

CERES V 640 SERIES

- Uncooled microbolometer camera for high-resolution thermal imaging
- 640x480 pixels
- 12 μm pitch
- GigE or CameraLink



COMPACT, INDUSTRIAL THERMAL CAMERA

The Ceres V 640 series is based upon the Dione 640 OEM thermal imaging core with 640x480 pixels and 12 μm pixel pitch. The camera offers superior thermal imaging capabilities thanks to the state-of-the-art microbolometer detector and on-board image processing.

The Ceres V 640 camera outputs full frame images at 60 Hz via either a CameraLink or GigE Vision interface - all GenICam compliant.

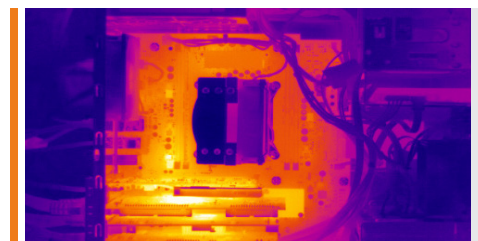
The compact size, excellent image quality and GenICam compliant interfacing allow for easy integration in demanding industrial, scientific and security thermal imaging applications.

DESIGNED FOR USE IN

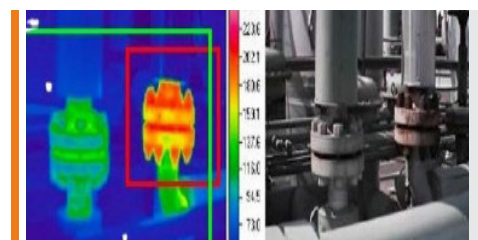
- Industrial Machine Vision
- Medical
- Scientific & Advanced Research
- Safety & Security

ADVANTAGES

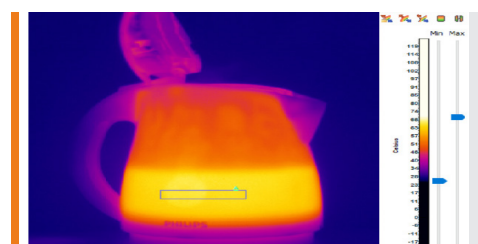
- Compact and high-resolution
- Superior on-board image processing performance (optimized image quality)
- GenICam compliant
- Uncooled operation
- Flexible optical mount and lens options



PCB Inspection



Thermal imaging



Thermography

SPECIFICATIONS

Camera Specifications	Ceres V 640 GigE 50 mK (60 Hz)	Ceres V 640 GigE 40 mK (60 Hz)	Ceres V 640 CL 50 mK (60 Hz)	Ceres V 640 CL 40 mK (60 Hz)
	Ceres V 640 GigE 50 mK (9 Hz)	Ceres V 640 GigE 40 mK (9 Hz)	Ceres V 640 CL 50 mK (9 Hz)	Ceres V 640 CL 40 mK (9 Hz)
Mechanical specifications				
Camera dimensions (width x height x length) [mm] (approx.)	45 x 45 x 75		45 x 45 x 67	
Optical interface	M24x0.5* or M34x0.5			
Camera weight [gr]	207		172	
Connector GigE	RJ45		NA	
Connector CameraLink	NA		SDR-26	
Connector Power	Unified connector (Lemo 1B)			
Connector Trigger	Unified connector (Lemo 1B)			
Connector General I/O	Unified connector (Lemo 1B)			
Environmental & power specifications				
Operating temperature range (housing temperature) [°C]	From -40 to +70			
Storage temperature [°C]	From -40 to +85			
Power consumption [W]	4		3.5	
Power supply voltage	DC 12 V			
Shock	40 g, 11 ms, MIL-STD810G			
Vibration	5 g (20 to 2000 Hz), MIL-STD810G			
IP rating	IP40			
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]	<50 (at 30Hz, 300K, F/1)	<40 (at 30 Hz, 300 K, F/1), available upon request	<50 (at 30Hz, 300K, F/1)	<40 (at 30 Hz, 300 K, F/1), available upon request
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)			
Analog-to-Digital [ADC] [bits]	16			
Command and control	GigE		CL	
Digital output format	GigE		CL	
Trigger	Unified connector (Lemo 1B)			
Product selector guide				
Part number	XEN-000786 [Ceres V 640 GigE 50 mK (60 Hz)]		XEN-000784 [Ceres V 640 CL 50 mK (60 Hz)]	
	XEN-000724 [Ceres V 640 GigE 50 mK (9 Hz)]		XEN-000727 [Ceres V 640 CL 50 mK (9 Hz)]	
	XEN-000788 [Ceres V 640 GigE 40 mK (60 Hz)]		XEN-000787 [Ceres V 640 CL 40 mK (60 Hz)]	
	XEN-000725 [Ceres V 640 GigE 40 mK (9 Hz)]		XEN-000728 [Ceres V 640 CL 40 mK (9 Hz)]	

Take note of different lens interfaces. If different type of interface lenses are chosen, conversion is required.

* Additional M34 lens is possible; conversion to M34 mount by removing M24 mounting ring.



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