate While Read; Asynchronous Integrate Then Read	
Synchronization Modes	Sync In, Sync Out, Tri-Level Sync, Video Sync	
Image Time Stamp	Internal precision timestamp. IRIG-B AM decoder, TSPI accurate, Free wheel if sync signal is lost	
Trigger Modes	Trigger In, Software generated, Time generated	
Integration Time	270 ns to approx.Full Frame	
Pixel Clock	355.2 MHz	
Frame Rate (Full Window)	Programmable; ~0.5 Hz to 181 Hz	
Subwindow Mode	Flexible windowing down to 64 × 4 (steps of 64 columns, 4 rows)	
Dynamic Range	14-bit	

For more information and to find your local support number, visit:
FLIR.com/contact/instruments-support
www.FLIR.com

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FLIR X8580-HS_SLS_US

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High-Speed MWIR
Science-Grade Camera

SPECIFICATIONS, CONT.

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Electronics Continued		
Direct to SSD Recording	Yes, removable 4 TB NVMe SSD included,approx. 2 hours of zero dropped frames record time	
On-Camera Image Storage	RAM (volatile): 64 GB, up to 23,000 frames full frame NVMe U.2 SSD (user-removable/non-volatile): 4 TB U.2 SSD included, up to 1.4 M frames full frame	
Download of On-Camera RAM/SSD Recordings	Transfer from SSD through 10 GigE, CXP, or CL to Research Studio	
Radiometric Data Streaming	Simultaneous 10 Gigabit Ethernet (GigE Vision), Camera Link, CoaXPress (CXP 2.1) Single link @ 10 Gbps or Dual Link @ 5 Gbps	
Standard Video	HDMI, SDI	
Command and Control	GigE, USB, RS-232, Camera Link Full, CXP (GenICam protocol supported over GigE or CXP)	
Temperature Measurement		
Standard Temperature Range (with band matched optics)	-20°C to 300°C (-4°F to 572°F)	-20°C to 350°C (-4°F to 662°F), -10°C for microscopes
Optional Temperature Range (with band matched optics)	250°C to 1500°C (ND1) 500°C to 3000°C (ND2)	
Accuracy	≤ 100°C ±2°C (±1°C typical), > 100°C ±2% of reading (±1% typical)	
Ambient Drift Compensation (with factory cal)	Yes	
Optics		
Available Lenses	Manual (7.5 – 12 µm): 17 mm, 25 mm, 50 mm, 100 mm, 200 mm Motorized (7.5 – 12 µm): 17 mm, 25 mm, 50 mm, 100 mm, 200 mm	
Close-up Lenses/Microscopes	1×	
Lens Interface	FLIR FPO-M (4-tab bayonet, motorized)	
Focus	Motorized (compatible w/ manual)	
Filtering	4-position motorized filter wheel, standard 1-inch filters, user swappable	
Image/Video Presentation		
Palettes	Selectable 8-bit	
Automatic Gain Control	Manual, Linear, Plateau equalization, DDE	
Overlay	Customizable with the ability to toggle off	
Video Modes	HD-SDI: 720p@50/59.9 Hz, 1080p@25/29.9 Hz, 1080p@60 Hz SD-SDI: 480i@60 Hz, 576i@50 Hz	
Digital Zoom	1x, Auto (best fit)	
General		
Operating Temperature Range	-20°C to 50°C (-4°F to 122°F)	
Power	24 VDC (< 50 W steady state)	
Weight w/o Lens	6.35 kg (14 lbs)	
Size (L × W × H) w/o Lens	249 mm × 157 mm × 147 mm (9.8 in × 6.2 in × 5.8 in)	
Mounting	2 × ¼ in. -20, 1 × 3/8 in. -16, 4 × #10 -24, Side: 3x ¼ in. -20 (each side)	

Specifications subject to change. For the most up-to-date specifications, please visit flir.com.

1	NVMe U.2 Solid State Drive (SSD)
2	10 GigE Vision (RJ45)
3	Camera Link Full (Dual MDR)
4	Record Start (BNC)
5	CoaXpress 2.1 (BNC)
6	Sync In (BNC)
7	Trigger In (BNC)
8	SDI Video Out (BNC)
9	Sync Out (BNC)
10	Tri-Level Sync (BNC)
11	IRIG Sync Input (BNC)
12	Auxiliary (DB-26)
13	DC Power

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