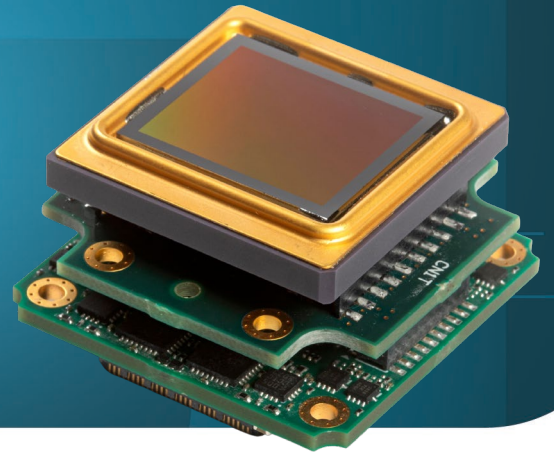ULTRA-COMPACT, UNCOOLED
LWIR THERMAL IMAGING CORE
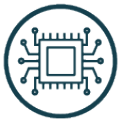
Xenics
EXOSENS GROUP

Dione 1280 OEM Series

STATE-OF-THE-ART THERMAL IMAGING CORE

KEY FEATURES

STATE-OF-THE-ART MICROBOLOMETER DETECTOR WITH 12 μm PIXEL PITCH

INDUSTRY LEADING LOW SWaP (SIZE, WEIGHT AND POWER)

FRAME RATES UP TO 60 Hz

The Dione 1280 OEM series is based on an uncooled microbolometer detector with a 1280x1024 pixel resolution and 12 μm pixel pitch.

The Dione 1280 OEM benefits from Xenics image enhancement for advanced image processing while keeping power consumption low.

All Dione 1280 versions are GenICam compliant. The ultra-compact Dione 1280 OEM series find application in safety and security systems, as well as in industrial thermal imaging systems.

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Camera Specifications	Dione 1280 OEM 40 mK	Dione 1280 OEM 50 mK
Mechanical specifications		
Dimensions (width x height x length) [mm]	35 x 35 x 23.5 (16bit DV), 35x35x30 (MIPI CSI-2, USB)	
Weight [gr]	27 (16bit DV); 30 (MIPI CSI-2, USB)	
Connector general I/O	SAMTEC ST5-30-1.50-L-D-P-TR [16bit DV]; 22-pin FFC/FPC connector (Molex) [MIPI CSI-2]; Type B USB 3.0 [USB]	
Environmental & power specifications		
Operating temperature range (housing temperature) [°C]	FrFrom -40 to +70 (16bit DV, USB); From -30 to +70 (MIPI CSI-2)	
Storage temperature [°C]	From -40 to +85 (16bit DV, USB); From -30 to +85 (MIPI CSI-2)	
Power consumption [W]	1.9 (at 30 Hz operation - 16bit DV) & 2.1 (at 60 Hz operation - 16bit DV); < 2.7 (MIPI CSI-2, USB)	
Power supply voltage	DC 5 V	
Shock	40 g, 11 ms, according to MIL-STD810G	
Vibration	5 g (20 to 2000 Hz), according to MIL-STD810G	
Regulatory compliance	RoHS	
Electro-optical specifications		
Image format [pixels]	1280x1024	
Pixel pitch [µm]	12	
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 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 (16bit DV, MIPI CSI-2); 40 (USB)	
Integration time range [µs]	20 - 65	
Analog-to-Digital [ADC] [bits]	14	
Command and control	via SAMTEC ST5 connector [16bit DV]; I2C [MIPI CSI-2]; GenCP over virtual COM port enumerated over the USB interface [USB]	
Digital output format	16bit DV, MIPI CSI-2, USB	
Trigger	via SAMTEC ST5 connector (16bit DV); NA (MIPI CSI-2, USB)	
Product selector guide		
Part number	XEN-000692	XEN-000691

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