Dione 1280 CAM Series

Xenics
Infrared Solutions
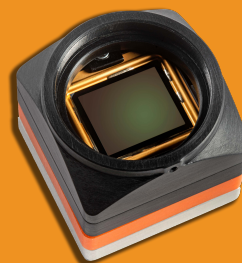
Ultra-compact LWIR thermal imaging core

‣ SWaP optimized, uncooled and shutterless
‣ Microbolometer detector with 1280x1024
   resolution and 12 μm pixel pitch

State-of-the-art thermal imaging core

The Dione 1280 series is based on an uncooled microbolometer detector with a 1280x1024 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 1280 CAM comes in two variations:

(1) Dione 1280 CAM M34 with a small
      housing and M34x0.5 optical mount

(2) Dione 1280 CAM M45 with a small
      housing and M45x0.75 optical mount

All Dione 1280 versions benefit from Xenics image enhancement for advanced image processing while keeping power consumption low (< 2 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)
• 1280x1024 microbolometer detector with 12 μm pixel pitch
• Frame rates up to 60 Hz
• Uncooled and shutterless

‣ Thermal security

‣ Vision enhancement

‣ Border security

▶ Camera Specifications

Camera Specifications	Dione 1280 CAM M34	Dione 1280 CAM M45
Mechanical specifications		
Approximate dimensions - excluding lens [width x height x length] [mm]	40 x 40 x 35	50 x 50 x 36
Weight [gr] - excluding lens	78	80
Optical interface	M34 x 0.5	M45 x 0.75
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 -40 to +85	
Power consumption [W]	1.7	
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]	1280 x 1024	
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]	<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-000701	XEN-000702

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