Allied Vision
a **TKH Vision** brand

// INFRARED CAMERAS

SWIR Imaging.
See beyond the visible!

// OUR EXPERTISE

Why Allied Vision?

9 global locations

with production sites in Germany and Canada plus distribution channels in more than 35 countries

Service & Support

24 hours a day, 5 days a week

ISO 9001 certified

Our four worldwide sites comply with DIN EN ISO 9001:2015 total quality management standards.

More than 10 different SWIR sensor types

with or without sensor cooling are integrated into various camera series, which support the most common machine and embedded vision interfaces

3 customization levels

Tailored solutions for your needs:
1. Modular Concept options
2. Modifications
3. Complete OEM development

// EXPERTISE FOR YOUR NEEDS

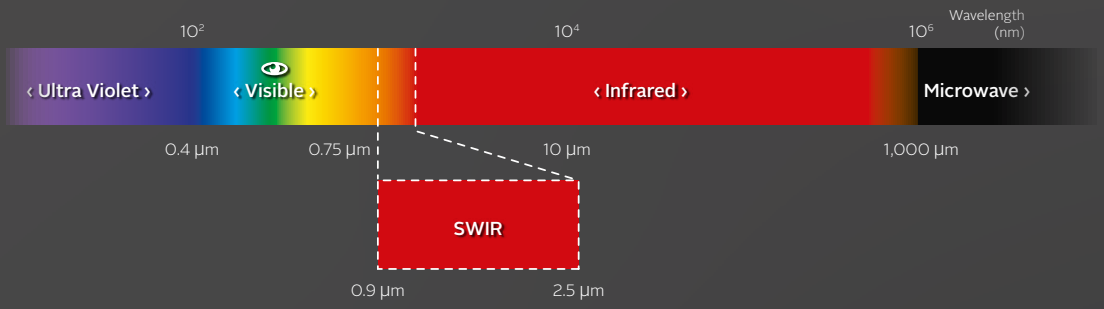
We don’t just develop cameras. We provide answers.

Discover the power of SWIR imaging with Allied Vision. Our cutting-edge SWIR cameras deliver exceptional image quality and sensitivity, making them ideal for a wide range of applications. With a focus on innovation and quality, we have become a trusted partner to businesses, researchers, and professionals seeking the highest level of performance and reliability in their imaging systems.

Explore our SWIR camera offerings today and unlock a whole new level of visibility.

// INFRARED IMAGING

Imaging beyond the visible



In everyday life, we are constantly exposed to electromagnetic radiation differing in wavelengths such as visible light, ultraviolet light, radio and microwaves, or X-rays. Within the electromagnetic spectrum, infrared radiation is in the range between visible light and microwaves.

It covers a wavelength range from 0.75 µm– 14 µm and is separated into near-infrared (NIR), short-wave infrared (SWIR), mid-wave infrared (MWIR), and long-wave infrared (LWIR). To detect light in these spectral ranges, typically specific detector materials are used. For example, silicon-based standard CCD/CMOS sensors can detect light only up to ~1,100 nm, because silicon gets transparent beyond this wavelength. Whereas, Indium Gallium Arsenide (InGaAs) based sensors are very popular to detect light in the SWIR range.

Although infrared radiation in the SWIR region is not visible to the human eye, it interacts with objects in a similar manner as visible light. Thereby, SWIR cameras have the advantage to "see" even at night and under challenging conditions such as fog, haze, or smoke. Another major benefit of SWIR cameras, is their ability to image through glass, making special and often expensive lenses unnecessary as they are required for MWIR or LWIR imaging.

InGaAs sensors: A hybrid architecture

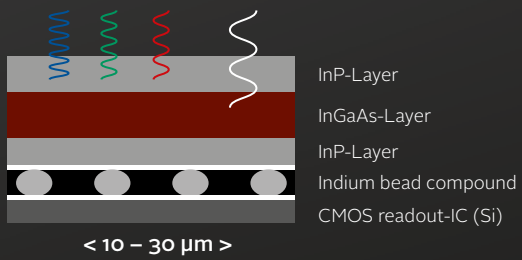
InGaAs sensors are in several aspects different to monolithic silicon-based sensors.

For example, InGaAs-based SWIR sensors...

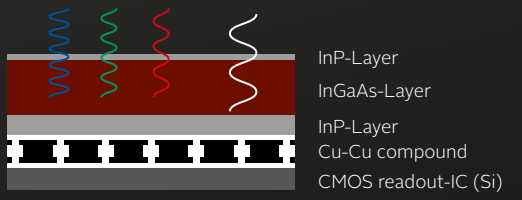
// consist of two layers - a light-sensitive InGaAs layer and a Silicon-based readout integrated circuit (ROIC). Combining these layers is a complex and error-prone process.

// have more defective and non-uniform pixels, requiring appropriate image correction functions in the camera.

// have a significantly higher dark current, requiring sensor cooling to reduce image noise and enable longer exposure times. For this reason, many sensors are equipped with thermoelectric cooling (TEC) elements.



< 10 – 30 µm >

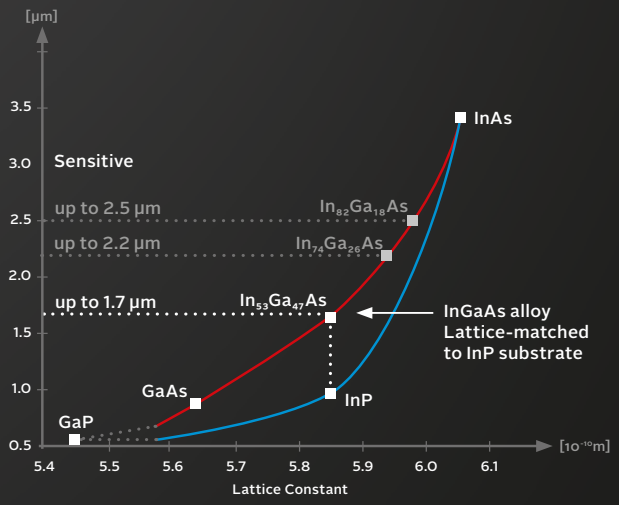


< 5 µm >

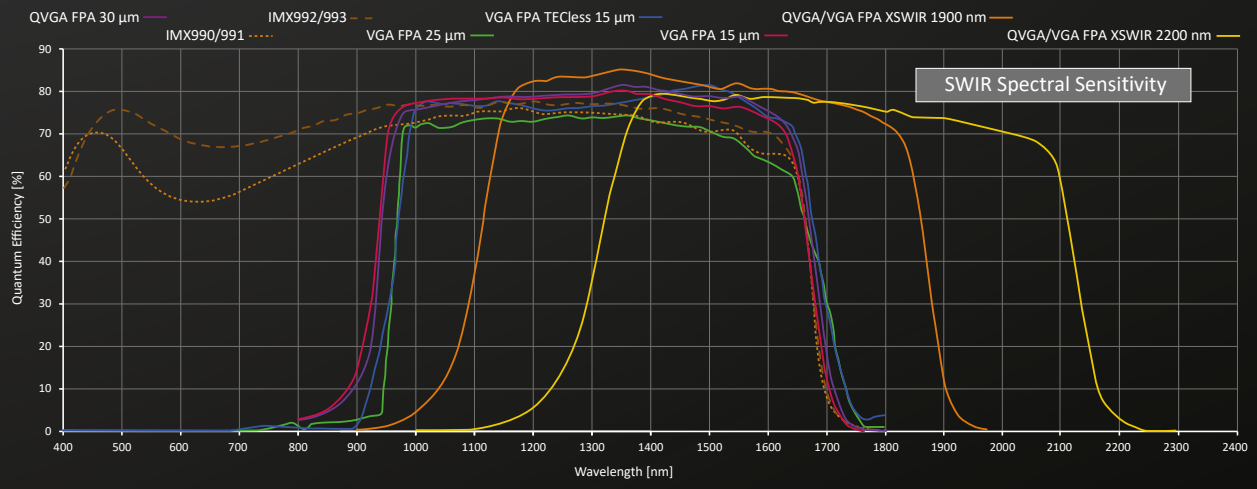
The standard spectral range of InGaAs sensors is 900 nm – 1,700 nm. By reducing the thickness of the upper Indium Phosphide (InP) layer, the spectral range can be extended into the visible down to 400 nm. Such visible SWIR (VSWIR) sensors are especially beneficial for spectral imaging applications to analyze objects at a broad spectral arrange with a single camera.

Extended Spectral Range

Extending the spectral range to longer wavelength is also possible by increasing the amount of Indium vs. Gallium in an InGaAs compound, whereby the cut-off wavelength is shifted to higher values. Corresponding extended range InGaAs sensors can only detect light below the cut-off wavelength. Typical cut-off wavelengths for eXtended SWIR (XSWIR) sensors are 1.9 µm, 2.2 µm, and 2.6 µm.



Allied Vision has a huge portfolio of SWIR cameras supporting many different types of SWIR sensors with and without thermoelectric cooling that are sensitive in the VSWIR, SWIR, and XSWIR range:



// ENHANCE YOUR VISION

SWIR Application Overview

MACHINE VISION

- Electronics, Photovoltaics & Semiconductor Inspection
- Pharmaceutical
- Metal Production
- Glass Production
- Agriculture
- Food & Beverages

SCIENTIFIC & MEDICAL

- Hyperspectral Imaging
- Art Inspection
- Document Authentication
- Airborne Remote Sensing
- Laserbeam Profiling
- OCT
- Microscopy
- Cancer Detection

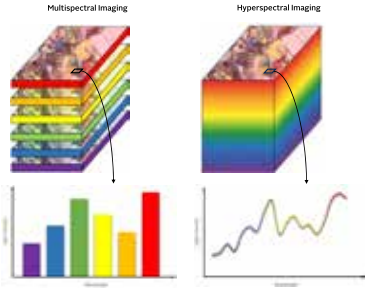
SECURITY & TRAFFIC

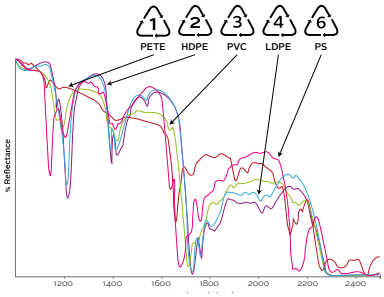
- Surveillance
- Vision Enhancement
- Night Vision

Analyzing the Spectral Signatures of Materials

Spectral imaging in the SWIR range can be applied to identify and discriminate materials that might appear identical visually based on their unique spectral signatures.

Hyper- or Multispectral imaging technologies have revolutionized many of the application fields named here by providing non-invasive, non-destructive, and highly informative analysis capabilities.





Recycling – Material Sorting

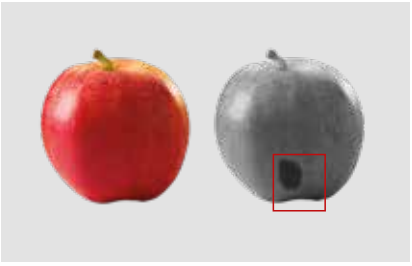
SWIR cameras are used efficiently in recycling facilities to separate material types such as plastics, textiles, construction waste, or various composite materials based on their unique spectral signatures.

Besides the segregation of different material types and grades, contaminants or unwanted materials in recyclable streams can be detected, ensuring the quality of recycled materials.

Agriculture

SWIR imaging assists in monitoring plant health by detecting subtle changes in nitrogen content, water stress levels, or pests often invisible to the human eye. It also aids in soil analysis by identifying soil composition variations and moisture levels.

Using SWIR cameras mounted on drones or handheld devices, farmers can assess crop health, optimize irrigation strategies, and identify nutrient deficiencies, enabling precision agriculture practices for enhanced yields and resource management.



Food & Beverage Industry – Grading, Sorting and Package Inspection

In the food and beverage industry, product quality and safety are of utmost importance. Contamination, counterfeiting, and non-compliance with regulations pose significant risks.

SWIR cameras aid in quality control by detecting foreign objects or fill level through certain opaque containers, verifying packaging integrity, and assessing food composition without physical contact, to ensure food safety and quality standards are met.

Print Industry – Counterfeit Detections and Authentication

Various security features are often applied to banknotes or original products using special types of ink to prevent counterfeiting and ensure authentication. Such security features are not normally visible to the human eye but can be detected with a SWIR camera due to the specific reflection, absorption, and transmission properties of the ink.

Non-invasive Analyzes Art Conservation

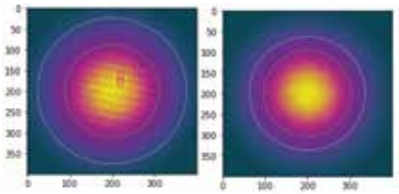
SWIR cameras assist in analyzing paintings, manuscripts, and artifacts by revealing underlying layers, detecting repairs, identifying pigments or materials used, and monitoring deterioration or changes over time, support preservation efforts and authentication of cultural heritage items without causing damage.

Life Science and Biomedical Imaging – See beyond

SWIR cameras assist in biomedical research by capturing images that reveal deeper layers of tissues, aiding in disease diagnosis, drug development, and surgical guidance. SWIR imaging enables non-invasive tissue analysis, visualization of blood vessels, and identification of specific biomarkers.

Laser Beam Analysis – Profiling and Wavefront Sensing

Short-wave Infrared lasers can penetrate materials more effectively, target specific molecule absorption bands, and experience less scattering than visible light lasers. Making them useful in various applications such as telecommunications, LiDAR based remote sensing, and medical imaging. SWIR cameras analyze laser beams to optimize their performance for different uses.

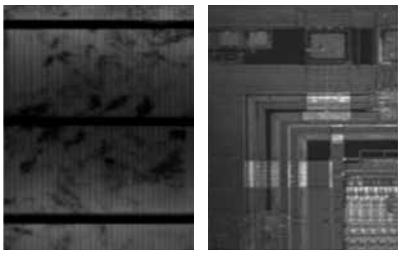


Surveillance – Vision Enhancement

SWIR imaging excels in low-light and adverse weather conditions such as rain, fog, or haze, providing enhanced visibility and detection capabilities compared to visible light or thermal imaging. Surveillance systems with SWIR cameras enable improved night vision and detection of obscured objects or individuals in various security applications, such as border control and law enforcement.

Semiconductor & Solar Cell Inspection – Transparency of Silicon beyond 1150nm

SWIR imaging can be applied to identify defects in semiconductor materials (e.g., ingots, solar cells, or wafers), such as cracks, impurities, or irregularities not visible through other imaging methods, ensuring a high yield production of high-quality chips and efficient electronic devices.



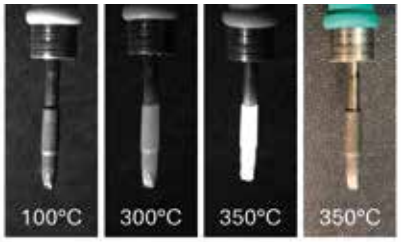
Firefighting and Search & Rescue Operations – Seeing through smoke

SWIR cameras offer an advantage in scenarios where visibility is hindered by smoke, allowing for improved situational awareness and enhanced vision compared to other imaging technologies.

Their ability to penetrate through certain types of smoke can be crucial in applications where clear visibility is vital for safety, surveillance, or operational efficiency.

Free-Space Optical Communication (FSOC)

SWIR cameras assists in monitoring, analyzing, and optimizing the laser beam's quality via adaptive optics in FSOC systems, which is crucial for reliable and consistent data transmission, especially in challenging and changing atmospheric conditions where SWIR wavelengths might experience less scattering and absorption.



Thermography – Monitoring Temperatures

SWIR cameras offer precise temperature measurement (300°C to 1700°C), with reduced errors due to emissivity variations. Their ability to penetrate materials and high sensitivity to thermal radiation makes them versatile tools widely used in industries such as metal processing, glass production, and semiconductor manufacturing.

// HIGHLIGHTS AND BENEFITS

10 reasons to go for... Alvium SWIR & Goldeye

High versatility

// Wide variety of resolutions, interfaces, lens-mounts, optical filters
// Sensor cooling options: TEC1, TEC2, TECless
// Various board-level versions
// For demanding industrial applications or for lab-use

Eased system integration

// Single cable solutions (powering, configuration, and streaming)
// Comprehensive I/O control functionalities
// Multiple mounting options

Superior image quality

// Multiple image processing features
// Sensor cooling down to -30°C
// Low-noise images with high linearity and dynamic range

ITAR free

// Classified as dual-use products (ECCN 6A003.b.4.a)
// Export license required – Expert in customs affairs
// Not subject to U.S. International Traffic in Arms Regulations (ITAR)

Ruggedized industrial design

// Robust against shock & vibrations
// Lockable connectors
// Extended operating temperature range

World-class user documentation

// Technical manuals
// Features references
// Detailed application notes

Simplified setup and maintenance

// Standardized Machine Vision interfaces GigE and USB3 Vision, Camera Link
// Dedicated CSI-2 drivers for Embedded Vision solutions
// GenICam-like feature control
// Free comprehensive GUI-viewer
// Firmware updates in the field

Future-proof Vimba X SDK

// Platform-independent: Runs on Windows, Linux, Linux ARM, and macOS
// APIs for C, C++, .NET, and Python
// Compatibility with popular 3rd party image-processing software solutions
// µManager and ROS2 software interfaces

Customized configurations

// Modification in optics, mechanics, or feature control possible
// We adapt our cameras to your needs!

3+ years warranty

// We are committed to quality.
// Warranty can be extended on request.

// SPECIFICATIONS

Alvium® – game changer in SWIR cameras

powered by ALVIUM TECHNOLOGY

Innovative SWIR technology in a compact camera design at an affordable price

Equipped with Sony SenSWIR InGaAs sensors, Alvium SWIR cameras deliver high image quality and frame rates at small size, light weight, and low power consumption, including low cost (SWaP+C). Multiple interface and housing design options including board level version makes them the ideal choice to build cost-effective OEM systems used in embedded and machine vision applications. Thereby, the industrial grade Alvium SWIR cameras and drivers provide a plug & play feeling whenever setting up your system solution.

Alvium SWIR cameras support a spectral range from 400 nm to 1,700 nm at high quantum efficiencies. This allows to capture images in both the visible and SWIR spectra with a single camera and enables users to reduce overall system costs.

Key Facts

// SWaP+C capabilities
// Modular housing design including board-level version
// Removed cover glass option for laser based applications
// GenICam-compatible feature control
// Extended temperature range from -20°C to +65°C
// Multiple interface options:
- GigE Vision
- 5GigE Vision
- USB3 Vision, or
- CSI-2 interface, incl. FPD-Link III & GMSL2™ range extender

// Plug & Play application setup

Alvium C

Camera model	Sensor	Mega-pixels	Resolution	Sensor format	Shutter mode	Max. frame rate in fps	Pixel size in µm	Spectral range in nm
1800 C-030	Sony IMX991 InGaAs	0.3	656 × 520	Type 1/4	Global	249	5 × 5	400–1,700
1800 C-130	Sony IMX990 InGaAs	1.3	1296 × 1032	Type 1/2	Global	130	5 × 5	400–1,700
1800 C-320	Sony IMX993 InGaAs	3.21	2080 x 1544	Type 1/1.8	Global	131	3.45 x 3.45	400–1,700
1800 C-530	Sony IMX992 InGaAs	5.32	2592 x 2056	Type 1/1.4	Global	84	3.45 x 3.45	400–1,700

Hardware options

// Bare Board / Open Housing // C-Mount / CS-Mount / S-Mount // FPD-Link III / GMSL2™ Interface

Dimensions L × W × H in mm

// 13 × 26 × 26 (Bare Board)

Alvium U

1800 U-030	Sony IMX991 InGaAs	0.3	656 × 520	Type 1/4	Global	249	5 × 5	400–1,700
1800 U-130	Sony IMX990 InGaAs	1.3	1296 × 1032	Type 1/2	Global	130	5 × 5	400–1,700
1800 U-320	Sony IMX993 InGaAs	3.21	2080 x 1544	Type 1/1.8	Global	125	3.45 x 3.45	400–1,700
1800 U-530	Sony IMX992 InGaAs	5.32	2592 x 2056	Type 1/1.4	Global	77	3.45 x 3.45	400–1,700

Hardware options

// Bare Board / Open Housing / Closed Housing // C-Mount / CS-Mount / S-Mount // USB standard connector / USB 90° connector

Dimensions L × W × H in mm

// 13 × 26 × 26 (Bare Board)

Alvium G1

G1-030	Sony IMX991 InGaAs	0.3	656 × 520	Type 1/4	Global	249	5 × 5	400–1,700
G1-130	Sony IMX990 InGaAs	1.3	1296 × 1032	Type 1/2	Global	86	5 × 5	400–1,700

Hardware options

// Closed Housing // C-Mount / CS-Mount / S-Mount

Dimensions L × W × H in mm

// 41 × 29 × 29 (Closed Housing)

Alvium G5

G5-130	Sony IMX990 CMOS	1.3	1296 x 1032	Type 1/2	Global	130	5 × 5	400–1,700
G5-320	Sony IMX993 InGaAs	3.21	2080 x 1544	Type 1/1.8	Global	131	3.45 x 3.45	400–1,700
G5-530	Sony IMX992 InGaAs	5.32	2592 x 2056	Type 1/1.4	Global	84	3.45 x 3.45	400–1,700

Hardware options

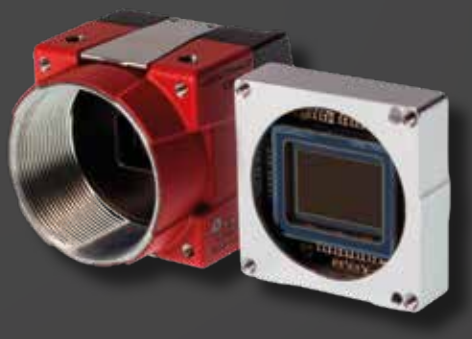
// Closed Housing // C-Mount / CS-Mount / S-Mount

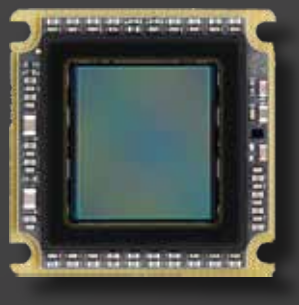
Dimensions L × W × H in mm

// 60 × 29 × 29 (Closed Housing)

// FLEXIBLE DESIGN FOR MAXIMUM VERSATILITY

Alvium Modular Concept





With the Alvium platform, we have created a flexible and modular platform to ensure that your camera adapts to your requirements and not the other way around. Alvium cameras are available with 6 different interfaces for diverse requirements. Together with the large choice of high-quality image sensors, various lens mount and housing options, and a wide range of spectral sensitivities, the Alvium platform offers a broad variety of cameras to choose from.

To meet individual needs and to enable the greatest possible flexibility, Allied Vision offers a wide range of additional modular options for Alvium cameras.

Removed Cover Glass (RCG) for cameras with Sony IMX sensors

Alvium cameras with Sony IMX, including VSWIR sensors, are available without sensor cover glass. Particularly for reflection-sensitive applications, the RCG option can help achieve the best possible imaging results. Image artifacts are eliminated.

// No image artifacts caused by particles on the sensor cover glass
// No disturbing reflections
// Increase of overall quantum efficiency
// Fiber optic arrays can directly be mounted to the sensor
// Disturbing reflections or interferences caused by the sensor cover glass are avoided

Alvium Frame for USB3 and CSI-2 cameras

Vision applications sometimes require a very precise sensor alignment than the standard bare board camera allows. Alvium Frame cameras are actively aligned during production. The image sensor is perfectly aligned towards the small precision frame. There are two options of alignement:

// Precision milled areas on the bottom, side, and front of the frame
// Precision milled front face, alignment pin, and oblong hole

Every available camera model / image sensor in the Alvium CSI-2 and USB3 series is available as an Alvium Frame camera.

Alvium Flex for USB3 and CSI-2 cameras

The Alvium Flex models enable the use of various connectors and cables by replacing the standard interface with a board-to-board connector for all signals.

// Very compact footprint of 26 mm × 26 mm for bare board and 29 mm × 29 mm for housed cameras
// Slim 8 mm bare board version
// Support for more than 20 image sensors
// Support for Sony SWIR and UV sensors
// Board-to-board connector to enable individual connections
// Various interface boards, add-on boards, and cables accessories available

Active Lens Alignment for cameras with S-mount lenses

Deviations along the optical axis between lens and sensor affect image quality.
Allied Vision offers Active Lens Alignment for its Alvium cameras. Each single S-Mount lens is aligned with the corresponding Alvium camera in an automated production process, resulting in:

// Consistent high image quality and optimal optical alignment
// Higher precision and shorter production times compared to manual alignment
// No effects such as blurring, tilt, rotation, focus drift and excessive variances

// SPECIFICATIONS

Goldeye – Excellence in Infrared

Goldeye short-wave infrared (SWIR) cameras offer a high grade of versatility whether resolution, interface, lens-mount, spectral range or thermo-electric sensor cooling wise (TEC1, TEC2, TECless). They can be operated at high frame rates and their multiple on-board image processing features provide superior imaging results with low-noise, high linearity, and high dynamic range. Standardized GigE Vision or Camera Link interface and GenICam-like feature control provide a plug & play feeling when utilizing these robust, high-quality SWIR cameras.

The new Goldeye Pro camera series is equipped with a GigE Vision compliant 5 Gbps interface, to support optimally the higher bandwidth requirements of the latest SWIR sensor solutions while enabling simultaneously an efficient sensor temperature stabilization via thermoelectric cooler (TEC).

Key Facts

// Various InGaAs sensor technologies supported, including visible SWIR and eXtended SWIR
// Resolutions up to 5.3 megapixels including SXGA, VGA, and QVGA
// GigE Vision / Camera Link (Goldeye) or 5 GigE Vision (Goldeye Pro) interface
// Comprehensive feature set including various image quality improvement features
// Extended operating temperature range: –20°C to +55°C (housing)
// Comprehensive I/O control options: TTL/LVTTL and opto-isolated in- and outputs, RS232 communication
// Removed cover glass option for laser based applications
// GenICam-compliant feature control
// Plug & Play application setup

Camera model	Sensor	Mega-pixels	Resolution	Sensor format	Shutter mode	Max. frame rate in fps	Pixel size in µm	Spectral range in nm
Goldeye G/CL								
G/CL-008 TEC1	InGaAs FPA with TEC1 (Min. ΔT = 20 K)	0.1	320 × 256	Type 1	Global	344	30 × 30	900–1,700
G/CL-030 TEC1	Sony IMX991 with TEC1 (Min. ΔT = 25 K)	0.3	656 x 520	Type 1/4	Global	234	5 × 5	400–1,700
G/CL-032 TEC1	InGaAs FPA with TEC1 cooling (Min. ΔT = 30 K)	0.3	636 × 508	Type 4/3	Global	100	25 × 25	900–1,700
G/CL-033 TEC1	InGaAs FPA with TEC1 (Min. ΔT = 25 K)	0.3	640 × 512	Type 1	Global	301	15 × 15	900–1,700
G/CL-033 TECless	InGaAs FPA without TEC	0.3	640 × 512	Type 1	Global	301	15 × 15	900–1,700
G/CL-034 TEC1	InGaAS FPA with TEC1 (Min. ΔT= 25 K)	0.3	636 × 508	Type 1	Global	303	15 × 15	900–1,700
G/CL-130 TEC1	Sony IMX990 with TEC1 (Min. ΔT = 25 K)	1.3	1280 x 1024	Type 1/2	Global	94	5 × 5	900–1,700
Goldeye G/CL Cool/XSWIR								
G/CL-008 Cool TEC1	InGaAs FPA with TEC1 (Min. ΔT = 30 K)	0.1	320 × 256	Type 1	Global	344	30 × 30	900–1,700
G/CL-008 XSWIR 1.9 TEC2	InGaAs FPA with TEC2 (Min. ΔT = 60 K)	0.1	320 × 256	Type 1	Global	344	30 × 30	1,100– 1,900
G-008 XSWIR 2.2 TEC2	InGaAs FPA with TEC2 (Min. ΔT = 60 K)	0.1	320 × 256	Type 1	Global	344	30 × 30	1,200–2,200
G/CL-032 Cool TEC2	InGaAs FPA with TEC2 (Min. ΔT = 60 K)	0.3	636 × 508	Type 4/3	Global	100	25 × 25	900–1,700
G/CL-034 TEC2	InGaAs FPA with TEC2 (Min. ΔT = 60 K)	0.3	636 × 508	Type 1	Global	303	15 × 15	900–1,700
G/CL-034 XSWIR 1.9 TEC2	Ext. range InGaAs FPA with TEC2 (Min. ΔT = 60 K)	0.3	636 × 508	Type 1	Global	303	15 × 15	1,100–1,900
G/CL-034 XSWIR 2.2 TEC2	Ext. range InGaAs FPA with TEC2 (Min. ΔT = 60 K)	0.3	636 × 508	Type 1	Global	303	15 × 15	1,200–2,200

Modular concept

// IR band-pass filter // F-Mount / M42-Mount // Silver design

Dimensions (including connectors and standard mount) L × W × H in mm

// Standard: 93.2 (Max) × 55 × 55 // Power over Ethernet acc. to IEEE 802.3 at

// Cool: 105.8 × 80 × 80 | XSWIR: 105 x 80 x 80

Goldeye G/CL

Goldeye G/CL Cool and XSWIR

Camera model	Sensor	Mega-pixels	Resolution	Sensor format	Shutter mode	Max. frame rate in fps	Pixel size in µm	Spectral range in nm
Goldeye Pro								
Goldeye Pro G5-530	IMX992 SenSWIR (Max. ΔT = 30 K)	5.3	2592 × 2056	Type 1/1.4	Global	115	3.45 × 3.45	400–1,700
Goldeye Pro G5-320	IMX993 SenSWIR (Max. ΔT = 30 K)	3.2	2080 x 1544	Type 1/1.8	Global	157	3.45 × 3.45	400–1,700

Dimensions (including connectors and standard mount) L × W × H in mm

// 90.8 × 55 × 55 // Power over Ethernet acc. to IEEE 802.3 at

Goldeye Pro G5

// SELECTED CAMERA PORTFOLIO AT A GLANCE

Features comparison

Image optimization features		Alvium U	Alvium C	Alvium G1 /G5	Goldeye G	Goldeye CL	Goldeye Pro G5
Defect pixel correction		✓	✓	✓	✓	✓	✓
2-Point Correction		-	-	-	✓	✓	✓
Multi-ROI		✓(1)	✓(1)	✓(1)	✓	✓	✓
Binning		✓	✓	✓	✓	✓	✓
Auto gain		✓	✓	✓	-	-	-
Auto exposure		✓	✓	✓	✓	✓	✓
Auto contrast		✓	✓	✓	✓	✓	✓
Look-up tables (LUT)		✓	✓	✓	✓	✓	✓
Gamma correction		✓	✓	✓	-	-	-
Reverse X/Y		✓	✓	✓	-	-	-
Camera control features							
Bandwidth control		✓	-	✓	✓	-	✓
Stream hold		-	-	-	✓	-	-
Flow control		-	-	✓	-	-	✓
Chunk data		✓	-	✓	✓	-	✓
Sync out modes		✓	✓	✓	✓	✓	✓
Trigger modes:	Single bulk level	✓ - ✓	✓ - ✓	✓ - ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓
Trigger counters:		✓	✓	✓	-	-	✓
Trigger timers:		✓	✓	✓	-	-	✓
Serial communication		✓	✓	✓	✓	✓	✓
Event channel		✓	-	✓	✓	✓	✓
IEEE 1588 Precision Time Protocol (PTP)		-	-	✓	-	-	-
Action commands		-	-	✓	-	-	-
Sequencer (1)		✓	-	✓	-	-	-
Storable user sets		✓	✓	✓	✓	✓	✓
Temperature monitoring		✓	✓	✓	✓	✓	✓
Opto-Isolated	In	-	-	1	1	1	1
	Out	-	-	1	2	2	3
TTL / LVTTL(2)	In	-	-	-	1	1	1
	Out	-	-	-	1	1	2
General Purpose (LVTTL)		4	2	2	-	-	1
RS232		via GPIOs	via GPIOs	via GPIOs	✓	✓	on-request

(1) Selected models only. Please contact our sales team for details.

(2) Goldeye Pro

// SOFTWARE PORTFOLIO

Discover our software

Vimba X

Vimba X stands for a new generation SDK. Fully GenICam compliant, it supports all Allied Vision cameras independent of the operating system as Windows 10 and 11, Linux, and Linux ARM, as well as macOS (all 64-bit). Vimba X contains C, C++, .Net, and Python APIs. This great flexibility empowers you to port your source code easily from Windows to Linux or cross-compile from a Linux PC to an embedded system. In addition, it supports interfaces to µManager and ROS2, as well as simplified interoperability with many 3rd-party SW solutions.

Vimba

Vimba is our well established SDK for Allied Vision cameras. Just like Vimba X, it runs on Windows, Linux, and Linux ARM.

Vimba X and Vimba can be installed on the same system to enable an easy migration from Vimba to Vimba X. Most function calls are the same and the few differences are described in the developer guide on **https://docs.alliedvision.com**.

You can download Vimba and Vimba X for free from our website:
www.alliedvision.com/en/products/software/

Software and drivers for embedded vision, open source projects

Visit www.github.com/alliedvision to discover our software, examples, and drivers for embedded vision and our open source projects:

// Alvium CSI-2 camera driver for NVIDIA Jetson
// V4L2 Viewer
// Examples for Alvium CSI-2 cameras (V4L2)
// Texas Instruments EdgeAI Demo with Alvium USB cameras
// gst-vimbasrc and gst-vmbsrc, plugins to access Vimba and Vimba X from GStreamer pipelines
... and more

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