FLIR X6980-HS SLS™

High-Speed 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 1.5 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:

- Ballistics and munitions testing
- Target signature
- Radiometry
- Non-destructive testing
- Stress mapping

www.FLIR.com/X6980HS-SLS

SPECIFICATIONS

	X6981HS SLS	X6983HS SLS
Part #	29448-281	29448-283
Detector		
Detector Type	Strained-Layer Superlattice	
Spectral Range	7.5 µm (lower), 11.5 – 12.5 µm (upper)	
Camera f/#	f/2.5	f/4.1
Resolution	640 × 512	
Detector Pitch	25 µm	
Thermal Sensitivity/NETD	40 mK typical	
Operability	≥98% (≥99% typical)	
Sensor Cooling	Closed cycle rotary	
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; 0.0015 Hz to 1004 Hz	
Subwindow Mode	Flexible windowing down to 32 × 4 (steps of 32 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

Revised 04/15/24
FLIR X6980-HS_SLS_US

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SPECIFICATIONS, CONT.

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Electronics Continued		
Direct to SSD Recording	Yes, removable 4 TB NVMe SSD included, approx. 1,5 hours of zero dropped frames record time	
On-Camera Image Storage	RAM (volatile): 64 GB, up to 95,000 frames full frame NVMe U.2 SSD (user-removable/non-volatile): 4 TB U.2 SSD included, up to 6 M frames full frame	
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 Full, 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, 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)	
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.

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

Revised 04/15/24
FLIR X6980-HS_SLS_US
(24-0023-INS)