

DIONE 1024 CAM SERIES

Ultra-compact LWIR thermal imaging core

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



STATE-OF-THE-ART THERMAL IMAGING CORE

The Dione 1024 CAM series is based on the Dione 1024 OEM thermal imaging core with a 1024x768 pixel resolution and 12 μm pitch. The detector NETD is less than 40 mK (available upon request) or 50 mK. The maximum frame rate is 80 Hz.

Dione 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.

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



Border Security



Thermal Security



Vision Enhancement

SPECIFICATIONS

Camera Specifications	Dione 1024 CAM 40 mK		Dione 1024 CAM 50 mK
Mechanical specifications			
Camera dimensions (width x height x length) [mm] (approx.)	40 x 40 x 34* 50 x 50 x 35*		
Optical interface (optional)	M34x0.5 or M45x0.75		
Camera weight [gr]	78* 80*		
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]	~ 2.1 (at 60 Hz) ~ 1.9 (at 30 Hz)		
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		
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)		
Analog-to-Digital [ADC] [bits]	16		
Command and control	via SAMTEC ST5 connector		
Digital output format	16bit DV		
Trigger	via SAMTEC ST5 connector		
Product selector guide			
Part number	XEN-000796		XEN-000794

* refers to specifications applicable for optical interfaces (optional)

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