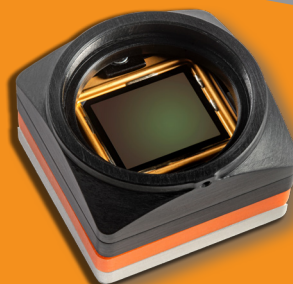


Dione 1280 CAM Series

Ultra-compact LWIR thermal imaging core

- ▶ SWaP optimized, uncooled and shutterless
- ▶ Microbolometer detector with 1280x1024 resolution and 12 μm pixel



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 (approximately 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 | 27 |
| Optical interface | M34 x 0.5 | M45 x 0.75 |
| Connector 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 | |
| Average power consumption [W] | 1.9 (at 30 Hz) & 2.1 (at 60 Hz) | |
| 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 [nm] | 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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