

// New Alvium SWIR Models

Alvium USB3 Vision  
and CSI-2 models with  
Sony SenSWIR sensors



## Camera Highlights

Allied Vision's Alvium SWIR cameras are the smallest industrial grade low-power uncooled short-wave infrared (SWIR) core modules on the market ideally suitable to build compact OEM systems used in embedded and machine vision applications.

The four new Alvium SWIR models of the 1800-series incorporate innovative Sony SenSWIR InGaAs sensors supporting a wide spectral range from 400 nm to 1700 nm at high quantum efficiency. This allows you to image in the visible and SWIR spectrum with a single camera to lower overall system costs.

Whatever interface you chose be it USB3 Vision or MIPI CSI-2 with GenIcam compliant feature control, industrial-grade hardware, and drivers, Alvium SWIR core modules provide you a plug & play feeling whenever setting up your machine vision applications beyond the visible, regardless if it's based on a PC or embedded system.

Model	Sensor	Sensor size	Pixel Size	Resolution	Frame rate	Weight
1800 C-030	IMX991 SenSWIR	Type 1/4	5 $\mu\text{m}$ x 5 $\mu\text{m}$	0.3 MP (VGA) 656 (H) x 520 (V)	223 fps	max. 20 g (bare board) max. 50 g (open housing) max. 70 g (closed housing)
1800 U-030						
1800 C-130	IMX990 SenSWIR	Type 1/2	5 $\mu\text{m}$ x 5 $\mu\text{m}$	1.3 MP (SXGA) 1296 (H) x 1032 (V)	119 fps	
1800 U-130						

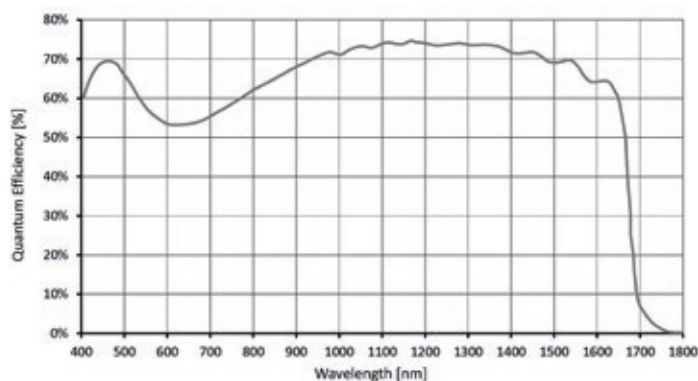
## Benefits

- // Small size, low weight, power, and costs enable you to build SWaP+C solutions:
  - Compact closed housing with 29mm x 29mm x 38 mm (WxHxL)
  - Bare board and open-housing options for very compact system designs
  - Low power consumption <2W ideal for battery powered system
- // Innovative digital InGaAs sensors with the industry's smallest pixels and a high-precision sensor alignment at production time provide you great image quality, which will increase the accuracy of your inspection system
- // High frame rates and flexible ROI control options empower you to speed up processes on-demand
- // On-board Automatic Gain Control (AGC) and Contrast Control will enhance your vision quality under challenging conditions, like: 24h day & night imaging or when seeing through dust or haze
- // A wide operating temperature range and on-board temperature monitoring secure you a reliable operation under diverse conditions

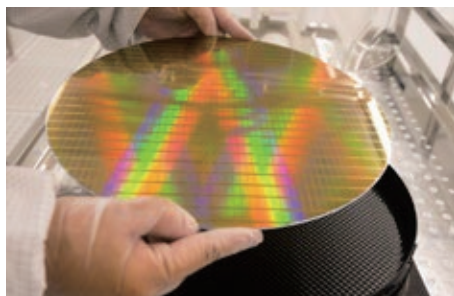
## Operating Conditions

Power requirements	Power over USB 3.1 or MIPI CSI-2 interface; External power via 5 VDC
Power consumption	< 2W
Operating temperature	-20°C to +65°C (case temperature)
Storage temperature	-30°C to +70°C (ambient)
Regulations	Closed housing options: CE, FCC Class B, CAN ICES-3 (B), All options: RoHS
Pixel operability	> 99.5 %

## Absolute Quantum Efficiency



## Applications




Alvium SWIR cameras are sensitive in the visible and the SWIR spectrum, and are well-suited for many typical SWIR applications in various industry branches:

- Semiconductor industry: Solar cell and chip inspection
- Agriculture: UAV based spectral remote sensing via Multicopter
- Recycling industry: Material sorting
- Medical imaging & Research: Hyper- and multi-spectral imaging
- Glass industry: Defect detection through hot glass
- Printing industry: Seeing hidden features
- Surveillance: Vision enhancement (for example, seeing through dust or haze)
- Security: Counterfeit detection (such as for currency, faked hair, or skin)



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Allied Vision assumes no liability for errors or omissions.

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