DIONE S 1024 CAM SERIES

Ultra-compact LWIR thermal imaging core

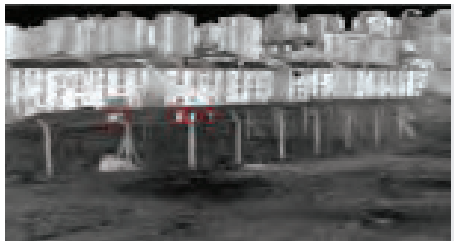
- SWaP optimized, uncooled with mechanical shutter
- Microbolometer detector with 1024x768 pixel resolution and 12 µm pixel pitch

STATE-OF-THE-ART THERMAL IMAGING CORE

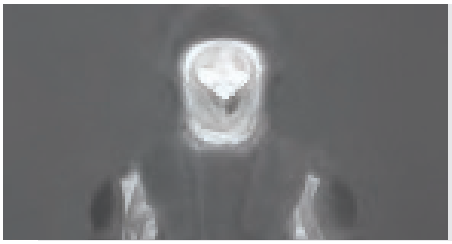
The Dione S 1024 CAM series is based on an uncooled 12 µm pitch microbolometer detector with a 1024x768 pixel resolution. The detector NETD is less than 40 mK (available upon request) or 50 mK. The maximum frame rate is 80 Hz.

Dione S 1024 CAM is a LWIR uncooled thermal imaging core with housing supporting M34/M45 lens (optional).

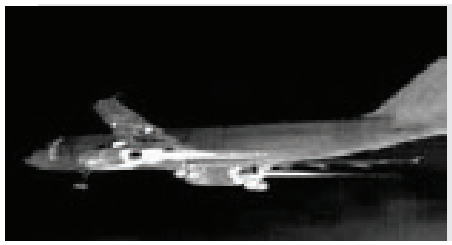
All Dione 1024 versions benefit from Xenics image enhancement for advanced image processing while keeping power consumption low. Moreover, GenICam compliance and availability of multiple lenses add flexibility for integration programs in the target markets like safety and security, transportation and industrial process monitoring.



Border Security



Thermal Security



Vision Enhancement

DESIGNED FOR USE IN

- Safety & Security
- Transportation
- Process Monitoring

ADVANTAGES

- Ultra-compact size, low weight and power (SWaP)
- 1024x768 microbolometer detector with 12 µm pixel pitch
- Frame rates up to 80 Hz
- Detector NETD is less than 40 mK (available upon request) or 50 mK
- Uncooled with mechanical shutter

SPECIFICATIONS

Camera Specifications	Dione S 1024 CAM 40 mK	Dione S 1024 CAM 50 mK
Mechanical specifications		
Camera dimensions (width x height x length) [mm] (approx.)	60x55x39*; 65x62x40*	
Optical interface (optional)	M34x0.5 or M45x0.75	
Camera weight [gr]	188*; 190*	
Connector general I/O	SAMTEC ST5-30-1.50-L-D-P-TR	
Environmental & power specifications		
Operating temperature range (housing temperature) [°C]	From -40 to +70	
Storage temperature [°C]	From -45 to +85	
Power consumption [W]	2.3 (at 60 Hz operation; 16bit DV)	
Power supply voltage	DC 5 V	
Shock	40 g, 11 ms, MIL-STD810G	
Vibration	5 g (20 to 2000 Hz), MIL-STD810G	
Regulatory compliance	RoHS	
Electro-optical specifications		
Image format [pixels]	1024x768	
Pixel pitch [µm]	12	
Detector type	Microbolometer	
Integration type	Rolling shutter	
Active area and diagonal [mm]	12.29 x 9.432 (diagonal 15.49)	
Detector NETD (Noise Equivalent Temperature Difference) [mK]	<40 (at 30Hz, 300K, F/1), available upon request	<50 (at 30Hz, 300K, F/1)
Spectral range [µm]	8-14	
Pixel operability	>99.5%	
Max frame rate [Hz] [full frame]	80	
Integration time range [µs]	20 - 65 recommended (1 - 100 is possible)	
Region of interest	Yes	
Min region size [pixels]	80 x 80	
Analog-to-Digital [ADC] [bits]	14	
Command and control	via SAMTEC ST5 connector	
Digital output format	16bit DV**, MIPI CSI-2**	
Trigger	via SAMTEC ST5 connector	
Product selector guide		
Part number	XEN-000798	XEN-000797

* refers to specifications applicable for optical interfaces (optional)

** refers to digital output formats/interfaces that are available as options