

Tigris 640 Series

Areascan MWIR Camera

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



Cooled mid-wave infrared camera

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

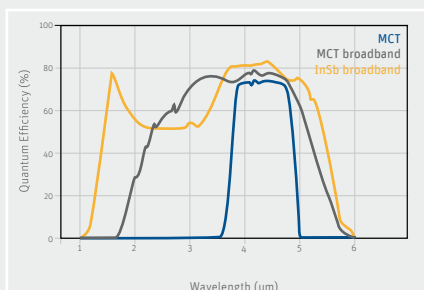
The Tigris 640 InSb is able to provide a maximum frame rate of up to 320 Hz. The Tigris 640 MCT offers maximum full frame rate of up to 105 Hz.

A window of interest (WOI) is available for higher frame rates for both InSb and MCT.

We offer broadband versions for extended spectral sensitivity into the short-wave infrared (SWIR) band.

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

On the Tigris 640 InSb, we offer several temperature calibrations (-20-170°C, 120-350°C, 150-500°C).

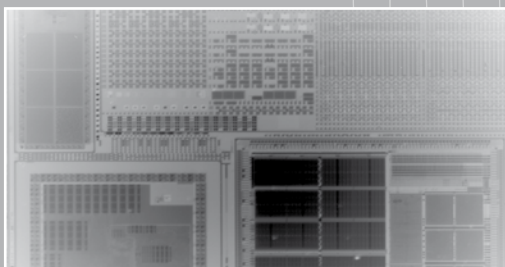


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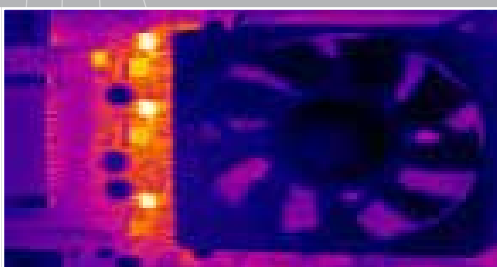
- Machine Vision
- Scientific & Advanced research
- Medical

Advantages

- Broadband imaging in SWIR and MWIR
- CameraLink, GigE Vision and analog interface
- Motorized filter wheel with multiple filters
- Thermography options available



• On-wafer semiconductor hot spot detection



• Thermal imaging : Electronics circuit



• Thermal imaging : Cold cup

► Camera Specifications

Camera Specifications	Tigris 640 InSb	Tigris 640 InSb BB	Tigris 640 MCT	Tigris 640 MCT BB
Mechanical specifications				
Approximate dimensions - excluding lens [width x height x length] [mm]	100 x 145 x 199			
Weight [gr] - excluding lens	3500			
Optical interface	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	CE, 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 K508N	Closed cycle rotary - Stirling cooler K508N	Closed cycle rotary - Stirling cooler RM3	Closed cycle rotary - Stirling cooler SRI
Integration type	Snapshot - global shutter			
Active area and diagonal [mm]	10.24 x 7.68 [diagonal 12.8]			
Detector aperture	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
Filter wheel	Motorized, 5 positions			
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-000610	XEN-000611	XEN-000612	XEN-000613

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