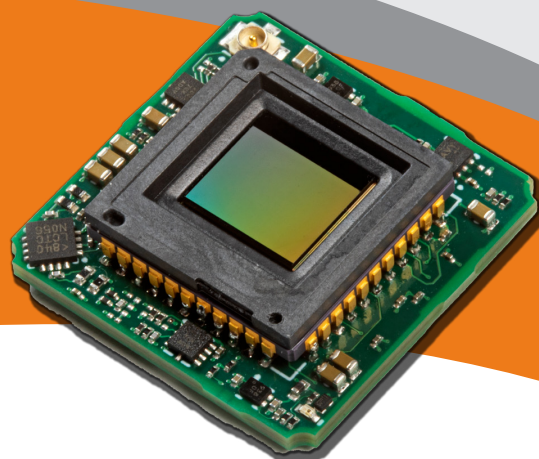


## DIONE 640 OEM SERIES

Ultra-compact LWIR thermal imaging core

- SWaP optimized, uncooled and shutterless
- Microbolometer detector with 640x480 pixel resolution and 12  $\mu\text{m}$  pixel pitch



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

The Dione 640 OEM series is based on an uncooled microbolometer detector with a 640x480 pixel resolution and 12  $\mu\text{m}$  pixel pitch. The detector NETD is less than 40 mK (available upon request) or 50 mK. The maximum frame rate is 60 Hz.

The Dione 640 OEM comes as a single PCB based core, with an ultra-compact form factor of just 25 x 25 x 10 mm<sup>3</sup>.

The Dione 640 OEM benefits from Xenics image enhancement for advanced image processing while keeping power consumption low. Moreover, GenICam compliance and availability of multiple lenses adds 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)
- 640x480 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
- Uncooled and shutterless



Border Security



Thermal Security



Vision Enhancement

## SPECIFICATIONS

Camera Specifications	Dione 640 OEM 40 mK		Dione 640 OEM 50 mK
Mechanical specifications			
Camera dimensions (width x height x length) [mm] (approx.)	25 x 25 x 10		
Optical interface	-		
Camera weight [gr]	6		
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]	0.750 (60 Hz operation)		
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]	640x480		
Pixel pitch [µm]	12		
Detector type	Microbolometer		
Integration type	Rolling shutter		
Active area and diagonal [mm]	7.68 x 5.76 (diagonal 9.6)		
Detector NETD (Noise Equivalent Temperature Difference) [mK]	<40 (at 30 Hz, 300K, F/1), available upon request	<50 (at 30 Hz, 300K, F/1)	
Spectral range [µm]	8-14		
Pixel operability	>99.5% (excluding 3 peripheral rows and columns)		
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 (standard), MIPI CSI-2 (optional), UVC (optional), USB (optional)		
Trigger	via SAMTEC ST5 connector		
Product selector guide			
Part number	XEN-000734	XEN-000733	



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