

## NEW SPACE APPLICATIONS SWIR CAMERA CORE



SWIR  
0.9 - 1.7  $\mu\text{m}$



600 FPS



<30 e- RON







640 x 512 InGaAs,  
15  $\mu\text{m}$  pixel pitch

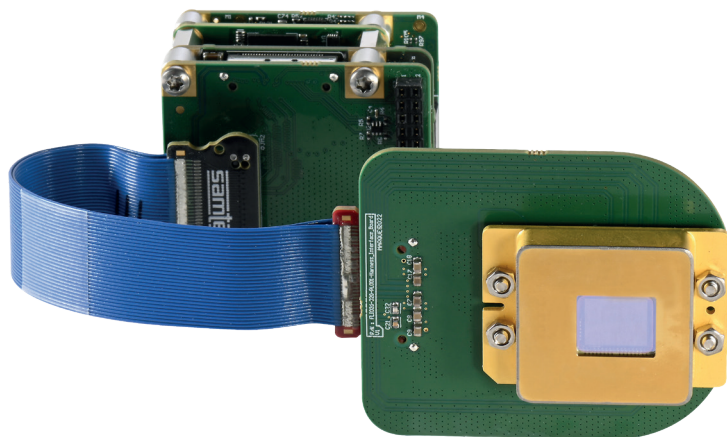


93 dB and true 16 bits  
High Dynamic Range



SDK compatible with  $\mu$ 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

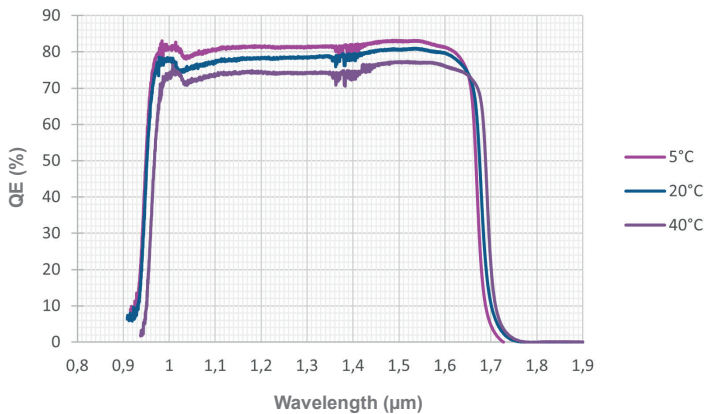
FEATURES*		Result	Unit
Sensor size		640 x 512	pixels
		0.3	Mp
Pixel pitch		15	µm
Quantization		14	bit
Readout Noise at high gain, Tint at 50 µs, 600 FPS Full Frame at 5°C		<30	e-
Flat Quantum Efficiency (1.0 to 1.65 µm)		> 70	%
Operability due to signal response (pixels with signal ± 0.3*median at 20°C)		> 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

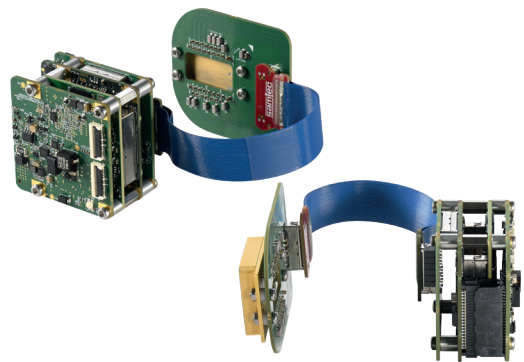
## ADDITIONAL FEATURES

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]
<b>Software: Graphical User Interface:</b> First Light Vision - <b>Software Development Kit:</b> [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

### First Light Imaging SAS

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### First Light Imaging Corp.

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**FIRST LIGHT**  
 ADVANCED IMAGERY