

XCO 640 Series

Areascan MWIR Camera Module

- MWIR cooled module with 640 x 512 resolution
- Broadband versions available for MCT and InSb



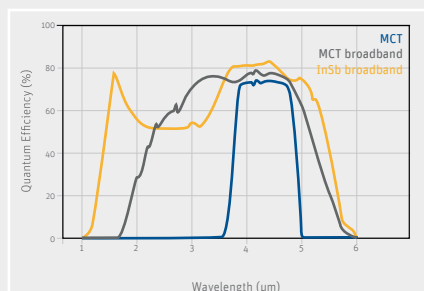
Cooled mid-wave infrared camera core

The XCO 640 is a cooled mid-wave infrared (MWIR) camera core with a state-of-the-art InSb or MCT detector with 640 x 512 resolution

The XCO 640 InSb is able to provide a maximum frame rate of up to 320 Hz. The XCO 640 MCT offers maximum full frame rate of up to 105 Hz. A window of interest (WOI) is available for higher frame rates for both InSb and MCT.

We offer broadband versions for the standard spectral sensitivity into the SWIR band.

XCO 640 uses either a CameraLink or GigE Vision digital interface. Analog out, HD-SDI and triggering are also available.

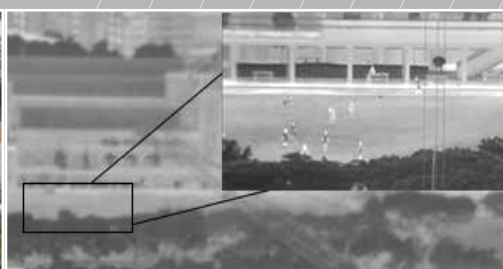
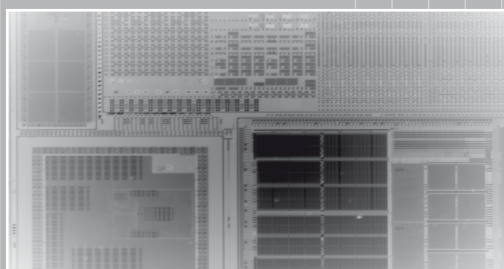


Designed for use in

- Machine Vision
- Safety & Security
- Transportation

Advantages

- Broadband imaging in SWIR and MWIR
- CameraLink and GigE Vision interface
- Various (zoom) lenses available



• On-wafer semiconductor hot spot detection

• Monitoring systems

• Long range surveillance

► Camera Specifications

Camera Specifications	XCO 640 InSb	XCO 640 InSb BB	XCO 640 MCT	XCO 640 MCT BB
Mechanical specifications				
Approximate dimensions - excluding lens [width x height x length] [mm]	93 x 100 x 160			
Weight [gr] - excluding lens	1600			
Optical interface [optional]	Bayonet [Janos]			
Connector GigE	RJ-45			
Connector CameraLink	Standard SDR			
Connector IRIG-B	BNC			
Connector Analog	BNC			
Connector SD-HDI	BNC			
Connector RS232	RJ-12			
Connector power	Phoenix			
Connector trigger	4 BNC connectors [2 for trigger in, 2 for trigger out]			
Environmental & power specifications				
Ambient operating temperature range - excluding lens [°C]	From -40 to +60			
Storage temperature [°C]	From -40 to +70			
Power consumption [W]	25			
Power supply voltage	DC 24 V			
Shock	MIL-STD810G; half sine; 40 g [11 ms]			
Vibration	Random: MIL-STD810G; 4.3 g			
Regulatory compliance	RoHS			
Electro-optical specifications				
Image format [pixels]	640 x 512			
Pixel pitch [µm]	15			
Detector type	InSb photodiode array with digital ROIC	InSb photodiode array with digital ROIC	MCT photodiode array with ROIC	MCT photodiode array with ROIC
Sensor temperature cooling	Closed cycle rotary - Stirling cooler K508	Closed cycle rotary - Stirling cooler K508N	Closed cycle rotary - Stirling cooler RM3	Closed cycle rotary - Stirling cooler RM3
Integration type	Snapshot - global shutter			
Active area and diagonal [mm]	10.24 x 7.68 [diagonal 12.8]			
Detector aperture	f/2 or f/4	f/3	f/2 or f/4	f/3
Cold shield height [mm]	19.4	19.4	20.46	20.46
Detector NETD [Noise Equivalent Temperature Difference] [mK]	25	25	22	22
Spectral range [µm]	3.6 - 4.9	1.5 - 5.4	3.7 - 4.8	1.5 - 6
Gain modes	High Gain [HG], High Dynamic Range [HDR]	High Gain [HG], High Dynamic Range [HDR]	Single Gain	Single Gain
Full well capacities [electrons]	1.5M [HG], 6M [HDR]	1.5M [HG], 6M [HDR]	6.36M [ITR], 4.99M [IWR]	6.36M [ITR], 4.99M [IWR]
Read out modes	ITR & IWR			
Pixel operability	>99.5%	>99.5%	>99.6%	>99.6%
Max frame rate [Hz] [Full frame]	320 [not at full bit resolution]	320 [not at full bit resolution]	105	105
Region of interest	Yes			
Min region size [pixels]	64 x 64 [step 16 x 16]	64 x 64 [step 16 x 16]	160 x 64 [step 16 x 16]	160 x 64 [step 16 x 16]
Max frame rate [Hz] [min region size]	>1000			
Analog-to-Digital [ADC] [bits]	13/14/15 [selectable on ROIC]	13/14/15 [selectable on ROIC]	14	14
Command and control	CameraLink, GigE Vision or RS232			
Digital output format	CameraLink or GigE Vision [16 bit]			
Trigger	Configurable, 2 in and/or 2 out			
Product selector guide				
Part number	XEN-000579 [f/4]	XEN-000597 [f/3]	XEN-000588 [f/4]	XEN-000598 [f/3]
	XEN-000586 [f/2]	-	XEN-000589 [f/2]	-

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