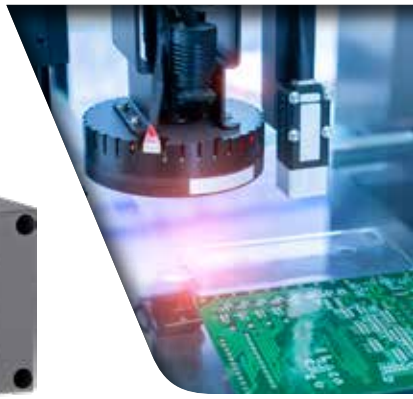
Allied Vision
Precision. Delivered.



// CAMERAS, ILLUMINATIONS, OEM-SOLUTIONS

Line Scan Camera Technology for Machine Vision

Precision. Delivered.

Machine vision expertise united under one brand.

More than components. One responsible source for your entire vision system.

Allied Vision brings together high-performance cameras, frame grabbers, IP cores, software, and services – engineered to work as one system. Not as isolated components, but as an integrated platform that reduces complexity, eliminates interface risks, and gives you a single partner accountable for performance.

ALL YOU NEED FOR VISION – FROM ONE SOURCE

Cameras

From simple inspection tasks to the most demanding high-precision applications, Allied Vision offers a comprehensive camera portfolio designed to cover every imaging requirement. Whether mono or color, visible, near-infrared or infrared, high speed or high resolution – our cameras are engineered to deliver reliable performance across a wide range of industries and use cases. All camera families follow a consistent design philosophy and are built to integrate seamlessly into the Allied Vision ecosystem.

Frame Grabbers

Frame grabbers enable reliable, high-speed image acquisition and data transfer in demanding machine vision systems. Designed for precise synchronization and low-latency performance, they ensure stable operation in both line-scan and area-scan applications. As part of the Allied Vision ecosystem, they reduce system load, simplify integration, and provide a dependable interface between cameras, processing, and peripherals – supporting scalable, high-performance inspection solutions.

Software

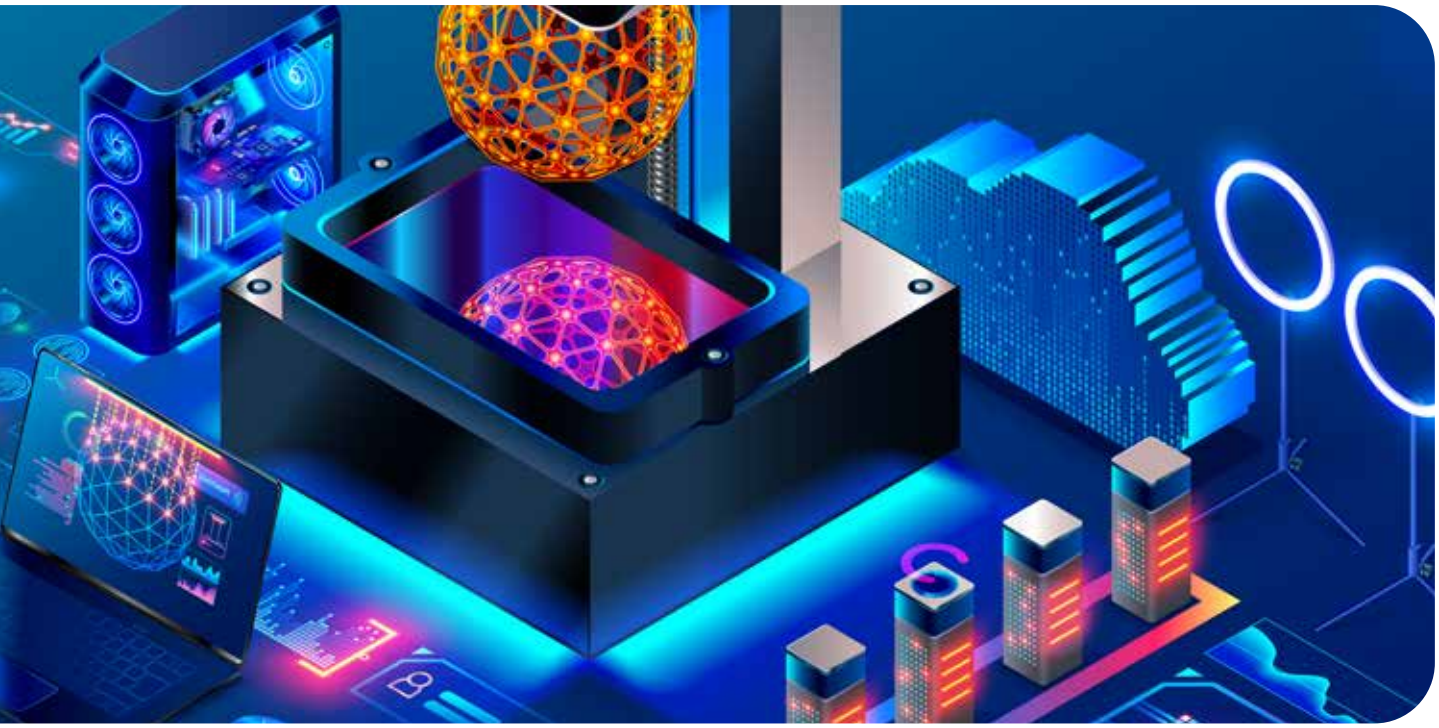
Machine vision software libraries and tools support efficient development, integration, and scaling of vision systems. Built on a unified architecture, they simplify workflows and enable reliable image processing across diverse applications.

Bundling & Sets

Allied Vision camera and frame grabber bundles combine perfectly matched components into pre-validated system configurations. Developed and tested as a unit, these bundles ensure seamless interoperability, reliable performance, and predictable system behavior.
By reducing integration effort and interface complexity, bundled solutions simplify system design, accelerate commissioning, and increase overall productivity – while maintaining full flexibility for future scalability.

Accessories

Approved machine vision accessories have been selected by our experts to deliver best possible image quality to your application with the greatest possible reliability. Our technicians and engineers conduct extensive tests with accessories such as lenses and interface cables in combination with our cameras. That way, we can recommend the best possible accessories and ensure maximal performance of your Allied Vision camera.

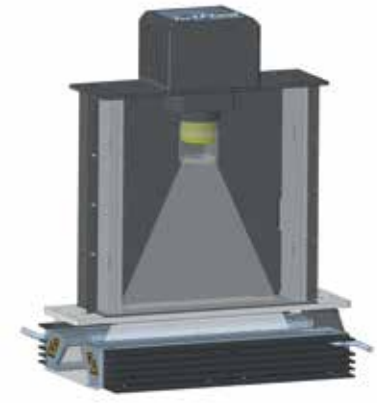


CUSTOMIZED OEM SOLUTIONS

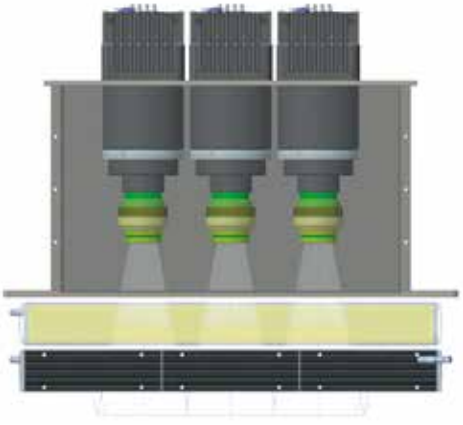
Designed for your application

We analyze your requirements and design a tailor-made solution in close cooperation with you. We offer a full range of technical solutions starting with customized branding, adaption of camera or light up to individual designs for a complete solution with camera, optics and light in light integrated into one ruggedized housing. We optimize the whole system to achieve best technical solutions and optimized total cost.

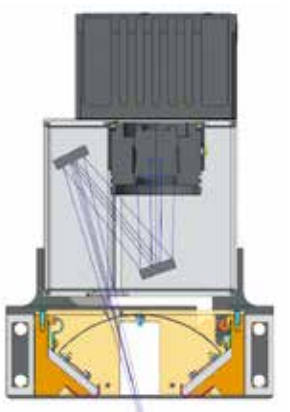
Your solution is created by a team of experienced engineers with many years of know-how in the development of cameras, lighting, optical systems and image processing. We use our modular product concept combined with innovative ideas for leading edge designs concidering technical requirements and cost targets.



Vision module with camera, optics, light



Vision module with multiple cameras



Compact vision module with mirrors

Medical and Pharma

Printing and Packaging

Food and Beverage

Logistics

Electronics and Semiconductors

Surface and Web Inspection

Adapted to your very individual requirements:

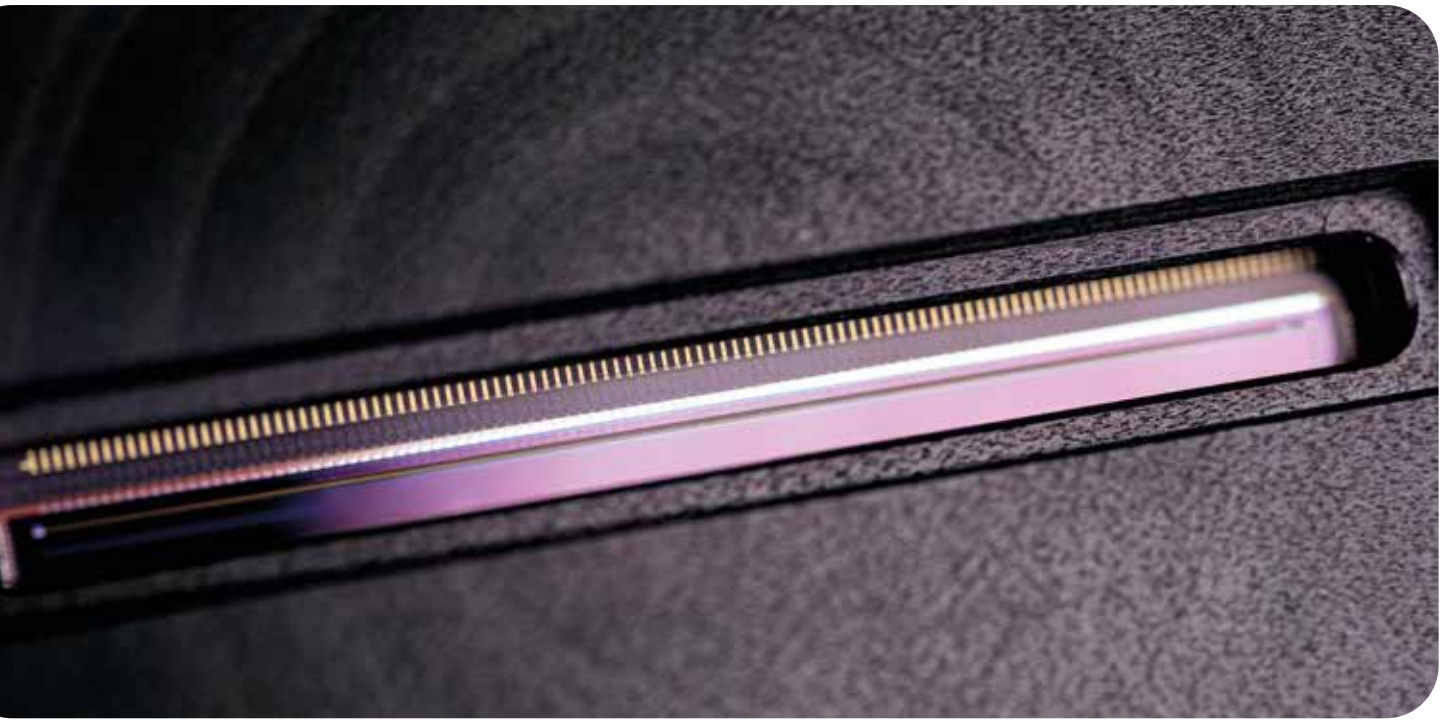
Our experienced engineering teams develop and build your custom-made special model. The spectrum of possible adaptations is just as diverse as the areas of application of our products. This means that even special ambient conditions or confined spaces are no problem.

Our services include

// Feasibility studies to get the best approach for your application
// Simulation of optical system, lenses, mirrors and light
// Compact design to fulfil space restrictions
// Cost efficient overall design and design to cost for production series design
// Design to fit in your environment including concept for easy adjustment and integration
// Project support from concept to series production
// Fully integrated line scan camera-based modules
// Design of mirror optics
// Design of lighting systems
// Embedded image preprocessing (CPU and FPGA based)
// PC based image processing
// Image processing
// CPU & GPU based hardware acceleration

Advantages of our tailor-made systems

// Cost-optimized solution for higher quantities
// Simplified maintenance through 1 to 1 interchangeability of modules
// Compact solution for limited installation space
// Robust, dust and moisture-proof complete module
// All from a single source Image processing
// CPU & GPU based hardware acceleration



Line Scan Cameras

Line Scan Camera Technology

Where continuous image acquisition is required, line scan technology is the solution of choice. We design, develop, and manufacture high-performance line scan cameras, LED line lighting systems, and OEM-customized vision solutions for machine builders and system integrators worldwide. Our portfolio supports a broad range of industrial applications, including factory automation, surface inspection, quality control, classification, and defect detection – helping our customers secure a sustainable competitive advantage.

High-performance 2D and 3D line scan solutions for continuous, high-speed inspection

Our line scan cameras deliver reliable, high-precision imaging even in the most demanding industrial environments, making them ideal for real-time product inspection, process monitoring, and quality control across industries such as paper, textile, and food processing. Seamlessly integrated into your existing systems, they enable continuous inspection, higher process stability, and measurable improvements in product quality.

Corona II
LED Line Lighting System

Allied Vision

FAST. VERSATILE. ECONOMICAL.

allPIXA neo 4k / 6k

Line Scan Camera with 10 GigE / CoaXPress Interface

10 GigE Vision · CoaXPress · CXP-12 · GenICam

The allPIXA neo is a fast and versatile line scan camera coming in different versions with 4k and 6k resolution, pixel sizes of 7 µm and 5 µm and two interfaces: The 10 GigE interface enables easy and economical integration whereas the CoaXPress interface provides highest speeds up to 90 kHz in color and 250 kHz in mono. The camera captures up to 4 lines simultaneously for high quality color images and an additional mono or a NIR image. With its extensive features and trigger options, the allPIXA neo is the best choice for a wide range of line scan applications where high speed and best image quality are essential.

CAMERA OVERVIEW

- // CMOS multi-line sensor with 4096 or 6144 pixels
- // Two different pixel sizes: 7 µm or 5 µm
- // 10 GigE (10GBase-T) or 2 x CoaXPress (CXP-12) interface
- // High speed: up to 90 kHz in color and 250 kHz in mono
- // supports PoE and PoCXP (Power over GigE or CoaXPress)
- // Camera models for Mono, RGB, and RGB+NIR available
- // Configurable voltage range for input signals
- // Various optical mounts: M42, F-Mount and TFL-Mount

FEATURES

- // Frame and line trigger options including variable encoder input
- // DSNU and PRNU correction
- // Continuous and automatic white balancing
- // Precise multi-camera synchronization
- // Multi-Flash function for multiple image acquisition in one pass
- // Color correction matrix for optimized color image representation
- // SDK and graphical tool for Windows and Linux
- // Fully GenICam and GigE Vision compliant

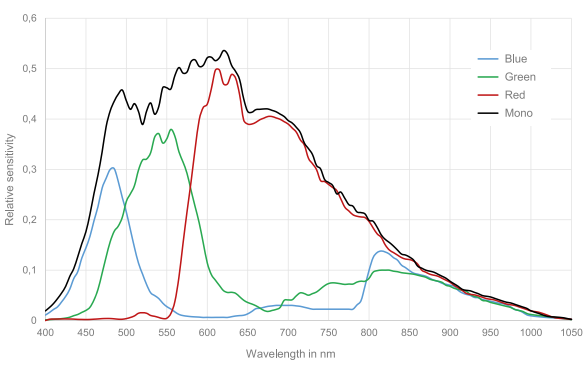
Applications

// High speed web inspection
// Sorting processes
// Pharma
// Food inspection
// Logistics
// High quality surface
// General machine vision

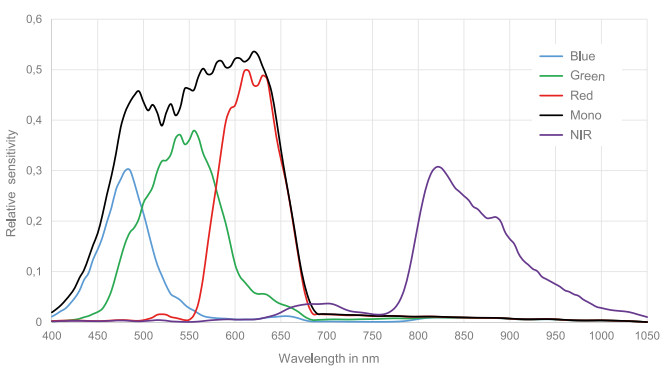
SPECIFICATIONS

	allPIXA neo 4k		allPIXA neo 6k	
Interface	10 GigE	CoaXPress	10 GigE	CoaXPress
Sensor	CMOS	CMOS	CMOS	CMOS
Number of pixels	4096	4096	6144	6144
Active pixel size	7 µm x 7 µm	7 µm x 7 µm	5 µm x 5 µm	5 µm x 5 µm
Interface connector	RJ45 (10GBASE-T)	2 x CXP-12	RJ45 (10GBASE-T)	2 x CXP-12
Max. line rate, single line	250 kHz	250 kHz	180 kHz	240 kHz
Max. line rate, Tri-linear	90 kHz	90 kHz	60 kHz	80 kHz
Max. line rate, quad-linear	70 kHz	80 kHz	45 kHz	60 kHz
Power over ethernet/CXP	PoE	PoCXP	PoE	PoCXP
Data format	8/10/12 bit			
Power supply	12 – 24V DC ± 10 %			
Trigger mode	Free run, external trigger, line trigger, frame trigger or encoder			
Operating temperature	0° to 60° housing temperature			
Dimensions	62 mm x 62 mm x 62 mm			
Lens mount	M42 x 1/F-mount/TFL adapters			
Weight	350 g			
Certifications	CE; RoHS			

SPECTRAL SENSITIVITY FOR ALLPIXA NEO MONO AND COLOR



SPECTRAL SENSITIVITY FOR ALLPIXA NEO WITH NIR OPTION



Allied Vision

HIGH SPEED CMOS LINE SCAN CAMERA WITH MULTI-LINE SENSOR FEATURING TDI OPTIONS

allPIXA evo 8k CXP

Line Scan Camera with CoaXPress Interface

The allPIXA evo 8k with CoaXPress interface unleashes the full speed of the multi-line CMOS sensor with line rates of up to 100kHz for color, mono and TDI images. The sensor provides images with CCD quality with high-resolution by using the fast 4 x CoaXPress interface. With versatile frame trigger and encoder options the allPIXA evo 8k is the best choice for all high-speed web and print inspection applications demanding high resolution. Filters in the near infrared range enables the recognition of object features in the visible and NIR spectrum. For easy integration, the allPIXA evo 8k CXP comes with the intuitive graphical tool GCT for Windows and Linux, which works with all GenICam compliant CXP frame grabbers.

CAMERA OVERVIEW

- // CMOS multi-line sensor with 8192 pixels
- // 4x CoaXPress (CXP-12) interface
- // Multiline sensor enables color or mono output, configurable with parameters
- // True RGB color with excellent signal-to-noise-ratio
- // High speed: up to 100 kHz line frequency with full RGB and RGB-NIR
- // Supports PoCXP (Power over CoaXPress).
- // Fully compatible with CoaXPress 2.0 standard
- // SDK and graphical tool GCT for Windows and Linux

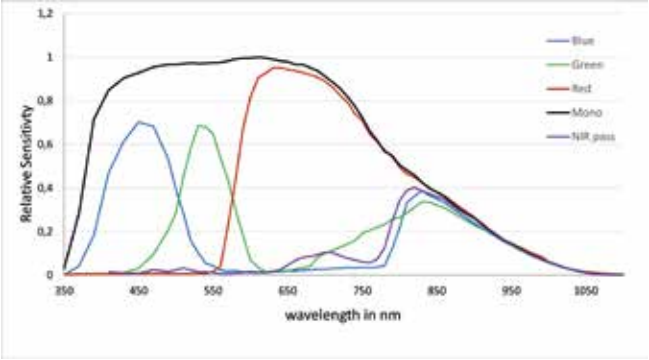
FEATURES

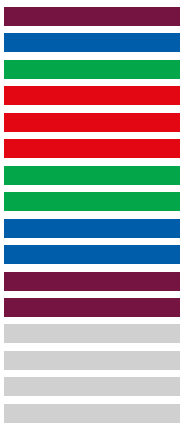
- // Full RGB color with 2 x TDI option in full speed
- // Frame and line trigger options including variable encoder input
- // Color correction matrix for optimized color image representation
- // Continuous white balancing
- // Precise multi-camera synchronization
- // Multi-Flash function for capturing multiple images in one pass with various lighting conditions

Applications

// Flat Panel Display Inspection
// Printed Circuit Board Inspection
// High-resolution Document Scanning
// Print and Label Inspection
// Web and Foil Inspection
// Postal Sorting (parcels / letters)
// Food Inspection and Sorting
// High Quality Surface Inspection
// Pharma Packaging and Print Inspection
// Wood Inspection
// General Machine Vision

SPECTRAL SENSITIVITY





NIR and RGB lines

2 lines TDI mode:
NIR and RGB

Mono lines with
optional 4 x TDI

SPECIFICATIONS

Sensor	CMOS line scan sensor for RGB, NIR, and mono
Number of pixels	8192 pixels
Active pixel size	5.0 µm x 5.0 µm
Output	4 x CoaXPress 2.0
Max. line rate color **Max. line rate color+NIR**	8192 x 3 pixels: up to 100 kHz RGB+NIR: 8192 x 4 pixels: up to 100kHz
Max. line rate TDI	Mono: 8192 x 1 pixels up to 100 kHz for 4x TDI
Max. line rate in ROI mode	up to 100 kHz
Data format	3 x 8/10/12 Bit color or 4 x 8/10/12 Bit color+NIR or 1 x 8/10/12 Bit mono mode
TDI options	RGB color: up to 2x TDI (Sensor) Mono: up to 4 x TDI (FPGA)
Interfaces	4 x CoaXPress 2.0 External I/O (DSUB) CoaXPress connections switchable 1, 2 or 4
Power supply	12 – 24V DC ± 20% (Hirose) Power over CoaXPress: PoCXP requires min. 2 x CXP connectors
Trigger mode	Free run / External trigger / Line trigger / Frame trigger
Operating Temperature	0° - 60°C (housing temperature)
Dimensions / **Lens mount**	102 x 76 x 87 mm (W x H x D) M72 x 0,75 mm / F-Mount (adapter for M72)
Certifications	CE; RoHS

Customized Cameras and Imaging Systems:

Allied Vision offers fully customized light, camera and scanner solutions. All systems are 100% adaptable to customer requirements.

Allied Vision

HIGH SPEED CMOS LINE SCAN CAMERA WITH TRILINEAR SENSOR

allPIXA evo 10k / 15k CXP

Line Scan Camera with CoaXPress Interface

CoaXPress® CXP-12 GEN<i>CAM

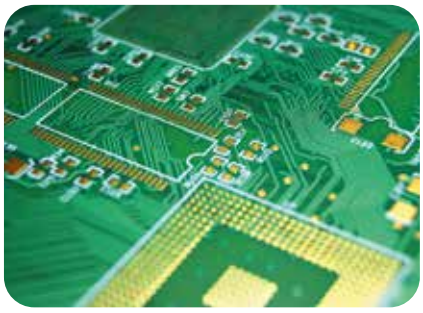
The allPIXA evo CXP cameras with 4 x CoaXPress interface provide the full speed of the 10k and 15k CMOS sensors: up to 68.4 kHz are possible with mono or true color RGB. Featured with line and frame trigger options, variable encoder input and color conversion possibilities, the allPIXA evo CXP is the best choice for all high-resolution web and print inspection applications demanding for high speed. For easy integration, the allPIXA evo CXP comes with the intuitive graphical tool GCT for Windows and Linux, which works with all GenICam compliant CXP frame grabbers.

CAMERA OVERVIEW

- // CMOS line scan sensor with 10240 or 15360 pixels
- // 4x CoaXPress (CXP-12) interface
- // True RGB color with excellent signal-to-noise-ratio
- // High speed: Up to 68 kHz line frequency with mono or full RGB
- // Supports PoCXP (Power over CoaXPress).
- // Fully compatible with CoaXPress 2.0 standard
- // SDK and graphical tool GCT for Windows and Linux

FEATURES

- // True RGB color or fast mono
- // Mono camera with up to 3 x TDI (FPGA) in full speed
- // Frame and line trigger options including variable encoder input
- // Color correction matrix for optimized color image representation
- // Continuous white balancing
- // Precise multi-camera synchronization
- // Multi-Flash function for capturing multiple images in one pass with various lighting conditions



Applications

// Flat Panel Display Inspection

// Printed Circuit Board Inspection

// High-resolution Document Scanning

// Wafer and Semiconductor Inspection

// Print and Label Inspection

// Web and Foil Inspection

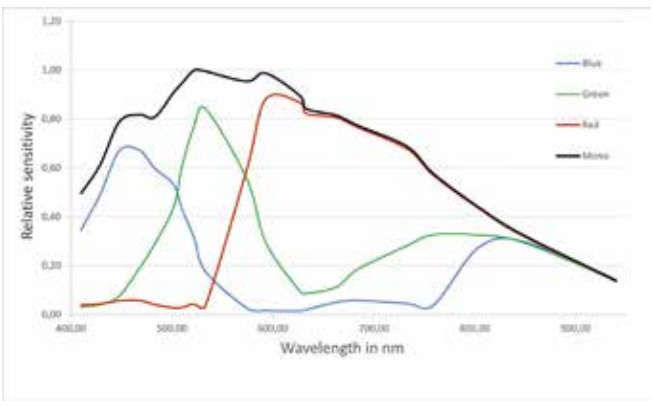
// High Quality Surface Inspection

// General Machine Vision

SPECIFICATIONS

Features	alIPIXA evo 15k CXP	alIPIXA evo 10k CXP
Sensor	Trilinear CMOS line scan sensor for color or mono	
Number of pixels	15360 pixels	10240 pixels
Active pixel size	5.6 µm x 5.6 µm	
Output	4 x CoaXPress 2.0	
Max. line rate color	15360 x 3 pixels: up to 68.4 kHz	10240 x 3 pixels: up to 68.4 kHz
Max. line rate mono	15360 x 1 pixels up to 68.4 kHz	10240 x 1 pixels up to 68.4 kHz
Max. line rate in ROI mode	up to 68.4 kHz	
Data format	3 x 8/10/12 Bit color or 1 x 8/10/12 Bit mono mode	
TDI options	Only for mono: 3 x TDI (FPGA processing)	
Interfaces	4 x CoaXPress 2.0 with micro-BNC connectors External I/O (DSUB) CoaXPress connections switchable 1, 2 or 4	
Power supply	12 – 24V DC ± 20% (Hirose) Power over CoaXPress: PoCXP requires min. 2 x CXP connectors	
Trigger mode	Free run / External trigger / Line trigger / Frame trigger	
Operating temperature	0° - 60°C (housing temperature)	
Dimensions / Lens mount	102 x 100 x 87 mm (W x H x D) / M95 x 1,0 mm	102 x 76 x 87 mm (W x H x D) / M72 x 0,75 mm
Certifications	CE; RoHS	

SPECTRAL SENSITIVITY:



Customized Cameras and Imaging Systems:

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Allied Vision

INTERNAL COLOR CONVERSATION TO ALL STANDARD COLOR SPACES

allPIXA evo 16k

Line Scan Camera with 4x CoaXPress

CoaXPress® CXP-12 GEN<i>CAM

The powerful allPIXA evo 16k line scan camera delivers exceptional performance with quadlinear CMOS sensors in CCD image quality in Mono & RGB. It can reach line rates up to 100 kHz (Mono). The 4x CoaXPress version offers extremly high data bandwidth for challenging industrial applications. The multi-field feature provides up to four images (e.g. bright and darkfield) in a single pass. The GCT (GenICam Control Tool) software tool enables easy set-up through grafical supported configuration. The SDK helps for quick integration into any industrial environment, whereas the camera can be integrated with any GenICam compliant development kit. This enables rapid implementation of camera control and high-speed image acquisition under Windows or Linux.

FEATURES

// CMOS multi-line sensor with 16384 pixels
// Pixel size: 5 µm
// Interfaces: 4x CoaXPress CXP-12 (HD-BNC)
// Supports PoCXP (Power over CoaXPress)
// High speed: up to 73 kHz in Color
up to 100 kHz in Mono
// Output of Mono, RGB, RGB+Mono
// Optical mount: M95

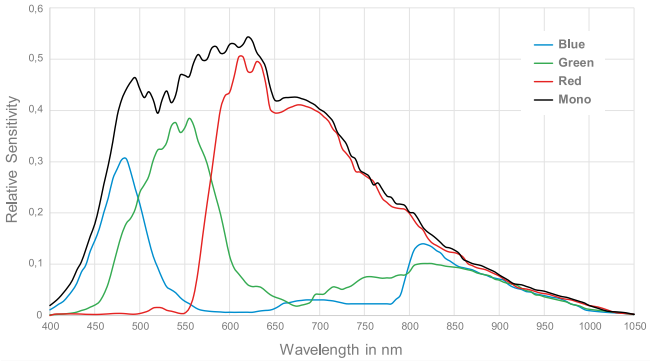
FUNCTIONALITY / INTELLIGENCE

// Frame and line trigger options including variable encoder input
// DSNU and PRNU correction
// Continuous and automatic white balancing
// Precise multi-camera synchronization
// Multi-field imaging features for multiple image acquisition in one pass via line synchronized LED strobe control
// Color correction matrix for optimized color image representation
// SDK and graphical tool for Windows and Linux
// Fully GenICam and GigE Vision compliant

Applications

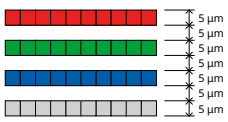
// AOI / PCB Inspection
// Wafer inspection
// Inkjet print inspection
// Print & color inspection
// High speed web & foil inspection
// Battery electrode foil inspection
// Flat panel inspection

SPECTRAL SENSITIVITY (MONO AND COLOR)



SENSOR LINES

16k Sensor with 5 µm x 5 µm pixels



SPECIFICATIONS

Sensor	Quad-linear CMOS line scan sensor
Number of pixels	16384 pixels
Active pixel size	5 µm x 5 µm
Interface connector	4x CoaXPress 2.0
Max. line rate **Mono: 16,384 x 1 (8 Bit)** **Color: 16,384 x 3 (8 Bit)**	 100 kHz 73 kHz
Power over CXP	PoCXP
Power supply	24 V DC +/- 10%; < 19W
Trigger mode	Free run / Line trigger / Trigger over CXP
Operating temperature	0° to 60° housing temperature
Dimensions	L=102 mm, H=113 mm, D=100 mm
Lens mount	M95 x 1
Weight	1,100 g
Certifications	CE; RoHS; REACH

Customized Cameras and Imaging Systems:

Allied Vision offers fully customized light, camera and scanner solutions. All systems are 100% adaptable to customer requirements.

Allied Vision

INTERNAL COLOR CONVERSATION TO ALL STANDARD COLOR SPACES

allPIXA evo 32k

Line Scan Camera with 4x CoaXPress

CoaXPress® CXP-12 GEN<i>CAM

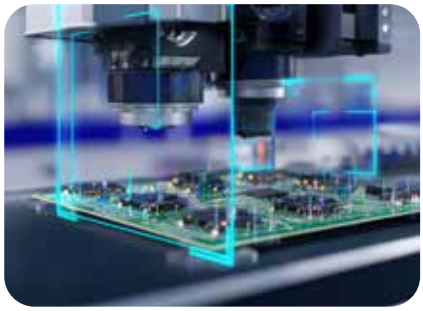
The allPIXA evo 32k line scan camera offers exceptional resolution and speed through combination of high-end CMOS sensors, embedded image processing algorithms and latest machine vision interface technologies. The innovative system design features two 16k/5 µm lines with a ½ pixel offset that are captured and processed in real time using state-of-theart algorithms to generate an outstanding 32k image using standard 16k lenses. Therefore, the camera is perfectly suitable for applications such as semiconductor inspection, PCB inspection, AOI and quality control where sub-pixel defect detection is critical.

FEATURES

// CMOS multi-line sensor with 32768 pixels
// Sensor pixel size: 5 µm
// Interfaces: 4x CoaXPress CXP-12 (HD-BNC)
// Supports PoCXP (Power over CoaXPress)
// High speed: up to 73 kHz in Mono
// Output of 32768 pixels Mono
// Optical mount: M95

FUNCTIONALITY / INTELLIGENCE

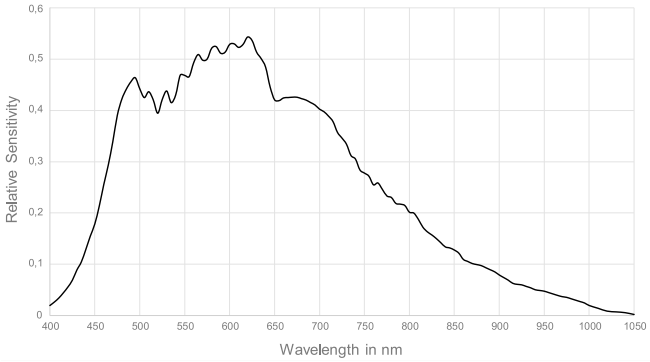
// Frame and line trigger options including variable encoder input
// DSNU and PRNU correction
// Continuous and automatic white balancing
// Precise multi-camera synchronization
// SDK and graphical tool for Windows and Linux
// Fully GenICam and GigE Vision compliant



Applications

// AOI / PCB Inspection
// Wafer inspection
// High speed web & foil inspection
// Battery electrode foil inspection
// Flat panel inspection

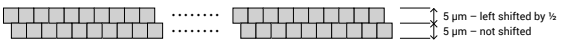
SPECTRAL SENSITIVITY (MONO)



SENSOR LINES

32k Sensor with 5 µm x 5 µm pixels

Shifted mono lines
for higher resolution



SPECIFICATIONS:

Sensor	CMOS line scan sensor
Number of pixels	32768 pixels
Active pixel size	5 µm x 5 µm
Interface connector	4x CoaXPress 2.0
Max. line rate Mono: 32,768 x 1 (8 Bit)	73 kHz
Power over CXP	PoCXP
Power supply	24 V DC +/- 10%; < 19W
Trigger mode	Free run / Line trigger / Trigger over CXP
Operating temperature	0° to 60° housing temperature
Dimensions	L = 102 mm, H = 113 mm, D = 100 mm
Lens mount	M95 x 1
Weight	1,100 g
Certifications	CE; RoHS; REACH

Customized Cameras and Imaging Systems:

Allied Vision offers fully customized light, camera and scanner solutions. All systems are 100% adaptable to customer requirements.

Allied Vision

HIGH-SPEED CMOS LINE SCAN CAMERA WITH MULTI-LINE SENSOR AND TDI OPTIONS

allPIXA evo 8k DXGE

Line Scan Cameras

The allPIXA evo 8k DXGE offers CMOS performance with CCD image quality. Line rates up to 90 kHz for 8k in full color are possible with the fast and cost-efficient Dual 10 GigE interface. With line and frame trigger options, variable encoder input and color conversion possibilities the allPIXA evo 8k DXGE is the best choice for all high-speed web and print inspection applications demanding high resolution. Filters in the near infrared range enables the recognition of object features in the visible and NIR spectrum. For easy integration, the allPIXA evo DXGE comes with an intuitive graphical tool and an SDK for camera control and image capture for Windows and Linux. Our SDK with real time kernel for Windows ensures completely reliable image data transfer, even for high data rates.

CAMERA OVERVIEW

// CMOS multi-line sensor with 8192 pixels
// Color or mono output is configurable with the versatile multiline sensor
// TDI options for RGB and mono
// High speed: up to 3 x 90 kHz line frequency (RGB)
// Optical connectors (SFP+) for long fibre cables far beyond 100 m
// Economical system by using cost effective network interface cards for 10GigE
// SDK with real time kernel to ensure reliable data transfer under Windows

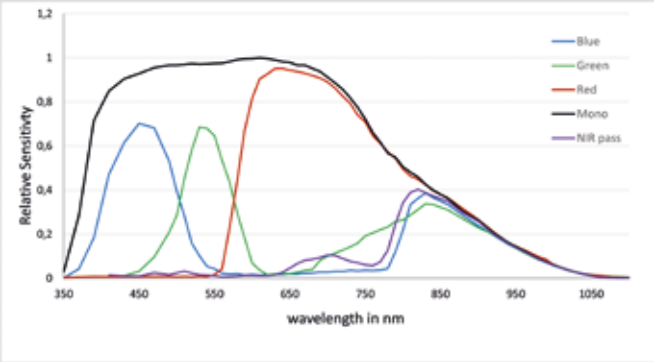
FEATURES

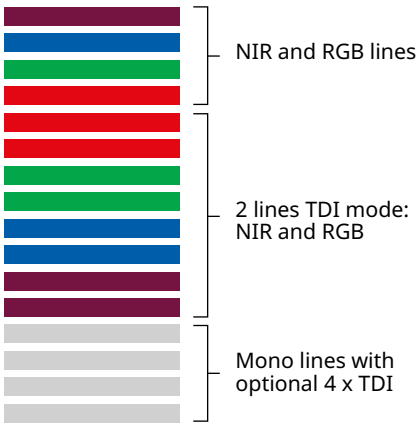
// Full RGB color with 2 x TDI in full speed
// Mono camera with up to 4 x TDI in full speed
// Continuous white balancing
// Precise multi-camera synchronization
// SDK with real time kernel for reliable high speed image capture under Windows
// Multi-Flash function for capturing multiple images in one pass with various lighting conditions

Applications:

// High-speed Print Inspection
// PCB & AOI
// Wafer Inspection
// Sorting Processes
// High-resolution Surface Inspection
// Food
// Semiconductor
// EV Battery

SPECTRAL SENSITIVITY





SPECIFICATIONS

Sensor	CMOS line scan sensor for RGB, NIR, and mono
Number of pixels	8192 pixels
Active pixel size	5.0 µm x 5.0 µm x 16 lines
Output	Single/Dual 10 GigE GigE Vision® 2.0 compliant
Max. line rate color	RGB: 8192 x 3 pixels: up to 50 kHz (Single)* RGB: 8192 x 3 pixels: up to 90 kHz (Dual)* RG-B+NIR: 8192 x 4 pixels: up to 37 kHz (Single)* RGB+NIR: 8192 x 4 pixels: up to 68 kHz (Dual)*
Max. line rate TDI	mono: 8192 x 1 pixels up to 100 kHz for 4x TDI (Single and Dual)*
Max. line rate in ROI mode	RGB and mono: up to 100 kHz
Data format	3 x 8/10/12 Bit color or 1 x 8/10/12 Bit mono mode or 4 x 8/10/12 Bit RGB + NIR-pass
TDI options	color: 2 x TDI / mono: 4 x TDI
Interfaces	2 x SFP+ (copper and fiber connectors) External I/O (DSUB)
Power supply	12 – 24V DC ± 20%
Trigger mode	Free run / External trigger Line trigger / Encoder / Frame trigger
Operating Temperature	0° - 60°C (housing temperature)
Dimensions / Lens mount	102 x 76 x 82 mm (W x H x D) / M72 x 0.75 mm / F-Mount
Certifications	CE; RoHS

*With our SDK. For more information see allPIXA evo manual.

Customized Cameras and Imaging Systems:

Allied Vision offers fully customized light, camera and scanner solutions. All systems are 100% adaptable to customer requirements.

Allied Vision

EXCELLENT IMAGE QUALITY WITH ULTRA-HIGH SPEED VIA 10 GIGE

allPIXA evo 10k / 15k DXGE

Line Scan Cameras

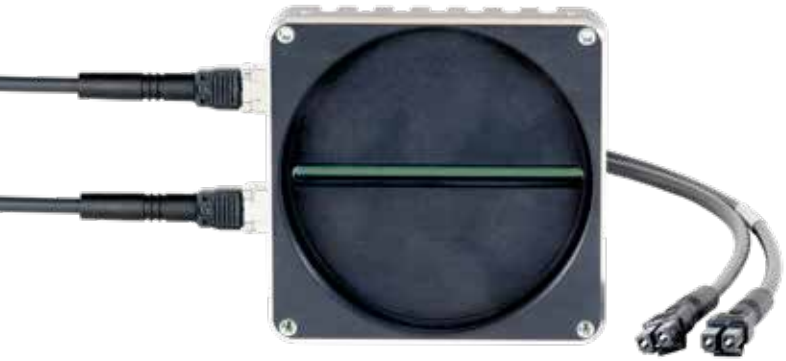
The Dual 10 GigE interface allows fast RGB color scanning with line rates up to 68.4 kHz for 10k, up to 49 kHz for 15k sensor. Featured with line and frame trigger options, variable encoder input and color conversion possibilities the allPIXA evo DXGE is the best choice for all high-resolution web and print inspection applications. For easy integration, the allPIXA evo DXGE comes with an intuitive graphical tool and an SDK for camera control and image capture for Windows and Linux. Our SDK with real time kernel for Windows ensures completely reliable image data transfer, even for high data rates.

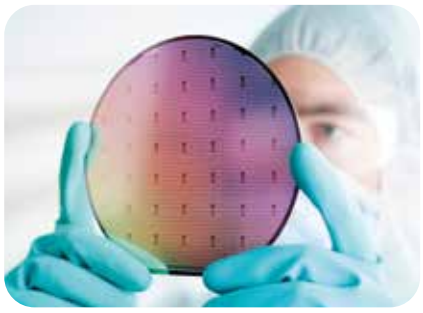
CAMERA OVERVIEW

- // 10k and 15k line scan camera with standard Single/Dual 10 GigE interface
- // True RGB color with excellent signal-to-noise-ratio
- // High speed: up to 68.4 kHz line frequency (ROI mode)
- // Optical connectors (SFP+) for long fibre cables far beyond 100 m
- // SDK with real time kernel to ensure reliable data transfer under Windows
- // Economical system by using cost effective network interface cards for 10 GigE

FEATURES

- // CMOS color line scan sensors for true RGB color and fast mono
- // Mono camera with 3 x TDI
- // Frame and line trigger options including variable encoder input
- // Color correction matrix for optimized color image representation
- // Continuous white balancing
- // Precise multi-camera synchronization
- // Multi-Flash function for capturing multiple images in one pass with various lighting conditions
- // Allied Vision SDK with real time kernel for reliable high speed image capture under Windows

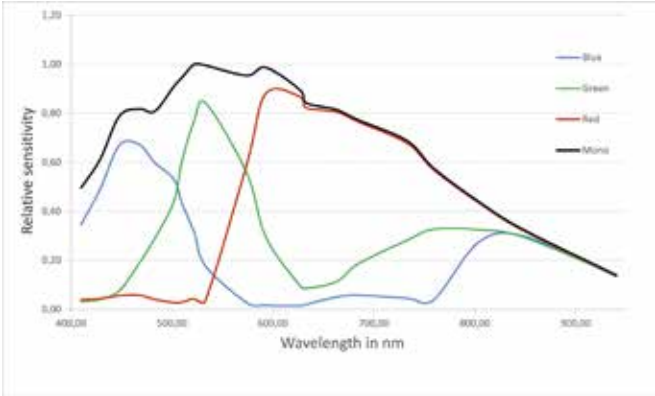




Applications:

// Flat Panel Display
// Printed Circuit Board
// High-resolution Document Scanning
// Print
// Web
// Quality Control
// Sorting Processes
// High Quality Surface
// Food
// Semiconductor
// General machine vision

SPECTRAL SENSITIVITY



SPECIFICATIONS

Sensor	Trilinear CMOS line scan sensor for color or mono
Number of pixels	10240 pixels 15360 pixels
Active pixel size	5.6 µm x 5.6 µm
Output	Single/Dual 10 GigE GigE Vision® 2.0 compliant
Max. line rate color	RGB: 10240 x 3 pixels: up to 40 kHz (Single)* RGB: 10240 x 3 pixels: up to 68.4 kHz (Dual)* RGB: 15360 x 3 pixels: up to 26 kHz (Single)* RGB: 15360 x 3 pixels: up to 49 kHz (Dual)*
Max. line rate mono	Mono: 10240 x1 pixels: up to 68.4 kHz (Single and Dual)* Mono: 15360 x1 pixels: up to 68.4 kHz (Single and Dual)*
Max. line rate in ROI mode	RGB and mono: up to 68.4 kHz[1]
Data format	3 x 8/10/12 Bit color or 1 x 8/10/12 Bit mono mode
TDI	up to 3 x TDI mode (TDI camera model - mono)
Interfaces	2 x SFP+ External I/O (DSUB)
Power supply	12 – 24V DC ± 20%
Trigger mode	Free run / External trigger Line trigger / Frame trigger
Operating Temperature	0° - 60°C (housing temperature)
Dimensions / Lens mount	10K: 102 x 76 x 82 mm (W x H x D) / M72 x 0,75 mm 15K: 102 x 101 x 82 mm (W x H x D) / M 95 x 1mm
Certifications	CE; RoHS

*With our SDK. For more information see allPIXA evo manual.

Customized Cameras and Imaging Systems:

Allied Vision offers fully customized light, camera and scanner solutions. All systems are 100% adaptable to customer requirements.

Allied Vision

HIGH-RESOLUTION 10K AND 15K TRILINEAR CAMERAS WITH LINE RATES UP TO 47.72 KHZ

allPIXA wave

Color Line Scan Cameras

Introducing the world's first trilinear true color RGB line scan sensor in ultra-high resolution with up to 15,360 pixels: The Allied Vision 10k and 15k allPIXA wave cameras. Both deliver CCD image quality with CMOS performance, plus offer added system flexibility of increased scan line lengths up to 15k, along with line frequencies topping out at a maximum speed of 47.72 kHz.

FEATURES

// Trilinear high speed CMOS color line scan sensor
// True RGB color with high-resolution
// High resolution sensor with line lengths up to 15k
// Speed up to 47.72 kHz line frequency
// Pixel size 5.6 µm

COLOR QUALITY

// True color with trilinear RBG CMOS line scan sensor
// Multiple Color Conversion Matrix (CCM) and offset supported
// Continuous white balancing
// Excellent signal to noise ratio for high speed image processing
// Ultra-high color resolution up to 15360 pixels x 3 lines
// Multiple sets of shading/offset correction
// Internal gamma correction

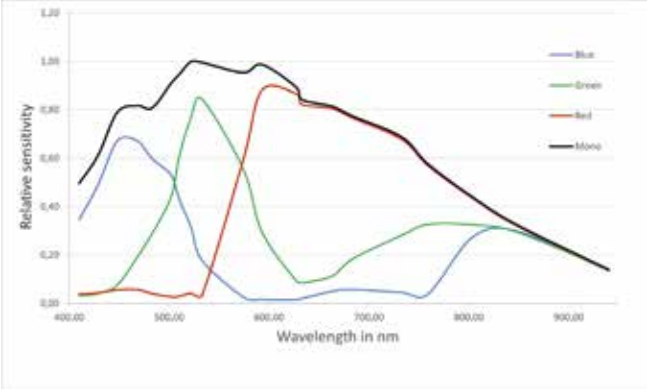
FUNCTIONALITY / INTELLIGENCE

// Multiple ROI functions for higher line rates or to reduce data volume and processing power
// Fast line rates up to 47.42 kHz with up to 850 mega-byte/s throughput
// Graphical user interface for easy parameter setting, control and integration of the camera
// Internal keystone correction for multiple angle positioning of the camera
// Automatic insertion of machine and camera data inside the image
// Sub-pixel accuracy for registration error (patented)
// Integrated test image generator for easy setup and diagnostic functions
// Compact and robust design
// Precise multi-camera synchronization
// Wide-range power input from 12 - 24V for easy use and machine integration
// High strength steel mounting threads for precise and robust camera mounting
// Extended Camera Link cable length: 15m @ 85 MHz Full (80 Bit)
// Rigorously tested with all popular frame grabbers

Applications:

// Flat Panel Display
// Printed Circuit Board
// High-resolution Document Scanning
// Print
// Web
// Quality Control
// Sorting Processes
// High Quality Surface
// Food
// Semiconductor
// General Machine Vision

SPECTRAL SENSITIVITY



SPECIFICATIONS

Sensor	Trilinear CMOS line scan sensor (RGB and mono)
Number of pixels	10240 x 4 pixels 15360 x 4 pixels
Active pixel size	5.6 µm x 5.6 µm
Max. line rate (Camera Link Full)	RGB: 10240 x 3 pixels with 25.33 kHz* RGB: 15360 x 3 pixels with 18.38 kHz* mono: 10240 x 1 pixels with 25.33 kHz* mono: 15360 x 1 pixels with 22.04 kHz* * Up to 47.42 kHz in ROI mode (ROI<5120)
Data format	3 x 8/10/12 Bit color or 1 x 8/10/12 Bit mono mode
Output	Camera Link @ 85 MHz Full (80/64 Bit) Medium, Base
Interfaces	Camera Link Base/Medium/Full Power supply (Hirose) External I/O (15 pin DSub) RS232
Power supply	12 – 24V DC ±10%
Trigger mode	Free run / external trigger Line trigger Frame trigger
Operating temperature	0°C to 60°C, 32°F to 140°F (housing temp)
Dimensions	10 k : 102 x 76 x 56 mm (W x H x D) 15 k : 102 x 100 x 56 mm (W x H x D)
Lens mount	10 k: M 72 x 0.75 mm 15 k: M 95 x 1mm
Certifications	CE; RoHS

Customized Cameras and Imaging Systems:

Allied Vision offers fully customized light, camera and scanner solutions. All systems are 100% adaptable to customer requirements.

Allied Vision

BEST COLOR QUALITY DELIVERED BY CCD SENSOR

allPIXA pro

Color Line Scan Cameras

The allPIXA pro is the world's fastest, most powerful color line scan CCD camera for high-speed machine vision applications, where general image quality and color reproduction are key requirements.. It delivers line rates up to 50kHz for the 4k model, allowing for a enourmous increase in speed compared to conventional CCD line scan cameras on the market. It also has improved responsivity, while retaining the best legacy features of the original Allied Vision allPIXA in a new more compact footprint.

CAMERA OVERVIEW

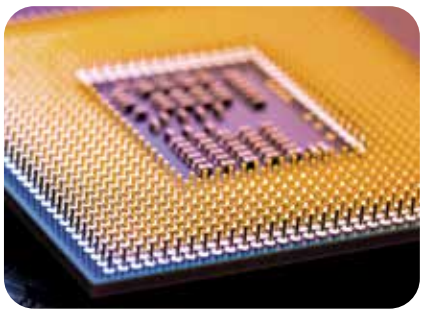
// High sensitivity trilinear CCD sensors
// Scan rates up to 50 kHz for standard configurations (up to 104.5 kHz in special OEM configurations)

COLOR QUALITY

// Continuous white balancing
// Large 10 µm CCD pixels for best image quality
// Internal 14 bit A/D conversion per color channel
// Multiple Color Conversion Matrix (CCM) and offset supported
// Internal gamma correction

FUNCTIONALITY / INTELLIGENCE

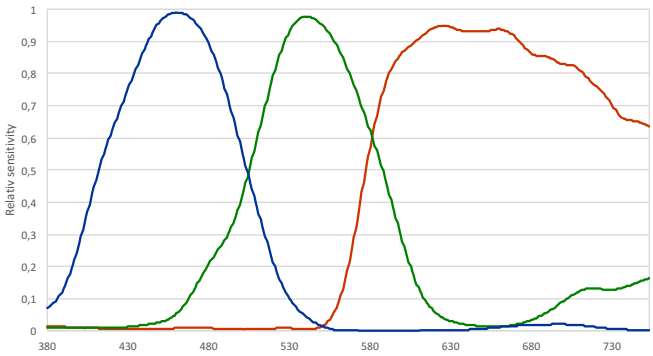
// Fully synchronized multi-channel LED flash control
// Internal keystone correction for multiple angle positioning of the camera
// Automatic insertion of machine and camera data inside the image (e.g. time stamp; encoder position; scanning speed, checksum)
// Sub-pixel accuracy for registration error compensation (patented)
// Precise multiple camera synchronization
// Adjustable Camera Link clock
// Grey image output (at individual color weights)
// 100% quality checked and calibrated to provide best quality and consistent camera performance
// Graphical user interface for easy parameter setting, control and integration of the camera
// Supports line and frame trigger similar to area cameras



Applications:

// Measurement/Quality Control
// Print
// Surface
// Document Scanning
// Web
// General Machine Vision
// Sorting Processes

SPECTRAL SENSITIVITY



SPECIFICATIONS

Sensor	Trilinear CCD line scan sensor (RGB)
Number of pixels	4096 x 3 pixels 5120 x 3 pixels 6000 x 3 pixels 7300 x 3 pixels (other resolutions on request)
Active pixel size	10 µm x 10 µm
Max. line rate	4096 x 3 pixels up to 50.8 kHz 5120 x 3 pixels up to 40.9 kHz 6000 x 3 pixels up to 34.3 kHz 7300 x 3 pixels up to 29.7 kHz
Data format	3 x 8/10 Bit color or 1 x 8/10/12 Bit mono mode with internal 3 x 14 Bit A/D converter
Output	Camera Link @ 85 MHz Full (80/64 Bit), Medium, Base
Interfaces	Camera Link Base/Medium/Full Power supply (Hirose) External I/O (15 pin D-Sub) RS232
Power supply	24 V DC +/- 10%; < 19W
Trigger mode	Free run / external trigger Line trigger Frame trigger
Operating temperature	0°C to 60°C, 32°F to 140°F (housing temp.)
Dimensions	L=102 mm, H=100 mm, D=77 mm
Lens Mounts	Large variety of adapters: F-Mount, C-Mount, M39x1/26", M42x1, M72x0.75
Certifications	CE, RoHS

Customized Cameras and Imaging Systems:

Allied Vision offers fully customized light, camera and scanner solutions. All systems are 100% adaptable to customer requirements.

Allied Vision

INTERNAL COLOR CONVERSATION TO ALL STANDARD COLOR SPACES

chromaPIXA

Color Line Scan Camera

The Allied Vision chromaPIXA line scan camera enables stable inline color measurement in a wide variety of extended color spaces, greatly simplifying downstream color processing. The chromaPIXA's output in LAB format allows for the determination of color differences in respect to the perception of the human eye. The chromaPIXA is calibrated by using the new, fast, and intuitive chromaCalc software and is compatible with all standard color charts.

FEATURES

- // Highly-sensitive CCD line scan sensor
- // Line length up to 7.3k
- // Scan rates up to 50 kHz
- // Color calibration allows internal conversion in sRGB, eciRGB, AdobeRGB, CIE-L*a*b* or CIE-XYZ in real time
- // Calibration with ColorChecker and other color targets
- // Stable white point is guaranteed by continuous white balancing
- // Measurement for every single pixel without interpolation

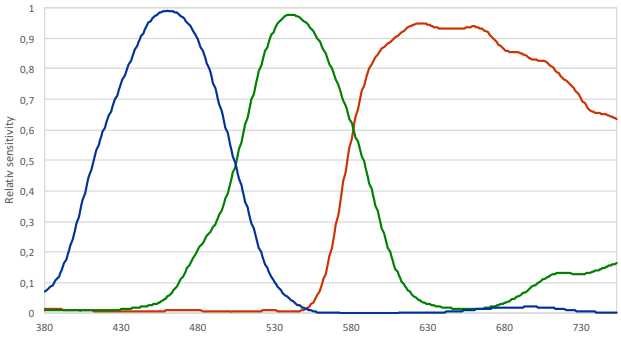
FUNCTIONALITY / INTELLIGENCE

- // Fully synchronized multi-channel LED flash control
- // Internal keystone correction for multiple angle positioning of the camera
- // Automatic insertion of machine and camera data inside the image (e.g. time stamp; encoder position; scanning speed, checksum)
- // Sub-pixel accuracy for registration error compensation (patented)
- // Precise multiple camera synchronization
- // Adjustable Camera Link clock
- // Grey image output (at individual color weights)
- // 100% quality checked and calibrated to provide best quality and consistent camera performance
- // Graphical user interface for easy parameter setting, control and integration of the camera
- // Supports line and frame trigger similar to area cameras

Applications:

// Measurement/Quality Control
// Print
// Surface
// Document Scanning
// Web
// Sorting Processes

SPECTRAL SENSITIVITY



SPECIFICATIONS

Sensor	Trilinear CCD color line scan sensor
Number of pixels	2048 x 3 pixels 4096 x 3 pixels 5120 x 3 pixels 6000 x 3 pixels 7300 x 3 pixels
Active pixel size	10 µm x 10 µm
Color output spaces	sRGB, eciRGB, AdobeRGB, CIE-L*a*b*, CIE-XYZ
Max. line rate	2048 x 3 pixels up to 92.7 kHz 4096 x 3 pixels up to 50.8 kHz 5120 x 3 pixels up to 40.9 kHz 6000 x 3 pixels up to 34.3 kHz 7300 x 3 pixels with up to 29.7 kHz
Data format	3 x 8/10 Bit color or with internal 3 x 14 Bit A/D converter
Output	Camera Link @ 85 MHz, Full (80/64 Bit), Medium, Base
Interfaces	Camera Link Base/Medium/Full External I/O (15 pin D-Sub) RS232
Power supply	24 V DC +/- 10%; < 19W
Trigger mode	Free run / external trigger Line trigger Frame trigger
Software	chromaCalc software generate calibration data to calculate color output
Light source	Recommend Allied Vision Corona II D50 for best performance
Operating temperature	0°C to 60°C, 32°F to 140°F (housing temp.)
Dimensions	L=102 mm, H=100 mm, D=77 mm
Lens mount	F-Mount, C-Mount, M39x1/26", M42x1, M72x0.75
Certifications	CE; RoHS

Customized Cameras and Imaging Systems:

Allied Vision offers fully customized light, camera and scanner solutions. All systems are 100% adaptable to customer requirements.

Allied Vision

STATE-OF-THE-ART INGAAS SENSOR WITH 512 AND 1K RESOLUTION

allPIXA SWIR

Line Scan Cameras

GiGE VISION

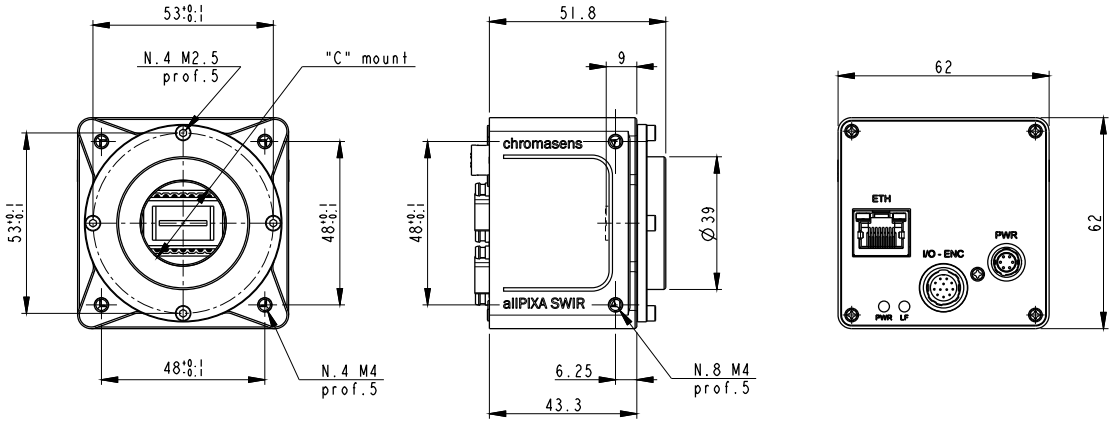
The allPIXA SWIR is the first short-wave infrared (SWIR) linescan camera in the Allied Vision allPIXA family. The state-of-the-art InGaAs sensor in a compact footprint allows its integration for multiple machine vision applications. It offers an uncooled sensor with 512 or 1k resolution and 25x25 or 12.5x12.5 µm pixel size for high resolution, high sensitivity and a line rate of 40 kHz. GenICam compliant GigE Vision interfaces allow an easy integration into existing machine vision systems.

CAMERA OVERVIEW

// Line Scan InGaAs sensor with a resolution of 512 pixels (25 µm x 25 µm pixel size) or 1024 pixels (12.5 µm x 12.5 µm pixel size)
// SWIR spectrum: From 950 to 1700 nm
// High speed: Up to 40 kHz line rate
// GigE Vision
// Internal FPGA for image pre-processing
// Compact size: 62 x 62 x 52 mm

FUNCTIONALITY / INTELLIGENCE

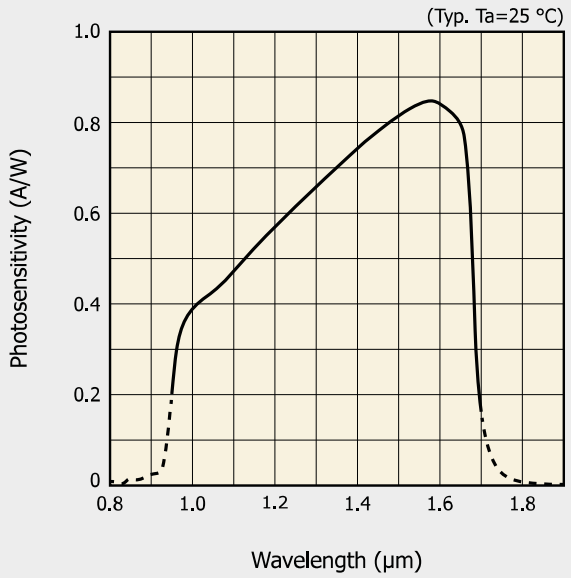
// Horizontal binning to increase responsivity
// 8, 10 or 12 Bits per pixel
// Internal DSNU, PRNU, and TRC LUT or gamma correction
// Frequency converter for external line trigger
// Tested with many popular frame grabbers and GenICam SDKs
// Free Allied Vision software tools and SDK available for easy setup and seamless integration



Applications:

// Sorting
// Recycling
// Semiconductor Inspection
// Solar Panel Inspection
// Moisture Detection
// Chemical Identification
// Anti-counterfeiting
// Medical / Biomedical

SPECTRAL SENSITIVITY



SPECIFICATIONS

Sensor	Linear InGaAs (uncooled)
Resolution	512 x 1 pixels / 1024 x 1 pixels
Active pixel size	25 µm x 25 µm (512) / 12.5 µm x 12.5 µm (1k)
Spectral band	950 nm to 1700 nm
Image Circle	12.8 mm
Lens Mount	C-Mount (others on request)
Interface	GigE Vision
Order Codes	GigE: CP000700-IR-01K-GE-001 CP000700-IR-512-GE-001
Max. line rate	40 kHz
Sync	External trigger / Software trigger signal / Free run
Data format	8, 10, 12 Bit
Digital inputs	3 x RS422 (only GigE version)
Digital outputs	2 x RS422 (only GigE version)
Power supply	12 to 24 V DC ±10%
Power consumption	6 W
Dimensions	L=62 mm, H=62 mm, D=52 mm
Weight	170 g
Operating temperature	-10°C ... +50°C
Protection Class	IP40
Certifications	CE, RoHS, REACH

Customized Cameras and Imaging Systems:

Allied Vision offers fully customized light, camera and scanner solutions. All systems are 100% adaptable to customer requirements.

Allied Vision

HIGH PRECISION IN FAST 3D AND COLOR

3DPIXA

Stereo Line Scan Camera

Allied Vision 3DPIXA stereo line scan camera is a unique combination of line scan technology with fast stereo algorithms running on GPU. The 3DPIXA camera enables new 3D inspection and measuring applications requiring high-resolution.

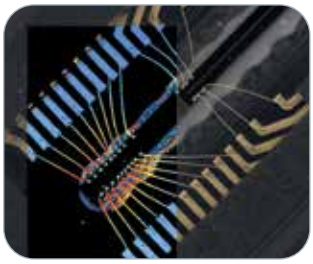
UNIQUE FEATURES OF THE 3DPIXA TECHNOLOGY

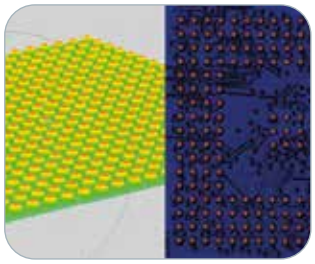
// High speed inline 3D measurement
// Large field of view @ high resolution
// Height resolution up to 0.5 micron
// 2D resolution up to 5 micron
// 3D data and full color image in one scan
// Line scan frequencies up to 68.4 kHz @ full resolution
// Flexible use of all types of line illuminations
// Easy to use application programming interface (API)
// Integrated in standard machine vision libraries

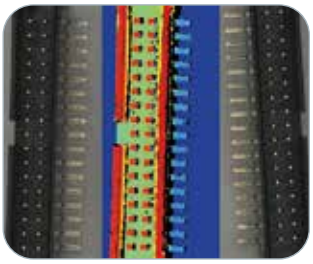
Applications

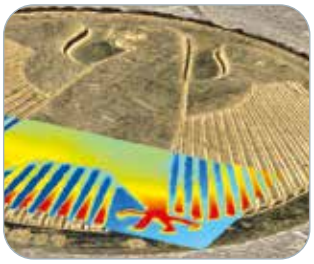
// Height Measurement
// Identifying Micron Defects
// Verification of Height and 2D Position
// Combined 3D and Color
// 3D Web

SAMPLE APPLICATIONS OF 3DPIXA TECHNOLOGY


Wirebond


PCB

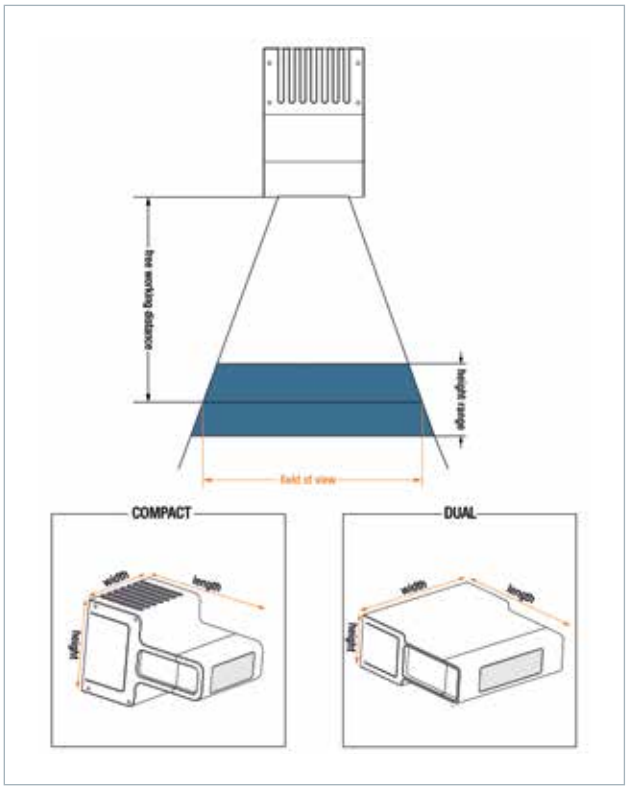

Pin inspection


Metal surface

3DPIXA compact	COMPACT evo CXP		
	CP000600-C01-008-0036	CP000600-C01-010-0056	CP000600-C01-012-0075
Optical resolution (µm/pixel)	8	10	12
Field of view (mm)	36	56	75
Measurement points	4500	5600	6250
Height resolution (µm)*	2.25	3.22	4.35
Height range (mm)**	1.32	1.89	2.55
Free working distance (mm)	155.9	183.3	210.8
Max. speed (mm/s)	547	684	820
Camera Link configuration	4 x CXP12 (4 x CoaXPress 2.0 with micro-BNC connectors)		
Line frequency (kHz)	68.4		
Dimensions LxHxW (mm)	240 x 105 x 114		

3DPIXA dual	DUAL	DUAL HR			DUAL WAVE
	CP000520-D01-015-0105	CP000520-D02-005-0035	CP000520-D02-070-0500	CP000520-E02-615-4400	CP000600-D02-030-0450
Optical resolution (µm/pixel)	15	5	70	615	30
Field of view (mm)	105	35	500	4400	450
Measurement points	7000	7000	7142	7154	15000
Height resolution (µm)*	3	0.55	7.0	188	5.87
Height range (mm)**	3.5	0.5	50.6	300	12.9
Free working distance (mm)	229	77.9	583.2	2158	612.4
Max. speed (mm/s)	445	149	2079	18265	552
Camera Link configuration	Base/Medium/Full	Base/Medium/Full	Base/Medium/Full	Base/Medium/Full	Base/Medium/Full
Line frequency (kHz)	29.7	29.7	29.7	29.7	18.4
Dimensions LxHxW (mm)	274 x 99 x 212	363 x 99 x 278	220 x 99 x 463	141 x 140 x 478	247 x 99 x 341

* Height range and height resolution depend on object surface ** For well-structured surfaces the height range can exceed the specified values *** on request



For more 3DPIXA models check www.alliedvision.com or contact sales

SPECIFICATIONS

Camera	Stereo line scan camera with lenses (factory calibrated)
Sensor	CMOS or Trilinear CCD line scan sensor (RGB)
Active pixel size	5.6 µm x 5.6 µm 10 µm x 10 µm
Interfaces	Camera Link Base/Medium/Full (80/64 Bit) 4 x CoaXPress 2.0 with micro-BNC connectors External I/O Serial (RS-232) Power supply (Hirose)
Power supply	Compact: 24 V DC +/- 10% 16 W Dual: 24 V DC +/- 10% 32/38 W
Trigger mode	Free run / external trigger Line trigger Frame trigger
Operating temperature	0°C to 60°C, 32°F to 140°F (housing temperature)
Software	· Allied Vision 3D-API for real time 3D data calculation on NVIDIA GPU board (Windows x64) · Allied Vision 3D Viewer
Software output	Rectified color image (3x8 Bit) Height map (16 Bit) 3D point cloud
Supported software libraries	HALCON (MVTec)
Additional accessories	Allied Vision Corona II illumination
Certifications	CE

Corona II

LED Line Lighting System

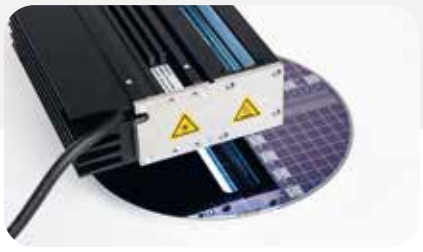
Applications:

- // Print
- // Surface
- // Document Scanning
- // Food
- // Steel
- // Semiconductor Industry
- // Measurement and Quality Control
- // Web
- // Sorting Processes
- // General Machine Vision

Dark field

Bright field / Back light

Tube light



Coaxial modules

Light is the first important step for a successful machine vision application. Even with line scan cameras the requirements for light are high. Allied Vision enables customers to achieve their objective with fewer complications. The Corona II family offers a wide range of lighting for line scanning:

COOLING OPTIONS

Passive cooling

Fan cooling

Water cooling

MODULAR CONCEPT

568.000 different illuminations are possible, based on the modular Allied Vision Corona II system.

- // Four basic illumination types
- // Eight standard module length
- // Four different focal distances for dark field illumination
- // Thirteen LED types
- // Five standard cable length
- // Seven front screen options
- // Five cooling systems

CUSTOMIZED SOLUTIONS

Besides standard components Allied Vision offers full custom solutions for lighting, camera and scanner solutions.

- // Based on standard Corona II and XLC4 technology
- // Special housing for the controller available
- // Special filters or screenings for the LED module available
- // Full custom designs

Corona II

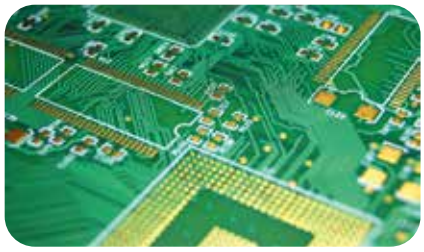
Top light / Dark field illumination

Improving inspection with more powerful light

300,000 Lux

3,000,000 Lux

CORONA II LED lighting modules feature powerful brightness up to 3,500,000 lux and deliver outstanding homogeneity via a patented reflector design that perfectly shapes light, eliminating chromatic aberrations for unprecedented performance and best in class inspection results.



FEATURES

// Brightness up to 3,500,000 lux

// Patented reflector focusing technology
– No color aberrations
– Higher efficiency

// Various LED colors
– Standard: White, red, green, blue
– IR (850 nm or 940 nm)
– UV (365 and 395 nm)
– SWIR (1100, 1350, 1450 or 1550 nm)
– D50 (standard daylight)

// Eight lengths up to 1360 mm per single module

// Three passive cooling options

// Fan or water cooling available

// Stackable modules

// Various screens
– Different diffuse screens
– Polarizing screen

// High quality LED binning

// Advanced thermal management and temperature control

// Housing design for easy mounting and integration

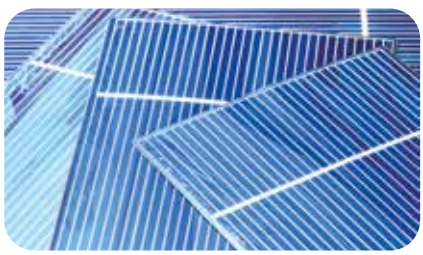
Corona II

Back light and bright field illumination

Bright field setup

Back light setup

With the outstanding luminance and uniformity of the Corona II back light / bright field illumination, high-speed applications without any compromises in image quality are possible.



FEATURES

// Ultra high bright: 280,000 cd/m2 or 880,000 Lux
// Compact design
// Modular concept
// Compatible with other Corona options
// Compatible with XLC4 controller
// Various LED colors
– Standard: White, red, green, blue
– IR 850 nm or 940 nm
// Modular lengths up to 1360 mm per single module
// Multiple passive cooling options
// Active fan or water cooling
// Temperature stabilization
// High quality LED binning and color matching with other Corona lighting options
// Advanced thermal management and temperature control
// Housing design for easy mounting and integration
– ITEM5 T-nut system

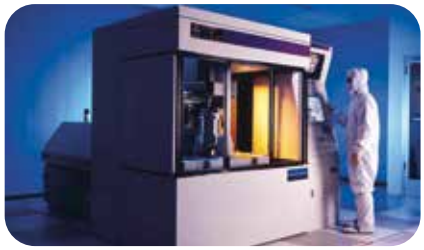
Corona II

Tube light

Camera viewing angle 0°

Camera viewing angle 15°

The Corona II tube light module offers the most powerful light source for line scan applications with diffuse lighting conditions, for example, when inspecting metallic objects with highly reflective or glossy surfaces.

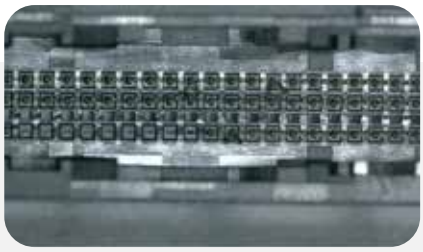


FEATURES

// Now with two power options:
– Ultra high bright version: up to 1,200,000 lux
– High bright version: up to 600,000 lux
// High uniformity light distribution
// Suitable for specular surfaces
// Reduces shadows on objects
// Reduces unwanted reflections
// Modular concept
// Compatible with other Corona lighting options
// Compatible with XLC4 controller
// Various LED colors
// Eight lengths up to 1360 mm per single module
// Camera angles 0°X or 15°X
// Active fan or water cooling
// Passive cooling options on request
// Temperature stabilization
// High quality LED binning for white
// Advanced thermal management and temperature control
// Housing design for easy mounting and integration

Corona II

Coaxial Illumination



Dark field setup for pin inspection

Bright field setup for wafer inspection

Coaxial light illuminates the objects in viewing direction of the camera. Two coaxial light modules are available for selecting the most suitable version for your application:
– Bright field illumination
– Dark field illumination

COAXIAL MODULES FOR DARK FIELD ILLUMINATION

Getting high light intensity into deep object grooves: Typical examples are automotive plug connectors with increasing pin counts and complexity. Many of them are equipped with very deep connector housings. With the Allied Vision coaxial module for dark field illumination, it is now possible to bring directed light into the depth of the component, free of shadows without affecting the camera perspective.

// Application: 3D inspection of connectors
// Type: Dark field version
// Approach: Getting light into deep objects

COAXIAL MODULES FOR BRIGHT FIELD ILLUMINATION

Diffuse light for flat objects: Bright field lighting systems are the first choice for applications with vertical viewing angle and with telecentric lenses. The coaxial bright field module from Allied Vision is perfect for such applications and is available with length of up of 680 mm. Optional protection glasses are offered for use in dusty environments. The performance values of the Corona modules are fully maintained.

// Application: Wafer inspection
// Type: Bright field version
// Approach: Perpendicular camera view

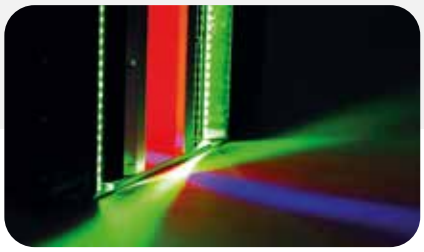
SETUPS

// Available for Corona modules up to 680 mm. High quality antireflection coating and thin glasses to reduce ghost images.
// Option: Protection glasses for dusty environments

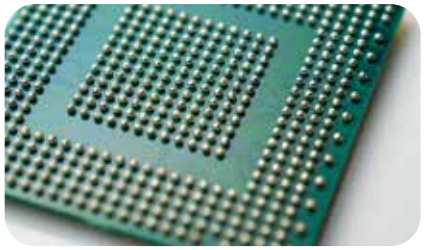
Corona II

Combined tube light

3-IN-1

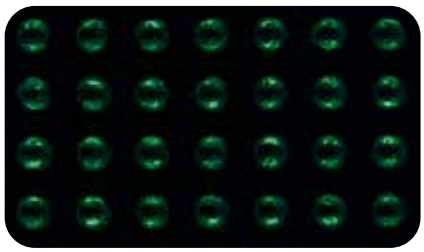


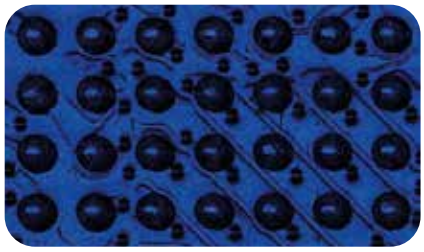
The illumination module of the CORONA II lighting series offers highly flexible illumination setups: Tube light, dark field and bright field characteristics are now available in one module. Instead of using three different illuminations with three cameras it's now possible with only one station and one camera.

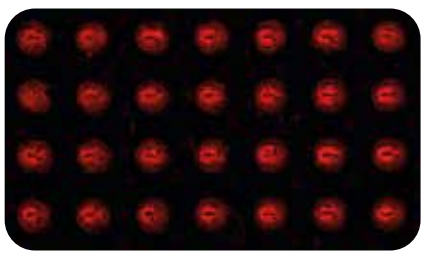


FEATURES

- // High Brightness values for single parts:
  – Tube light segment: Up to 1.000.000 Lux
  – Dark field segment: Up to 800.000 Lux
  – Bright field module: Up to 12.000 cd/m²
- // Indipendent LED segments for the single units, e.g. for line synchronized flashing
- // Patended reflector focusing technology for dark field segment
- // Various LED colors:
  – White (5500 K or 3500 K)
  – Red, green, blue
  – IR (850 nm or 940 nm)
- // Four lenghts up to 680 mm per single module
- // Fan cooling
- // Passive or water cooling on request







SETUPS

- // Tube light / Dark field / Bright field
- // Tube light / Dark field
- // Tube light / Bright field

Corona II

LED Control Unit XLC 4 – Four channel LED controller

LEDs need controlled conditions. The smallest fluctuations in current lead to noticeable brightness variations in the image. The XLC4 controller guarantees this even at very high powers.

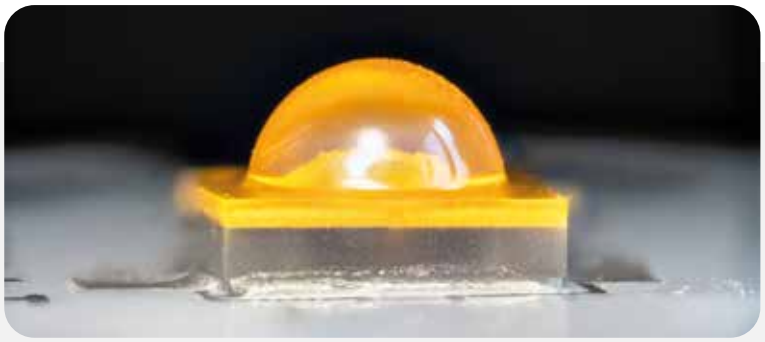
FEATURES

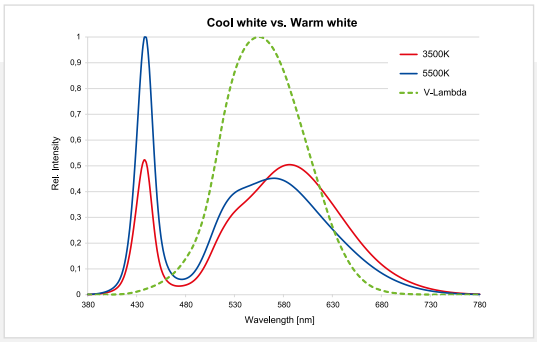
// External LED controller for flexibility and improved thermal management
// Four channels up to 1.8 amps per channel
// Trigger inputs for each channel
// Flashing up to 50 kHz
// RS232, USB, Ethernet and RS485 interfaces
// Direct communication and triggering with allPIXA cameras
// Analog or PWM input for external control
// Temperature stabilization via controller:
– +/- 1 Kelvin water cooling option
– +/- 2 Kelvin fan based cooling
// Automatic detection of Corona II modules with automatic current limitation
// Temperature monitoring in the controller and the Corona II modules
// Intended for use within cabinets
// EMC tested for industrial enviroment

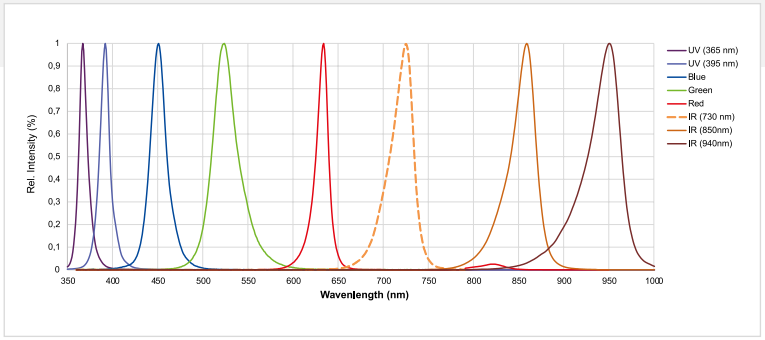
LED control unit XLC4	
Dimensions	160 x 116 x 72 mm
Input voltage	24 Volt DC +/- 10%; approx. 3.5 amps per channel used at full load
Trigger inputs	1 trigger input synchronous for 4 output channels CP000411-1A 4 trigger input Independent for each output channel CP000411-1F4
Outputs	4 current controlled outputs, from 0.2 amps to 1.8 amps Output power 80 watts per channel and max. output 46 Volt
Interfaces	Rs232; RS485; USB; Ethernet; Analog input 1-10 Volt and PWM interface; fan control output 24 VDC/1 amp
Protection classes	IP 40
Operating temperature	0° to 50° C (housing temperature)
Certifications	CE; FCC compliant; RoHS; REACH

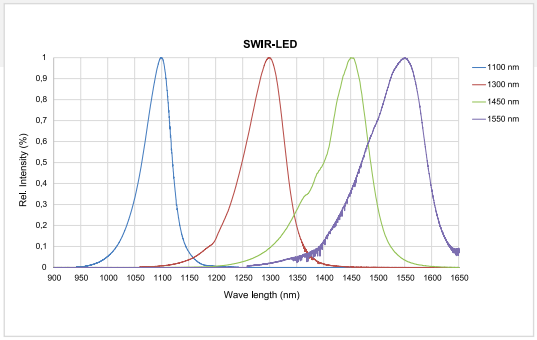
Corona II

Technical Specifications









Corona II Lighting System		Dark Field / Top Light	Bright Field / Back Light	Tube Light	Coaxial Modules	Combined Tube Light
Illuminance (white 5500 Kelvin)		up to 3.500.000 Lux @ focus „A" - 60 mm	800.000 Lux on top surface	Ultra high bright: @ 10 mm WD up to 1.200.000 Lux	min. 750.000 Lux @ focus „B" - 95 mm	up to 1.200.000 Lux for „Tube light"
		min. 1.500.000 Lux @ focus „B" - 95 mm				for „Dark field" up to 800.000 Lux
		min. 800.000 Lux @ focus „C" - 190 mm		High bright: up to 600.000 Lux @ 10 mm WD	min. 350.000 Lux @ focus „C" - 190 mm	up to 12.000 cd/m² for „Bright field"
		min. 300.000 Lux @ focus „D" - parallel				–
Luminance (white 5500 Kelvin)		–	up to 280.000 cd/m²	–	up to 140.000 cd/m² @ bright field „H"	–
Available module length		170 mm to 1360 mm			170 mm to 680 mm	
Step size		170 mm				
LED colors	Red (632 nm)	X	X	X	X	X
	Green (520 nm)	X	X	X	X	X
	Blue (452 nm)	X	X	X	X	X
	White (5500 Kelvin or 3500 Kelvin)	X	X	X	X	X
	IR (850 nm or 940 nm)	X	X			X
	UV (365 nm or 395 nm)	X				
	SWIR (1100, 1350, 1450 or 1550 nm)	X				
LED-Ports per 170 mm segment		1	1	High bright: 2 Ultra high bright: 4	1	
Communication ports		I²C port for temperature control and identification				
Cable length		Standard length 2,5 m or 5 m Up to 15m length or drag chain cable on request				
Protection class		IP 54	IP 54	IP 20	IP 54	IP 20
Operating temperature		10° C to + 70°C (housing temperature)				
Certifications		CE, FCC compliant, RoHS, REACH				

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Rev. 01/2026

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