Basler Components

Features Checklist

BASLER
VISION TECHNOLOGIES

Basler Cameras	scout Series	scout Series	scout light Series	pilot Series	A100	A300	A600	ace	aviator
Interface	Gigabit Ethernet	IEEE 1394	IEEE 1394	Gigabit Ethernet	IEEE 1394	IEEE 1394	IEEE 1394	Gigabit Ethernet	Camera-Link®
SOFTWARE									
Software Triggering	×	×	×	×	×	×	×	×	
PIXEL DATA FORMATS									
Mono 8	×	×	×	×	×	×	×	×	×
Mono 10									×
Mono 12								×	×
Mono 16*	×	×	×	×	×	×	×		
Mono 12 Packed*	×	×	×	×				×	
YUV 4:2:2 Packed	×	×	×	×	×	×	×	×	
YUV 4:2:2 (YUYV) Packed	×	×	×	×				×	
Raw 8					×	×	×		
Bayer GB 8*				×					
Bayer RG 8*	×	×	×						
Bayer BG 8*	×	×	×	×				×	
Bayer GR 8									×
Bayer GR 10									×
Bayer BG 12								×	
Bayer GR 12									×
Raw 16					×	×	×		
Bayer GB 16*				×					
Bayer BG 16*	×	×	×	×					
Bayer GB 12 Packed*				×					
Bayer BG 12 Packed*	×	×	×	×				×	
CAMERA LINK TAP GEOMETRIES									
1X2-1Y									×
1X-2YE									×
STANDARD FEATURES									
Configurable Input/Output Lines	×	×	×	×	×	×	×	×	×
Adjustable Camera Link Pixel Clock Speed									×
Selectable Camera Link Baud Rate									×
Adjustable Gain All	×	×	×	×	×	×	×	×	×
Individual Tap Gain Adjustment									×
Adjustable Black Level All	×	×	×	×	×	×	×	×	×
Indivitual Tap Black Level Adjustment									×
Manual White Balance*	×	×	×	×	×	×	×	×	×
Digital Shift*	×	×		×				×	×
Area of Interest	×	×	×	×	×	×	×	×	×
Automatic White Balance*	×	×		×				×	×
Automatic Gain Control*	×	×		×				×	×
Automatic Exposure Control*	×	×		×				×	×
Auto Function Profile*	×	×		×				×	×
Binning up to 4 x 4*	×	×		×				×	×
Reverse X (Horizontal Mirroring)	×	×	×	×				×	×
Reverse Y (Vertical Mirroring)									×
Lookup Table	×	×		×	×	×	×	×	×
Gamma Correction	×	×		×				×	×
User Defined Values									×
Disable Parameter Limits	×	×	×	×				×	
Debouncer	×	×	×	×				×	
Trigger Delay	×	×	×	×				×	×
Acquisition Status	×	×	×	×				×	×
Event Reporting	×	×		×				×	
Test Images	×	×	×	×	×	×	×	×	×
Device Information Parameters	×	×	×	×	×	×	×	×	×
Configuration Sets	×	×	×	×	×	×	×	×	×
Temperature Readout	×	×	×	×					×
Trigger Ready Signal*	×	×	×	×	×	×	×	×	
CHUNK FEATURES									
Frame Counter	×	×		×	×	×	×	×	
Time Stamp	×	×		×	×	×	×	×	
Trigger Input Counter	×	×		×	×	×	×	×	
I/O Line Status	×	×		×	×	×	×	×	
DCAM Values					×	×	×		
Gray Value Stamp*							×		
CRC Checksum	×	×		×	×	×	×	×	
HARDWARE									
90° Head Housing	×	×		×	×		×		
Inputs	2	2	1	2	4	4	4	1	2
Outputs	4	4	1	4	4	4	4	1	1

High-End Area Scan Cameras

Basler Cameras	A102k/kc	A202k	A40xk/kc	A50xk/k
Interface	CameraLink®	CameraLink®	CameraLink®	CameraLink®
8 Bit Output	×	×	×	×
10 Bit Output*	×	×	×	
12 Bit Output	×			
Test Images	×	×	×	×
AOI (Area of Interest)	×	×	×	×
AOI List, AOI Editor			×	
Column FPN Shading			×	
Shading Correction (PRNU, DSNU)			×	
Flash Window Controlled Exposure Modes			×	
Adjustable Flash Trigger Offset (Negative and Positive)			×	
Defect Pixel Correction			×	
Exposure Time Control	×	×	×	×
Flash Trigger			×	×
Reverse X (Horizontal Mirroring)		×	×	×
Binning	×	×		
Stamp Features			×	x (A503k, A504k only)
VGA Output				x (A504k only)
Adjustable Gain	×	×	×	×
Adjustable Offset	×	×	×	×
White Balance*	×			
Gamma Correction	×			
Low Smear	×			
Temperature Readout		×	×	×
Configuration Sets	×	×	×	×
Device Information	×	×	×	×

Line Scan Cameras

Basler Cameras	sprint	runner	L10xk	L301kc	L304kc	L40xk	L80xk
Interface	CameraLink®	Gigabit Ethernet	CameraLink®	CameraLink®	CameraLink®	CameraLink®	CameraLink®
8 Bit Output	×	×	×	×	×	×	×
10 Bit Output	×		×	×	×	×	×
12 Bit Output	×	×					
16 Bit Output (12 Bits Effective)		×					
Configurable Input/Output Lines		×					
AOI (Area of Interest)	×	×	×	×	×	×	×
Time Delayed Line Sum/Average	×						
Color (Three Concepts)	×						
DSNU Shading Correction (Offset Shading)	×				×	×	×
PRNU Shading Correction (Gain Shading)	×	×	×		×	×	×
Test Images	×	×	×	×	×	×	×
Stamp Features	×	×			×	×	×
Configuration Sets	×	×	×	×	×	×	×
Device Information	×	×	×	×	×	×	×
Error Condition Detection	×				×	×	×
Binning (Horizontal, Vertical)	×						
Lookup Table	×	×					
Inversion of Direction	x*						
Temperature Readout	×		×	×	×	×	×
Adjustable Gain	×	×	×	×	×	×	×
Adjustable Offset	×	×	×	×	×	×	×
Digital Shift		×	×	×			
White Balance*	×	×					
Gamma Correction		×					
Frequency Converter		×					
Debouncer		×					
Trigger Delay		×					
Exposure Time Control	×	×	×	×	×	×	×
Dark Noise Cancellation					×	×	×
Mirror Image					×		
Two Line Averaging						×	×
Heat Dissipation	×	×			×	x (optional)	x (optional)
CHUNK FEATURES							
Frame Counter		×					
Time Stamp		×					
Trigger Counters		×					
CRC Checksum		×					
Encoder Counter		×					
Input Status @ Line Trigger		×					

* This feature may not be available on all camera versions and/or may not be available on scout-f (BCAM) cameras.

Note: The terminology used here to describe the features on GigE cameras complies with the GigE Vision standard. Accordingly, the terminology used to describe DCAM compliant cameras may differ.

What Makes Basler Camera Quality So Special?

EMVA 1288 Compliance

Basler Components is a leading company in the push for standardizing the measurement and presentation of machine vision sensor and camera specifications. All measurements performed by Basler will be 100% compliant with EMVA standard 1288 (Standard for Measurement and Presentation of Specifications for Machine Vision Sensors and Cameras). Basler has given this standard its strongest support. Basler helped to develop the unified method used to measure, compute, and present the specification parameters for cameras and image sensors used in machine vision applications.

The EMVA 1288 standard includes a well defined method for measuring most common noise sources. It also includes a mandatory and detailed description of the measurement setup, environmental conditions, and test requirements. As a first step, only the standardization process for monochrome area scan cameras is covered. An expansion covering the standards for color area scan and line scan cameras is expected to follow.

The signal-to-noise ratio chart provides information on the image quality and sensitivity for a tested camera. The chart describes the development of the signal-to-noise ratio from a low level, where noise overlays the signal, up to the point of saturation. It also embeds camera parameters, such as full well, dynamic range, and the signal-to-noise ratio, for selected points on the curve that are relevant to a specific application.

The EMVA 1288 standard is available at www.emva.org.
A detailed technical white paper describing the measurement methods used in the standard can be downloaded from www.baslerweb.com.

Accessories for Basler Cameras

Basler Components offers a wide variety of accessories designed to help you get the most out of your camera. To ensure full compatibility, all accessories are tested with our cameras. Cables and power supplies are all EMC proven by our support team for industrial conditions.

Our portfolio includes several accessories in each of the following categories:

- Cables
- Connectors
- Frame Grabbers and Cards
- Lens Mounts
- Optics
- Power Supplies
- Tripod Mounts
- Others

You can view the entire accessories portfolio, including order numbers and data sheets, at our website: www.baslerweb.com/accessories.

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