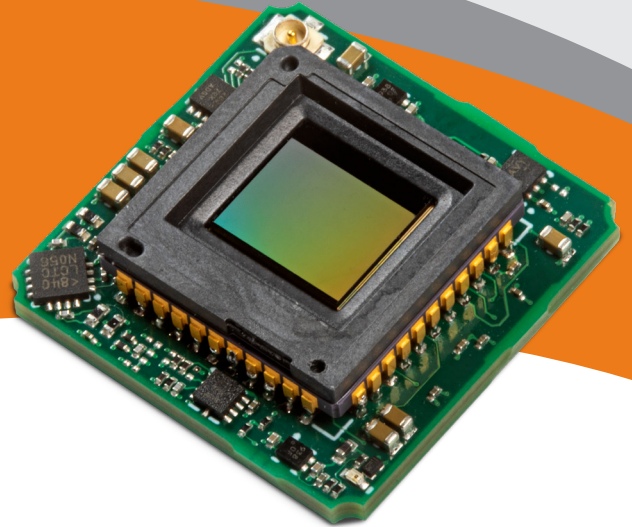


DIONE 640 OEM SERIES

Ultra-compact LWIR thermal imaging core

- SWaP optimized, uncooled and shutterless
- Microbolometer detector with 640x480 resolution and 12 μm pixel pitch

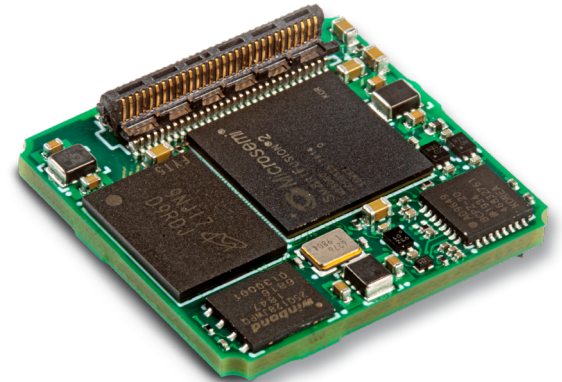


STATE-OF-THE-ART THERMAL IMAGING CORE

The Dione 640 series is based on an uncooled microbolometer detector with a 640x480 pixel resolution and 12 μm pixel pitch. The NETD (Noise Equivalent Temperature Difference) is less than 60 mK and 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 mm³.

All Dione 640 versions benefit from Xenics image enhancement for advanced image processing while keeping power consumption low (< 1 W). A 16 bit digital video output (compatible with CameraLink) is available on all versions, via the SAMTEC ST5 connector. Moreover, GenICam compliance and availability of multiple lenses adds flexibility for integration programs in the target markets such as 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 μm pixel pitch
- Frame rates up to 60 Hz
- Uncooled and shutterless



Thermal security



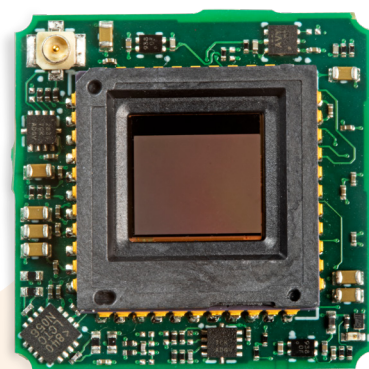
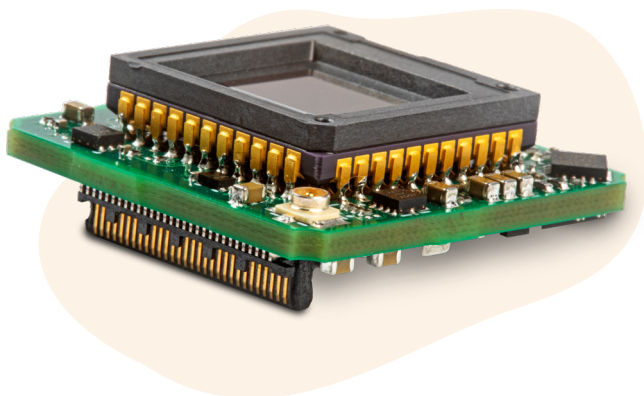
Vision enhancement



Border security

SPECIFICATIONS

Camera Specifications	Dione 640 OEM
Mechanical specifications	
Approximate dimensions - excluding lens [width x height x length] [mm]	25 x 25 x 10
Weight [gr] - excluding lens	6
Optical interface	-
Connector general I/O	SAMTEC ST5-30-1.50-L-D-P-TR
Environmental & power specifications	
Ambient operating temperature range [°C]	From -40 to +70
Storage temperature [°C]	From -45 to +85
Power consumption [W]	0.8
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]	640 x 480
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]	<60 [at 30 Hz, 300 K, 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
Region of interest	No
Min region size [pixels]	NA
Analog-to-Digital [ADC] [bits]	14
Command and control	SAMTEC ST5 connector
Digital output format	16 bit [compatible with CameraLink]
Trigger	SAMTEC ST5 connector
Product selector guide	
Part number	XEN-000684



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