

## DIONE 1280 CAM SERIES

- Ultra-compact LWIR thermal imaging core
- SWaP optimized, uncooled and shutterless
- Microbolometer detector with 1280x1024 pixel resolution and 12  $\mu\text{m}$  pixel pitch



### STATE-OF-THE-ART THERMAL IMAGING CORE

The Dione 1280 CAM series is based on an uncooled microbolometer detector with a 1280x1024 pixel resolution and 12  $\mu\text{m}$  pitch. The detector NETD is less than 40 mK (available upon request) or 50 mK.

Dione 1280 CAM is a LWIR uncooled thermal imaging core with housing supporting M34/M45 lens (optional).

All Dione 1280 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)
- 1280 x 1024 microbolometer detector with 12  $\mu\text{m}$  pixel pitch
- Frame rates up to 60 Hz
- Detector NETD is less than 40 mK (available upon request) or 50 mK



Border Security



Thermal Security



Vision Enhancement

## SPECIFICATIONS

Camera Specifications	Dione 1280 CAM 40 mK	Dione 1280 CAM 50 mK
<b>Mechanical specifications</b>		
Camera dimensions (width x height x length) [mm] (approx.)	40 x 40 x 35*; 50 x 50 x 36*	
Optical interface (optional)	M34 x 0.5 or M45 x 0.75	
Camera weight [gr]	78*; 80*	
Connector general I/O	SAMTEC ST5-30-1.50-L-D-P-TR	
<b>Environmental &amp; power specifications</b>		
Operating temperature range (housing temperature) [°C]	From -40 to +70	
Storage temperature [°C]	From -45 to +85	
Power consumption [W]	1.9 (at 30 Hz operation; 16bit DV) & 2.1 (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	
<b>Electro-optical specifications</b>		
Image format [pixels]	1280x1024	
Pixel pitch [µm]	12	
Detector type	Microbolometer	
Integration type	Rolling shutter	
Active area and diagonal [mm]	15.36 x 12.29 (diagonal 19.67)	
Detector NETD [Noise Equivalent Temperature Difference] [mK]	<40 (at 60 Hz, 300K, F/1), available upon request	<50 (at 60Hz, 300K, F/1)
Spectral range [µm]	8-14	
Pixel operability	>99.5%	
Max frame rate [Hz] [full frame]	60	
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**, USB**	
Trigger	via SAMTEC ST5 connector	
<b>Product selector guide</b>		
Part number	XEN-000702	XEN-000701

\* refers to specifications applicable for optical interfaces (optional)

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

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