

SOTIRA™ SYSTEMS

Infrared Focal Plane Interface Electronics

Designed for infrared space sensors, the radiation hardened Sotira Systems can be configured for direct data pass through or to support a range of image processing functions for Defense, Aerospace, and Industrial needs.

**FEATURES:**

- Compatibility with Teledyne and expanding the Sotira family to support additional infrared camera focal plane arrays, such as Raytheon and HRL, reducing system cost and complexity
- High-speed image acquisition and data transfer provide faster access to your data
- Advanced image processing algorithms for improved image quality and accuracy
- Low power consumption, so batteries last longer in portable applications
- 6U, 3U, and Stand Alone system variations
- Heat rejection by conduction in vacuum
- Designed for EMI/EMC and radiation environments
- SmallSat – small footprint
- Enclosure options include standalone enclosure, or SpaceVPX Vita 74 or 78 interface standards
- Redundancy by duplication

APPLICATIONS:

- Defense: Surveillance, Reconnaissance, and Target tracking
- Industrial Inspection: Thermal imaging, Quality control, and Non-destructive testing

PERFORMANCE:

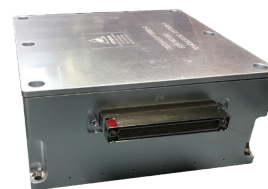
- Resolution: up to 8k
- Bit Rate: up to 3.2 Gbps
- Frame Rate up to 120 frames per second

COMPATIBILITY:

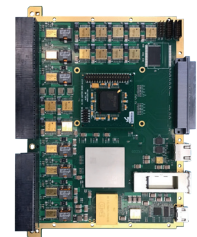
- FPA's from Teledyne with expansion to support other vendors
- Requires host computer with USB 3.0 or higher

PRICING AND AVAILABILITY:

- Demonstrated cost effective unit pricing with attractive delivery schedules



Sotira Stand Alone Unit



Sotira 6U

IRIS TECHNOLOGY

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SOTIRA SYSTEM VARIANTS

INFRARED FOCAL PLANE INTERFACE ELECTRONICS (FPiE)			
	SOTIRA (6U)	SOTIRA (3U)	STAND ALONE (CUSTOM)
Size	160 x 234 mm	160 x 100 mm	161 x 158 mm
Image Processing	DDR3 72bit ECC 1200MT/s across 32 lanes 1.6Gb/s to 3.2Gb/s (cabling)		None
Diagnostics	QSFP 40Ge image output HDMI to 4K monitor output External RS422 TX/RX IO External CAN bus IO		None
Brassboard/EM models	Available		
Functions	Powering FPA, configuring FPGA		
Reprogrammability	Yes		
Formats	2k, 4k, 8k imagers, all spectral bands		
FPA Powering	Low noise LDOs Remote sensing feedback ADC voltage sensing ADC current sensing FPGA enable sequencing Voltage tuning Voltage sequencing		
FPA LVDS registers, RESET, frame start	TOP/BOT signals Script file for configuring registers		
FPA MCLK	TOP/BOT MCLKs Fixed low jitter LVDS oscillators		
FPGA Static	RTAX250 for health monitoring, Xilinx FPGA programming, elements of cyber security		N/A
FPGA Dynamic	Xilinx Kintex Ultrascale 060		
Image GTH SERDES	32 lanes at up to 1.6Gb/s or 3.2Gb/s		
IO cmd/status	CAN		
FPA Monitor	Temperature/Voltage/Current		
Power Input	27-37 VDC		
TRL Level	5	5	9

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