

PRELIMINARY KEY TECHNICAL SPECIFICATIONS SWIR TECLESS SWaP CAMERA

PROXY CAMERA MODULE FEATURES	CHARACTERISTICS	DESCRIPTION
Camera resolution	640x512 pixels	Uncooled Sensor: Indium Gallium Arsenide PIN - Photodiode with 15 μm pixel pitch
Spectral response (SWIR)	0.9 to 1.7 μm	For QE>70%, spectral range 1.0 to 1.6 μm
Read out Floor Noise [@ 295K, minimum Gain, Tin : xx μs]	<30 e-	@ Low noise mode
Scene dynamic	> xx dB (tbd)	
Low Noise mode	Yes	Prevent sensor readout during integration time with reduced frame rate
Power consumption	< 1W	@ 30 Fps
Standard Interface USB 3.0 (micro-USB type B female)	RAW 16 bits digital output Camera control	Plug & Play to any host controller system (PC or Computer Board) and @ Fps max. 178 Hz with full resolution
DF12-30 DP Interface	Digital Video Output (RAW 14 bits) External sync mode Free run	9 LVDS serial links [8 data & 1 clock]
	5V +-10% (module Power Supply)	Can be also supply by USB connector
	Adjustable Sensor setting point (Exposure time, Gain, Offset...)	
	Power consumption management: Standby power mode Deep standby power mode	Video disable and wakeup for fast time to image Video disable, module powered off
User Configuration Storage	Up to 8	On module
Storage Calibration Table	Up to 4	On module
Time to image	< 3 s	
Image Optimization	BPR, FFC, Gain	Configuration dependant
Full Frame Rates		Adjustable frame rate:
Max. Frame rates	178Hz	from 30Hz to 178Hz (USB 3.0 Super Speed host required)
Standard Frame Rates	30Hz	
Image Flip	yes	On module
ROI mode:	Yes	
Smallest window size	16x4 @ 30 KHz	
Binning Mode	2x2 or 4x4 or 8x8 or 16x16	With or without ROI mode available
Lens Mounting	C type	In option on demand
Qualification grade	Industrial (Standard grade)	
Operating temperature range	-20°C ; +60°C (Standard grade)	
Size : Length x Width x Height	30 x 30 x 35 mm ³	Excluding Optics
Weight	< 50g	Excluding Optics
Graphical User Interface SDK (only for USB)	Windows/Linux Windows/Linux	IrqLA Viewer adjusts all image parameters in GUI Calibration wizard (up to 8 maps: gain and/or offset tables) Easy and fast Import/Export of gain, offset & data to Matlab; ImageJ, Excel, ... BPR (Bad Pixel Replacement); NUC (Non Uniformity Correction); Gain management can be done by just clicking Free SDK (Software Design Kit): for easy integration into your applications, compatible with Windows 7, 8 & 10 or Linux_32 & Linux_64 or Linux Embedded on ARM plat-form

General Notices:

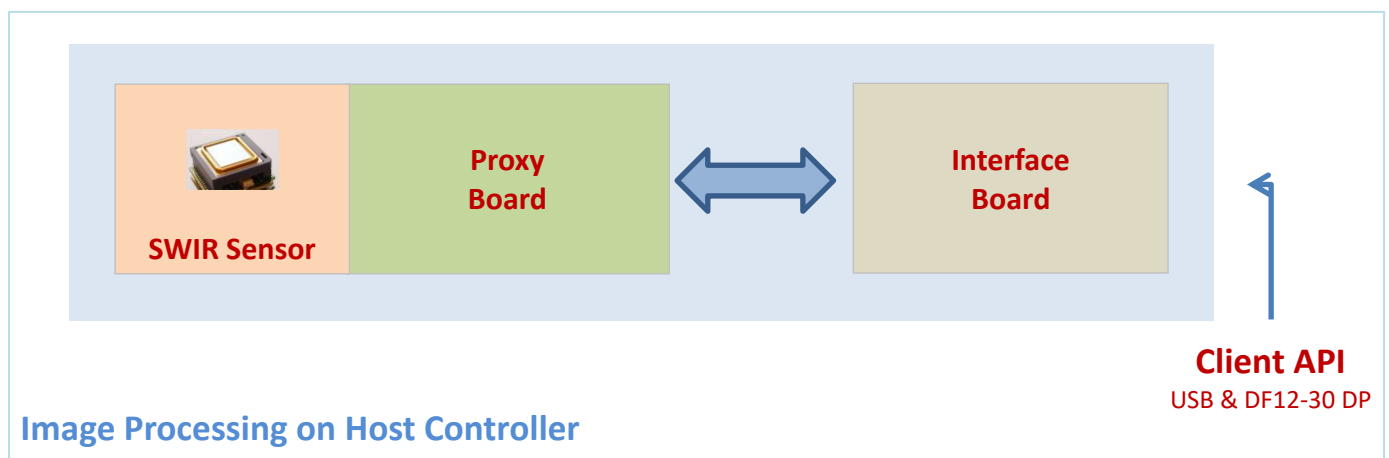
This OEM module is intended only for product evaluation, development or incorporation into other product or sub-system. It is not a finished end-product fit for general consumer use. As such, this module does not fall under the scope of the European Union (EU) directives concerning electromagnetic compatibility (EMC).

The products described herein are subject to French Government Export Controls.

MODULARITY OF PROXY MODULE

IrqLA640™ is developed using a modular concept and architecture.

It is suitable for host-based processing systems, processing being on a PC or on any x84 or ARM-embedded platform.



TYPICAL APPLICATIONS

IrqLA640™ is of special interest for observation and monitoring in:

- Surveillance and security (ground based or mobile systems)
- Unmanned Vehicles (UAVs, UGVs)
- Yachting and recreational boating (EVS - Enhanced Vision Systems)
- Machine vision (online process quality control)