

NEW SPACE APPLICATIONS SWIR CAMERA CORE



SWIR
0.9 - 1.7 μm



600 FPS



<30 e- RON



640 x 512 InGaAs,
15 μm pixel pitch

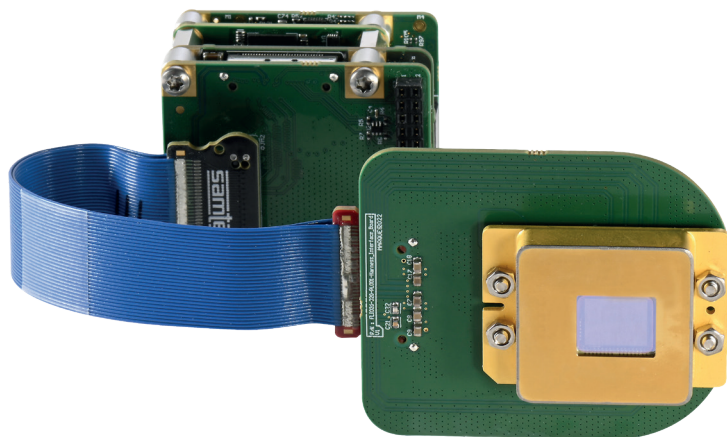


93 dB and true 16 bits
High Dynamic Range



SDK compatible with μ Manager,
LabVIEW, MatLab,

**DESIGNED FOR
SPACE OPTICAL PAYLOADS**



Board level for easy integration
Custom OEM on demand

APPLICATIONS

NEW SPACE:

FSO communications
Cubesats
Space exploration
Data exchange

SCIENCE & ASTRONOMY:

Planetary exploration
Earth observation
Hyperspectral imaging
Meteorology

SURVEILLANCE:

Defense and security
Environmental monitoring
Gas detection

C-RED NEW SPACE PERFORMANCES

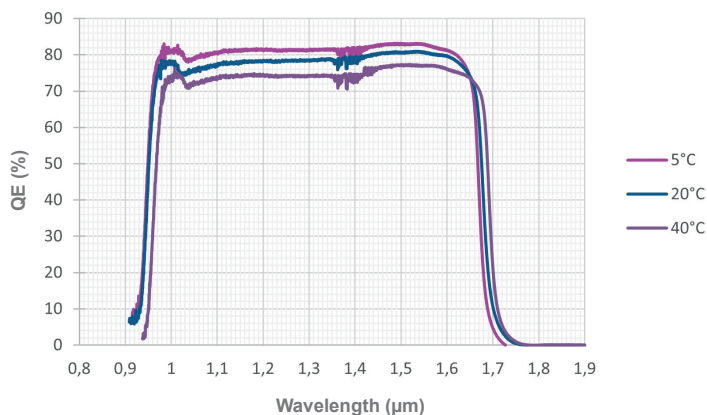
FEATURES*		Result	Unit
Sensor size		640 x 512	pixels
		0.3	Mp
Pixel pitch		15	µm
Quantization		14	bit
Readout Noise at high gain, Tint at 50 µs, 600 FPS Full Frame at 5°C		<30	e-
Flat Quantum Efficiency (1.0 to 1.65 µm)		> 70	%
Operability due to signal response (pixels with signal ± 0.3*median at 20°C)		> 99.8	%
Image full well capacity	low gain	1.4	Me-
	medium gain	115	ke-
	high gain	34	ke-
Framerate	full frame	600	FPS
	32 x 4 [min] pixels	32066	FPS
	320 x 256 pixels	1779	FPS

* Typical values

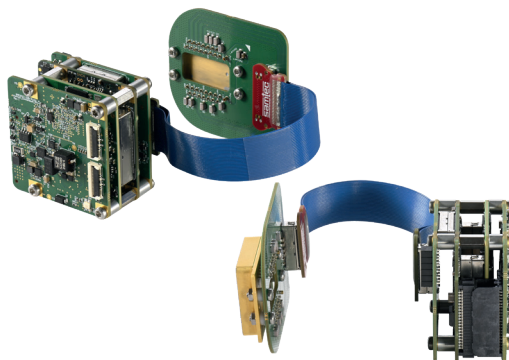
ADDITIONAL FEATURES

Data interface: CameraLink®
LVTTTL synchronization [5 V tolerant]
High Dynamic Range mode: 93 dB and true 16 bits
Fast configuration switch mode [To be developed]
Software: Graphical User Interface: First Light Vision - Software Development Kit: [C, C++, C#, Python, MatLab] / LabVIEW / µManager / Halcon

QUANTUM EFFICIENCY



BACK VIEW WITH CAMERA LINK® OUTPUT*



Power: Sensor: 0.5W to 13.9W max
Stack: 6W

*Electronic boards may differ from picture

FRAME RATE TABLE CROPPING MODE CAMERA LINK® OUTPUT

		Columns					
		32	64	128	256	512	640
Lines	4	32 066	31 512	30 458	28 548	25 367	24 029
	8	28 108	27 348	25 945	23 532	19 840	18 397
	16	22 542	21 631	20 015	17 413	13 819	12 526
	32	16 147	15 254	13 736	11 455	8 599	7 646
	64	10 302	9 596	8 440	6 801	4 898	4 297
	128	5 975	5 509	4 765	3 752	2 632	2 291
	256	3 247	2 975	2 547	1 978	1 367	1 184
	512	1 697	1 549	1 319	1 016	697	602

New Space special features

- Designed to maintain optical performance and support extreme conditions of space operations
- Advanced thermal design
- On-board processing (AGC, 2-point NUC, image flip, etc...)
- Large operational temperature range
- User preset configurations
- Multiple synchronization configurations
- **Customization** : Contact us to discuss your project

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