Features Check List

CAMERAS FOR MEDICAL & LIFE SCIENCES

USB3 VISION GiGE VISION

ISO 13485:2016

BASLER
the power of sight

FEATURES MED ACE USB 3.0

Basler MED ace 2.3 MP 41 mono/color (IMX249), Basler MED ace 2.3 MP 164 mono/color (IMX174), Basler MED ace 5.1 MP 35 mono/color (IMX264), Basler MED ace 5.1 MP 75 mono/color (IMX250), Basler MED ace 8.9 MP 32 mono/color (IMX267), Basler MED ace 8.9 MP 42 mono/color (IMX255), Basler MED ace 12.3 MP 23 mono/color (IMX304), Basler MED ace 12.3 MP 30 mono/color (IMX253)

	mono	color
Physical Interface and I/O Control		
Configurable Input/Output Lines		
Inputs	1	
Outputs	1	
General Purpose I/O	2	
Debouncer	●	
Minimum Output Pulse Width	●	
I/O Signals		
Frame Burst Start Wait	●	
Frame Start Wait	●	
Exposure Active Signal	●	
Flash Window Signal		
User Output	●	
Timer 1 Active	●	
Image Acquisition Control		
Frame Burst Start Trigger	●	
Frame Start Trigger	●	
Triggered by Software	●	
Triggered by Hardware	●	
Trigger Delay	●	
Acquisition Status	●	
Standard Features		
Gain	●	
Gain Auto	●	
Black Level	●	
Digital Shift	●	
Region of Interest (ROI)	●	
Binning Horizontal	●	
Binning Vertical	●	
Decimation Horizontal		
Decimation Vertical		
Scaling Horizontal		
Scaling Vertical		
Reverse X (Horizontal Mirroring)	●	
Reverse Y (Vertical Mirroring)	●	
Gamma Correction	●	
Exposure Mode: Timed (Control via API)	●	
Exposure Mode: Trigger Width (Control via external trigger)	●	
Exposure Auto	●	
Auto Function Profile	●	
Lookup Table (12Bit)	●	
Test Images	●	
Sequencer	●	
Stacked ROI*	●	
Ultra Short Exposure Time Mode		
Miscellaneous		
Remove Parameter Limits	●	
User Defined Values	●	
Device Information Parameters	●	
User Sets (Configuration Sets)	●	
Device Temperature	●	

	mono	color
MED Features		
Quick Auto Brightness	●	
Long Exposure Mode*	●	
User Set Light Microscopy	●	
Tonal Range	●	
Tonal Range Auto	●	
Light Source Presets Microsocpy		●
Chunks		
Timestamp	●	
Counter Value	●	
Line Status All	●	
CRC Checksum	●	
Sequencer Set Active	●	
Exposure Time	●	
Gain	●	
Event Reporting		
Exposure End	●	
Frame Start	●	
Frame Start Wait	●	
Frame Start Overtrigger	●	
Frame Burst Start	●	
Frame Burst Start Wait	●	
Frame Burst Start Overtrigger	●	
Critical Temperature	●	
Over Temperature	●	
Pixel Formats		
Mono 8	●	
Mono 10		
Mono 10p (Mono 10 Packed)		
Mono 12	●	
Mono 12p (Mono 12 Packed)	●	
YCbCr422_8 (YUV422_8)		●
Bayer 8		●
Bayer 10		
Bayer 10p (Bayer 10 Packed)		
Bayer 12		●
Bayer 12p (Bayer 12 Packed)		●
RGB 8		●
BGR 8		●
Color Creation and Enhancement		
Balance White (Manual White Balance)		●
Balance White Auto (Automatic White Balance)		●
Light Source Presets		●
Color Transformation		●
Color Adjustment (6 axis Hue/Saturation)		●
PGI	●	

* only available for IMX174, IMX250, IMX255 and IMX253

Basler MED ace 5.3 MP 20 mono/color (PYTHON 5000)

	mono	color
Physical Interface and I/O Control		
Configurable Input/Output Lines		
Inputs	1	
Outputs	1	
General Purpose I/O	1	
Debouncer		
Minimum Output Pulse Width		
Line Source Signals		
Acquisition Start Wait	●	
Frame Start Wait	●	
Exposure Active	●	
Flash Window		
User Output	●	
Sync User Output	●	
Timer Active	●	
Image Acquisition Control		
Frame Burst Start Trigger	●	
Acquisition Start Trigger	●	
Frame Start Trigger	●	
Triggered by Software	●	
Triggered by Hardware	●	
Trigger Delay	●	
Acquisition Status	●	
Standard Features		
Gain	●	
Gain Auto	●	
Black Level	●	
DigitalShift		
Region of Interest (ROI)	●	
Binning Horizontal	●	
Binning Vertical	●	
Decimation Horizontal		
Decimation Vertical		
Scaling Horizontal		
Scaling Vertical		
Reverse X (Horizontal Mirroring)	●	
Reverse Y (Vertical Mirroring)	●	
Gamma Correction	●	
Exposure Mode: Trigger Width (Control via external trigger)	●	
Exposure Auto	●	
Auto Function Profile	●	
Lookup Table (LUT)	●	
Test Images	●	
Sequencer	●	
Stacked ROI	●	
GigE Vision 2.0		
Precision Time Protocol (IEEE 1588)	●	
Action Commands (Synchronous Triggering)	●	
Scheduled Action Commands	●	
Miscellaneous		
Remove Parameter Limits	●	
User Defined Values	●	
Device Information Parameters	●	
User Sets (Configuration Sets)	●	
Device Temperature	●	

	mono	color
MED Features		
Quick Auto Brightness	●	
Long Exposure Mode		
User Set Light Microscopy	●	
Tonal Range	●	
Tonal Range Auto	●	
Light Source Presets Microsocpy		●
Chunks		
Timestamp	●	
Line Status All	●	
CRC Checksum	●	
Trigger Input Counter	●	
Frame Counter	●	
Sequence Set Index	●	
Exposure Time	●	
Gain Raw	●	
Event Reporting		
Exposure End	●	
Frame Start	●	
Frame Start Overtrigger	●	
Acquisition Start	●	
Acquisition Start Wait	●	
Acquisition Start Overtrigger	●	
Critical Temperature	●	
Over Temperature	●	
Pixel Formats		
Mono 8	●	
Mono 10	●	
Mono 10p (Mono 10 Packed)	●	
Mono 12		
Mono 12 Packed (Mono 12 Packed)		
YCbCr422_8 (YUV422_8)		●
Bayer 8		●
Bayer 10		●
Bayer 10p (Bayer 10 Packed)		●
Bayer 12		
Bayer 12p (Bayer 12 Packed)		
Color Creation and Enhancement		
sRGB Gamma Correction		●
Balance White (Manual White Balance)		●
Balance White Auto (Automatic White Balance)		●
Light Source Presets		●
Color Transformation (RGB to RGB)		●
Color Transformation (YUV to RGB)		
Color Adjustment (6 axis Hue/Saturation)		●
PGI	●	

MED FEATURE SETS

The Basler MED feature sets combine our cameras' most impressive attributes, and stand out with their hardware, firmware and pylon features. Find features specifically designed for Medical & Life Sciences within the following sets. Find more information on *baslerweb.com/MED-Feature-Sets*.

EASY COMPLIANCE

Basler produces and distributes the Basler MED ace cameras for Medical & Life Sciences under ISO 13485:2016. In addition, we maintain all relevant standard conformities, such as CE, UL, EMC Class B, CISPR Class B or FCC Class B to support.

BRILLIANT IMAGE

Get a supreme image out-of-the-box with the Brilliant Image feature set. Experience Basler MED cameras with the market-leading PGI algorithm for color and monochrome cameras, advanced auto white balancing, as well as smart auto contrast and auto exposure algorithms.

PERFECT COLOR

This feature set incorporates several unique tools to change the color appearance of your image: adjust settings for hue, saturation and brightness for full control of color space. Basler`s Color Adjustment (6-axis Hue/Saturation) enables for single-color changes and the Color Calibrator lets you find the perfect color parameters for highest color fidelity.

LOW LIGHT IMAGING

State-of-the-art Sony Pregius CMOS sensor technology together with Basler's unique long exposure mode and built-in histogram functions allow for excellent low light images. The well-developed CMOS technology combined with the Low Light Imaging feature set is highly beneficial for applications with fluorescence imaging.

HIGH SPEED

Basler offers fast and yet highly reliable cameras for high-speed applications in laboratory automation. Experience Basler MED ace cameras with frame rates between 60 and 164 frames per second with global shutter and CMOS sensor technology as well as industry-proven USB3 Vision interface technology.

INDUSTRIAL EXCELLENCE

Basler cameras are 100% quality tested and are the market's most robust and reliable products. Together with the pylon Camera SDK, our extended camera control features and a customer-focused support based on 30 years of vision experience, camera integration has never been more efficient.

MED FEATURE SETS

Camera	Sensor	Interface	MED Feature Sets					
			Easy Compliance	Brilliant Image	Industrial Excellence	Perfect Color*	Low Light Imaging	High Speed
			ISO 13485:2016					SPEED
Basler MED ace 2.3 MP 41 mono/color	IMX249	USB 3.0	•	•	•	•		
Basler MED ace 2.3 MP 164 mono/color	IMX174	USB 3.0	•	•	•	•	•	•
Basler MED ace 5.1 MP 35 mono/color	IMX264	USB 3.0	•	•	•	•		
Basler MED ace 5.1 MP 75 mono/color	IMX250	USB 3.0	•	•	•	•	•	•
Basler MED ace 5.3 MP 20 mono/color	PYTHON 5000	GigE	•	•	•	•		
Basler MED ace 8.9 MP 32 mono/color	IMX267	USB 3.0	•	•	•	•		
Basler MED ace 8.9 MP 42 mono/color	IMX255	USB 3.0	•	•	•	•	•	
Basler MED ace 12.3 MP 23 mono/color	IMX304	USB 3.0	•	•	•	•		
Basler MED ace 12.3 MP 30 mono/color	IMX253	USB 3.0	•	•	•	•	•	

* This feature set is available for color cameras only.

How Does Basler Ensure Superior Quality and Reliable High Performance?

Our approach to quality assurance is rigorous: we continually audit all facets of our business to ensure powerful performance, increase efficiency and reduce costs for our customers. We are compliant with all major quality standards including ISO 9001, CE, RoHS, and more. To ensure consistently high product quality, we employ several quality inspection procedures during manufacturing.

Every Basler camera is subjected to exhaustive optical and mechanical tests before leaving the factory. Regardless of what technology or camera model you choose you can be assured of consistent performance.

ISO
13485:2016

Our Compliance with ISO 13485:2016

With the certification according to ISO 13485:2016, Basler has proven its quality standards for the development, production, distribution and service of digital cameras as well as for placing them on the market.

For you, this means consistency, reliability and quality. Whether you want to operate internationally or expand locally, the quality management standards set for the ISO 13485:2016 certification help you achieve the quickest time to market. Let Basler assist you with documentation and preparation for the certification of medical devices you produce.

Find our white papers, success stories and more useful information on: *baslerweb.com/medical.*

3-Year Warranty

Basler offers a 3-year warranty for their cameras and the Basler Lenses 1/2.5". We make this unprecedented promise because we have unparalleled confidence in our products. We continually reinvest in research, development and superior manufacturing capabilities so that our customers can fully rely on the products we manufacture.

About Basler

Basler is a leading manufacturer of high-quality cameras and camera accessories for industry, medicine, traffic and a variety of other markets. The company's product portfolio encompasses area scan and line scan cameras in compact housing dimensions, camera modules in board level variants for embedded solutions, and 3D cameras. The catalog is rounded off by our user-friendly pylon SDK plus a broad spectrum of accessories, including several developed specially for Basler and optimally harmonized for our cameras.

Basler has three decades of experience in computer vision. The company is home to approximately 600 employees, at its headquarters in Ahrensburg, Germany, and at its subsidiaries and sales offices in Europe, Asia, and North America.

Basler AG
Germany, Headquarters
Tel. +49 4102 463 500
sales.europe@baslerweb.com

Basler, Inc.
USA
Tel. +1 610 280 0171
sales.usa@baslerweb.com

Basler Asia Pte Ltd.
Singapore
Tel. +65 6367 1355
sales.asia@baslerweb.com

Please visit our website to find further Basler offices and representatives close to you:
baslerweb.com

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