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AuraSR™

The Fastest Super Resolution Thermal Infrared Camera



TM

Santa Barbara **Focalplane**





PD079-056



PD079-059

AuraSR

AuraSR Super Resolution infrared camera sets the standard for high performance IR imaging with its 16 channel >100 Hz frame rate output and 1024 x 1024 FPA built with Lockheed Martin's advanced InSb FPA technology.

Santa Barbara Focalplane (SBF) is a merchant vendor of the very latest in thermal infrared components, imaging systems, cameras and technology. SBF specializes in designing and manufacturing the highest quality indium antimonide (InSb) focal plane arrays (FPAs) in many configurations from linear through large staring formats. Product groups include FPAs, Integrated Detector/Dewar/Cooler Assemblies (IDDCAs), digital camera heads, and complete imaging systems.

Specifications

Camera Type	InSb	QWIP	HgCdTe
Detector			
Spectral Range	<1 μm to 5.2 μm	8.5 μm to 9.1 μm	<2 μm to >10 μm
Resolution	1024 x 1024 (windowable)		
Pixel Pitch	19.5 μm		
Electronics & Data Rate			
Integration Type	Snapshot		
Integration Time (Elect. Shutter Speed)	1 μs to full frame time		
Integration Delay & Jitter after Sync Input	<120 \pm 32 nanoseconds		
Dynamic Range	14 bits		
Data Rate	128 megapixels/sec		
Max Frame Rate at Full Window	114 frames per second		
Subwindowing	Predefined & user selectable		
Performance Specifications			
NETD	<20 mK (<14 typical)	<35mK	<25mK (<20 typical)
Well Capacity	8.1 million electrons		
Operability	>99.5	>99.5	>98.0
Camera Specifications			
Sensor Assembly f/#	f/4.0		
Standard Spectral Range (Cold Filter)	3.3 - 4.1 & 4.4 - 4.9 μm	8.5 μm to 9.1 μm	2 μm to >10 μm
Additional Cold Filter Options	3-5 μm , none	N/A	8 μm to 10.5 μm
Sensor Cooling	Stirling closed cycle cooler		
Lens Mount	Bolt hole patterns & twist-lock bayonet		
Power at 24-36Vdc	36 W steady state		
Advanced Communication and Data Transfer			
Command, Control and Data Output	Full Camera Link®		
Meta-Data	IRIG-B		
Software	WinIR™ & Software Development Kit		
Physical Characteristics			
Size (width x height x length)	6" x 6" x 11"		
Weight	15 lbs		
Environmental	Rugged design - 95% non-condensing		
Sun Protection (surface and shielding)	Thermal Enamel & Optional Sun Shield		
Optics			
Fixed Focal Length	f/4.0 60mm, 100mm	f/4.0	f/4.0
Continuous Zoom	f/4.0 50 - 200mm		

Features

- Super Resolution Highest Speed Focalplane Array
 - High speed 16-output FPA
 - Sensitive from UV to 5.3 μm
 - 1024x1024 windowable format
 - Standard CO₂ notch cold filter
- Ultra Fast Trigger Input Synchronization:
 - <120 nsec delay to start of integration with jitter of less than 32 nsec
 - Super-framing & Preset Sequencing Modes
- FPA Impervious to Direct Sun
 - No residual after-image of ultra-bright objects
- Adjustable Integration Times, Frame Rates & Window Sizes
- WinIR™ Software
 - Stream data to disk
 - SDK for custom development
- Digital Data Output
 - Full Camera Link® with live analog video via video card
- Integrated IRIG-B + metadata stamped on each frame header
- Optional Configurations
 - Large Cold Stop to FPA Distance for telescope relays & custom lenses
- Thermal-Efficient Ruggedized Package

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Front top: PD079-056; Front bottom: PD079-057