



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

©2024 Teledyne FLIR, LLC. All rights reserved.
Revised 03/21/24
FLIR X8580-HS_SLS_A4



FLIR X8580-HS SLS™

High-Speed MWIR
Science-Grade Camera

SPECIFICATIONS, CONT.

X8581HS SLS		X8583HS SLS	
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	1x		
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.

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

This product is subject to United States export regulations and may require US authorization prior to export, reexport, or transfer to non-US persons or parties. Diversion contrary to US law is prohibited.

For assistance with confirming the Jurisdiction & Classification of Teledyne FLIR, LLC products, please contact exportquestions@flir.com. ©2024 Teledyne FLIR, LLC. All rights reserved.
Revised 03/21/24
FLIR X8580-HS_SLS_A4
(24-0023-INS)