

Imagine the invisible

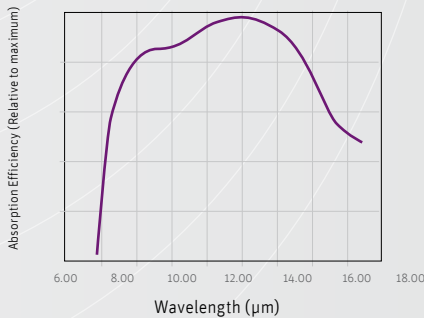
Modules & components

XTM-640

High resolution uncooled thermal OEM module



Ready-to-integrate thermal OEM module consuming ultra-low-power



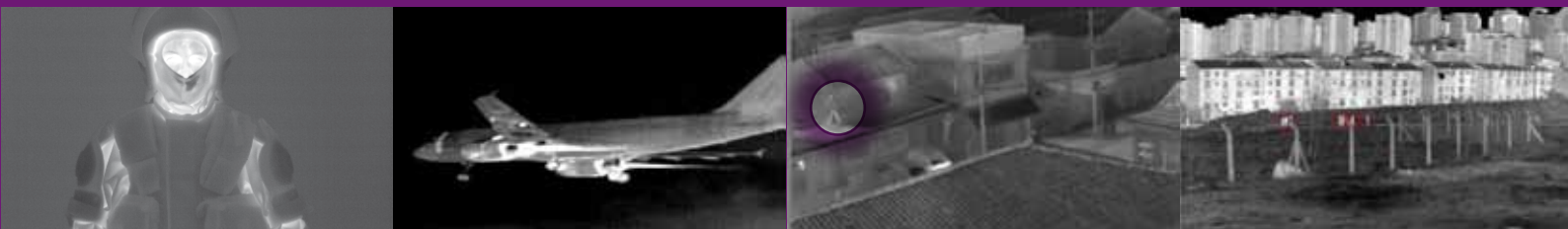
Xenics' XTM-640 is an extremely compact and versatile thermal camera module with unique image quality and stability for a broad range of OEM applications. These applications include security, night vision, firefighting, airborne and land-based reconnaissance and surveillance.

You can easily integrate our XTM-640 into your system with the universal Samtec QTE connector, providing digital video out or raw digital data. This allows you immediate connection, data acquisition, command and control.

We guarantee you unparalleled uniform and crisp thermal images thanks to on-board image processing and full shutter control.

The small pixel pitch of 17 µm allows for longer Detection, Recognition and Identification (DRI) values in critical security applications.

Designed for use in



Thermal security

Vision enhancement

Police surveillance

Border security

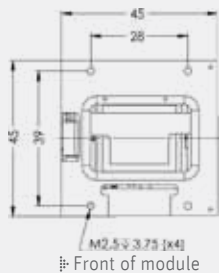
Key features

- Low power
- High resolution
- Easy connectivity
- Small size, 17 µm pixel pitch
- 50 Hz frame rate world wide

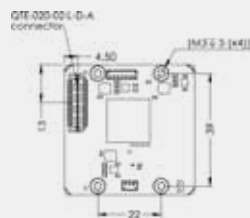
OEM applications

- UAV / UGV
- Gimbal
- Night vision
- Thermal sights
- Border security
- Fire fighting
- Driver assistance
- Police surveillance
- Search & Rescue (SAR)
- Electro optical payloads

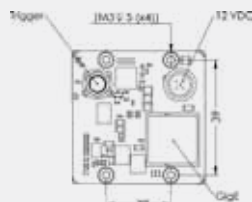
Ready-to-integrate



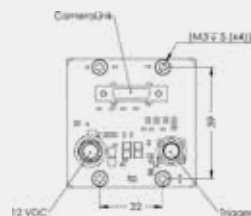
Front of module



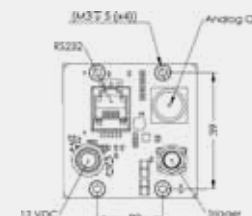
Samtec QTE interface



GigE interface



CameraLink interface



Analog interface

Specifications

Array Specifications	XTM-640			
Array type	Uncooled microbolometer (a-Si)			
Spectral band	8.0 to 14.0 μm			
# pixels	640 x 480			
Pixel pitch	17 μm			
NETD	$\approx 50 \text{ mK @ } 30^\circ\text{C}$ with F/1 lens			
Array cooling	Uncooled			
Pixel operability	$> 99.5\%$			
Module Specifications	XTM-640-QTE	XTM-640-GigE	XTM-640-CL	XTM-640-Analog
Lens				
Optical interface	No lens option	Fixation holes for multiple lens mount		
Imaging performance				
Frame rate	Max 50 Hz		25 Hz (PAL) 30 Hz (NTSC)	
Window of Interest	Minimum size 160 x 120			
Exposure time range	1 μs - 40 μs			
Shutter	Full control by serial command			
Temperature stabilization	No ThermoElectric Cooling required (TEC-less)			
Integration type	Rolling shutter			
On-board image processing	Image correction, Auto Gain (span), Auto level, Trigger possibilities			
A to D conversion resolution	16 bit			
Interfaces				
Digital output	BT.601-6/ BT.656-5	GigE Vision or Xeneth API/SDK	CameraLink or Xeneth API/ SDK	-
Analog output	-	-	-	PAL or NTSC
Module control	Serial LVCMOS 3 V (XSP)	GigE Vision	CameraLink	RS232 (XSP)
Trigger	In or out (configurable)			
Power requirements				
Power consumption	1.65 W	$< 4.5 \text{ W}$	$< 2 \text{ W}$	$< 3 \text{ W}$
Power supply	3.3 V			
Physical characteristics				
Shock	70 G, 2 ms halfsine profile			
Vibration	4.5 G, (5 Hz to 500 Hz)			
Ambient operating temperature	-40°C to 70°C			
Dimensions (W x H x L mm ³)	45 x 45 x 36	45 x 45 x 55	45 x 45 x 43	45 x 45 x 50
Weight module	75 g	$< 150 \text{ g}$ (lens not included)		

Product selector guide

Part number	NETD (mK)	Frame rate (Hz)	Interface
XEN-000064	50	50	16bitDV
XEN-000299			BT.656
XEN-000300			GigE Vision
XEN-000301		CameraLink	
XEN-000302		25	PAL
XEN-000303	30	NTSC	

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