Allied Vision

Precision. Delivered.





// DEFENSE AND HIGH-LEVEL SECURITY

Advanced Camera Technology for Defense Applications

Allied Vision is your Mission-Driven Partner for Advanced Vision Technology in Defense.

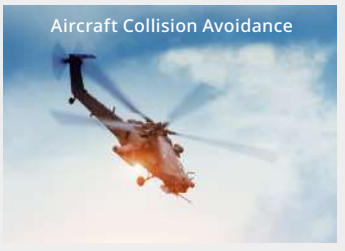
In no other industry the reliability and security of machine vision systems do play a more pivotal role than in the sensitive landscape of defense technology.

Operational capabilities and mission success highly depend on the quality and stability of the technologies used. Each application has its specific requirements and demands different technical solutions. Depending on the task, various technologies are suitable. We deliver state-of-the-art vision technology tailored for for your Situational Awareness, C4ISR or Countermeasure equipment, ensuring the highest quality 'Made in Germany'.

Defense Applications









// Long Distance Detection on board of military vehicles

Compact Alvium CSI-2 cameras with rugged connectors enable:

- Multi-camera setup
- Comprehensive view of the surroundings
- Monitoring threats from multiple angles

// Aircraft Collision Avoidance

Lightweight Alvium cameras with robust interface support:

- Secure operation in low-altitude
- Real-time surround views
- High-resolution image streams

// Quality Inspection of ammunition

High-speed FXO CoaXPress12 cameras ensure:

- Fast and reliable detection of smallest defects
- Safe and perfect functioning of ammunition
- Standard-compliant production

// Border Control

High-performance Goldeye SWIR cameras help:

- Seeing through fog, haze and other obscurants
- Maintaining situational awareness
- Detecting potential threats and reacting

Alvium Alvium C/U/G1/G5



- Very compact (29mm x 29mm x L), light weight, energy-efficient, and affordable (SWaP+C) camera solution
- High modularity including board-level versions (Flex & Frame) and sensors with removed cover glass
- Support of TEC-less SWIR (0.3–5.3 MP), UV (8MP) and Polarizer (5MP) sensors
- Multiple standardized interface options including CSI-2 range extenders FPD-Link III or GMSL2
- 512 MB Burst Mode buffer (5GigE)
- GenICam-compliant feature control and streaming
- Extended feature set including sequencer, convolution filters, or lens shading compensation
- Plug & Play application setup
- Extended temperature range from -20°C to +65°C (housing)
- General Purpose (GigE modles) Inputs/Outputs (GPIOs) opto-isolated inputs

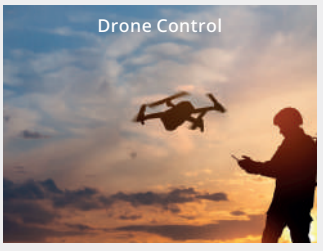
FXO

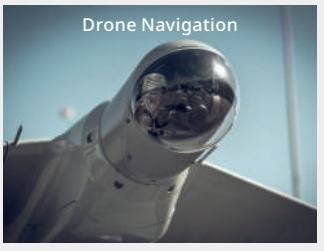


- World fastest high-resolution SWIR (1.3 to 5.3 MP) and UV camera series in a compact industrial housing (50 mm x 50 mm)
- Support of SWIR sensors optionally with thermo-electric cooling and UV sensors
- CoaXPress-12 for lowest latency and highest speed
- 10 GigE for an easy integration
- 1024 MB image buffer SDRAM
- Advanced image correction features including Non-Uniformity (Two-Point NUC), Shading, and Defect- and dynamic Hot Pixel Correction
- Support of GenICam and GenTL standards
- Up to 65°C operating temperature
- Electrical and optical inputs TTL-24V
- Power output (4-channel strobe controller) with 3A max
- Programmable timer and sequencer with Logical Trigger functions (PLC)

Allied Vision









// Counterattack against aerial assault

High-resolution EXO GigE cameras allow for:

- Rapid and accurate detection
- Real-time tracking and prediction of target trajectories
- Neutralizing threats

// Drone Control

Supporting landing maneuvers with Alvium VSWIR

- Images from ground for tactical flight maneuvers
- Clear images even under critical lighting conditions
- Compact size for portable landing hub

// Drone Navigation

High-resolution Alvium CSI-2 cameras with low-latency enable:

- Precise and reliable drone navigation
- Real-time obstacle detection
- Inertial Measurement Units (IMU) and Inertial Navigation Systems (INS)

// Unmanned Surface Vehicle (USV) for offshore mission

Shock and vibration resistant Alvium SWIR cameras provide:

- 360° view for offshore manoeuvering
- Seamless video of multiple cameras

Goldeye / Goldeye Pro



Thermoelectric Cooled Option (TEC)

- Multi-purpose SWIR camera series with two designs: compact industrial (55mm x 55mm x 78mm) and advanced scientific (90mm x 90mm x 80mm)
- Support of numerous InGaAs sensors with TEC1 or TEC2 cooling with resolutions ranging from QVGA to 5.3 MP
- Models with strong sensor cooling down to -30°C for long exposure times or extended SWIR sensitivity up to 2,200nm
- Standard compliant interfaces, as GigE Vision & Camera Link (Goldeye) or 5GigE Vision (Goldeye Pro)
- 256 MB SDRAM (Goldeye) / 512 MB DDR4 RAM (Goldeye Pro) image buffer
- Advanced image correction features including Non-Uniformity, Defect and Background Correction
- Extended operating temperature range: –20°C to +55°C (housing)
- Outstanding image quality with high dynamic range (up to >70dB)
- Comprehensive I/O Control options via optocoupled and non-isolated in- & outputs, or RS232

EXO



- Entry-level camera series with compact and robust industrial design (50mm x 50mm)
- Support of VGA and SXGA resolution TEC-less SWIR sensors, as well as 5 and 12 MP Polarizer sensors
- Advanced image correction features including Non-Uniformity (Two-Point NUC), Shading, Defect- and dynamic Hot Pixel Correction
- Support of GenICam and GenTL standards
- 256 MB Burst Mode Buffer (GigE)
- Up to 65°C operating temperature
- Electrical and optical inputs TTL-24V including
- Power output (4-channel strobe controller) with 3A max
- Programmable timer and sequencer with Logical Trigger functions (PLC)

A reliable Partner

What makes a supplier a reliable partner?

// Cameras and solutions made in Germany
// Meeting Military Standards based on project requirements
// Extensive project experience in the defense sector
// Backed by a secure supply chain
// Ruggedized and reliable vision systems for extreme outdoor use
// Largest SWIR camera portfolio in the market
// High volume production capacities
// Committed to your project and your product life cycle

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Due to the sensitive nature of our work with defense customers, we maintain strict confidentiality regarding customer identities and project specifics. In the following slides, you will find use cases accompanied by brief application descriptions that intentionally omit any military context. Additionally, while we highlight our vision technology, we do not disclose specific model specifications or requirements to protect proprietary information and ensure compliance with our confidentiality agreements.

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