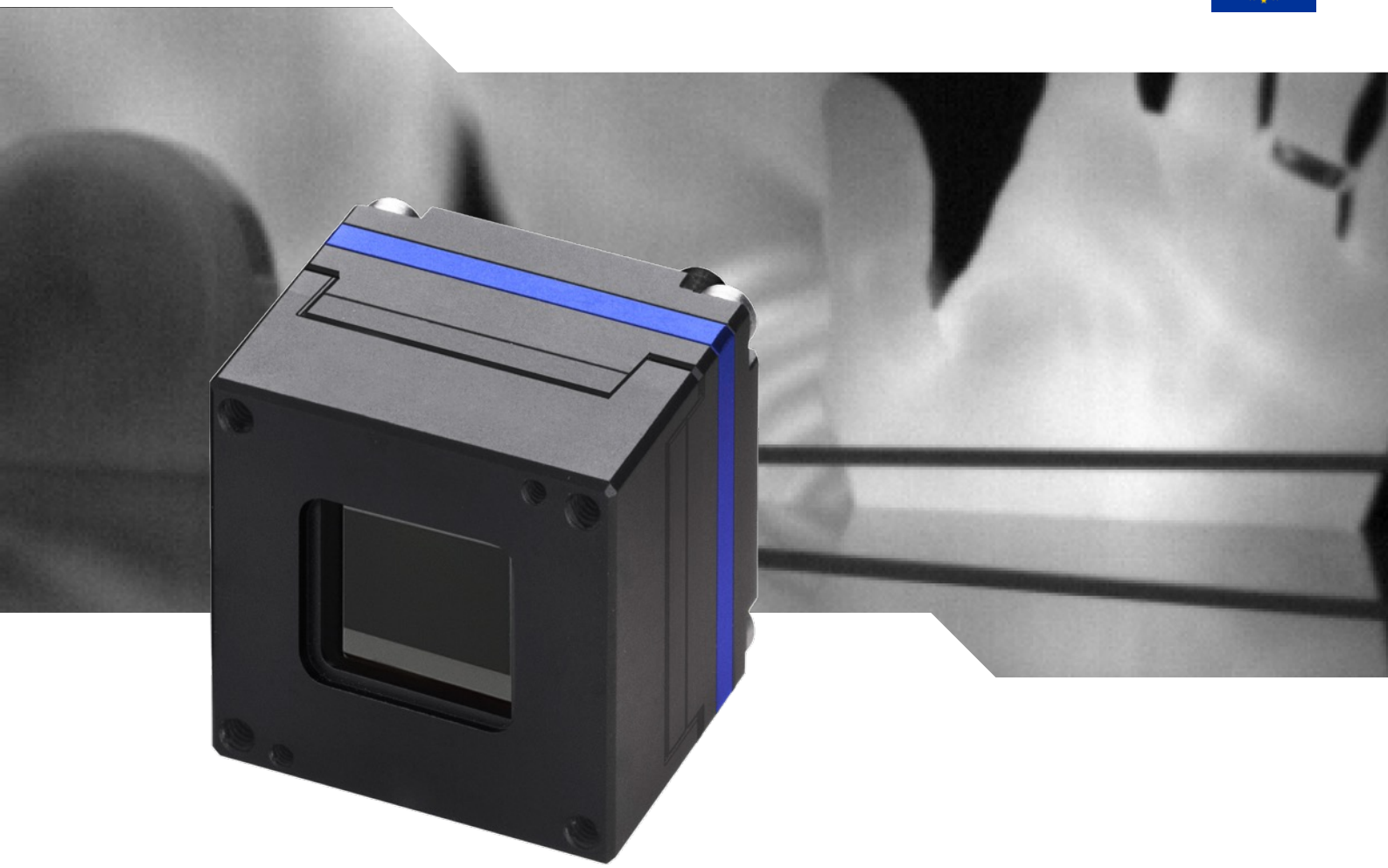

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MicroCube – ITAR Free Miniature Thermal Camera

MicroCube is the latest generation of thermal cores in 12µm pixel pitch feature true SWaP design and cover main standard interfaces, including USB-C or MIPI CSI-2. Size, weight and power altogether make this European-made thermal core the ideal candidate for all applications where consumption and/or footprint are key factors, namely UAVs, UGVs and robot-type platforms, as well as handheld devices and all battery-powered equipment.

- → 640 x 480 micro-bolometer with 12 µm pixels
- → Compact and feather-weighted
- → Easy to integrate
- → Low-power consumption
- → Typical NETD 35mK (F/1; 300 mK; 30 fps)

New ITAR Free MicroCube Camera

State-of-the-art Camera

The MicroCube640 series with its high sensitivity in a 22 mm cube, a weight of 22 g and an 0.82 W consumption, will open the door of numerous applications. The MicroCube VGA (640x480 pixels) format takes benefits of existing technology, with key functionalities such as shutterless, automated gain control (AGC) and trigger.

This new state-of-the-art camera core enables OEMs to easily and quickly build their thermal systems with improved Detection, Recognition and Identification (DRI) features. Wide range of interfaces have also been taken into account to cover the main standards that include the standard MIPI CSI-2.

	Key Performance
Sensor	Micro-bolometer technology
Resolution / Pixel pitch	640 x 480 pixels
Spectral response	LWIR: 8 – 14 µm
Pixel size	12 µm
Max NETD (F/1; 300 mK; 30 fps)	< 40 mK
Frame rate	Up to 60 fps
For module (host-based processing)	USB-C
For core engine (embedded processing)	BT 656 / YCbCr / MONO16 / MIPI CSI-2
Dimension	22 x 22 mm2 (section) / from 22 (depth)
Weight	From 22 g
Optics	From 4.3 mm to 100+ mm EFL
Qualifications	MIL-STD 810G and MIL-STD-883 (TWS)

Plug & Play Camera Serie

SmartIR and IrLugX ™series, the reference in uncooled LWIR

As specialists of uncooled camera cores in infrared domain, we can provide true SWaP cameras, ready for integration into electro optical systems or devices SmartIR and IrLugX TM LWIR camera series cover resolutions from 80 x 80 to 1 M 3 pixels and include the most recent microbolometric detectors of either 34 17 or 12 µm pixels.

The generic design of the cores enables versatile implementations, in fact reducing risks and development time for OEMs, Integrators and Solution Providers in defense and commercial markets.

ITAR Free Miniature Camera

APPLICATION NOTE

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Versatile implementation

With / without optics

Various interfaces

True SWaP

Low consumption

Small footprint

Resolution up to 1280 pixels

NETDperformance <30 mK

Frame rate up to 120 Hz

Trigger / No latency

Shutterless capability

MIL & TWS qualified

SmartIR(34/17µm pixel)	80	160	384	640	1M0
Resolution(pixels)	80 x 80	160 x 120	384 x 288	640 x 480	1024 x 768
Frame rate (maximum)	50 Hz	60 Hz	60 Hz	120 Hz	120 Hz
TypicalNETD(F/1 ; 300K ; 30 Hz)	80 mK	50 mK	30 mK	25 mK	40 mK
IrLugX™(12µm pixel)	**320**		**640**	**1M3**	
Resolution(pixels)	320 x 240		640 x 480	1280 x 1024	
Frame rate (maximum)	60 Hz		60 Hz	60 Hz	
TypicalNETD(F/1 ; 300K ; 30 Hz)	50 mK		40 mK	40 mK	
Product Interfaces / Videostandards					
Modules (host-basedprocessing)	RAW16 over USB2.0 or USB3.0				
Engine Cores(embedded processing)	BT656 / YCbCr / CMOS parallel16bit / PAL-NTSC / Camera Link /SD-SDI / 3G/HD-SDI / MIPI				
Platforms (for handhelddevices)	Digital: BT656 / YCbCr and/or Analog: PAL / NTSC				
Others					
Image processing	Bad Pixel Correction, NUC, Shutterless				
Image optimization	Global/local AGC, Progressive digital zoom up to x4, Overlays				
Optics(optional)	1.5 mm to 100+ mm Focal Distance / 4°to 180°HFOV				
Operating temperaturerange	Up to -40°C to +70°C (Extended or Military grade)				
Qualifications	MIL-STD-810G and MIL-STD-883 (TWS)				

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Product design

Inspection &
Quality management

Simulation &
Design verification

Assembly &
Testing

Advanced
Manufacturing

Value-Added
Products & Services

We supply only the best solution for each and every industry, get in touch with us to learn more about your possibilities when working with Penlink.

Email: info@penlink.se

Phone: +46 (0) 8 401 10 10

Headquarters: Penlink AB, Vretensborgsvägen 28, SE-126 30 Hägersten, Sweden