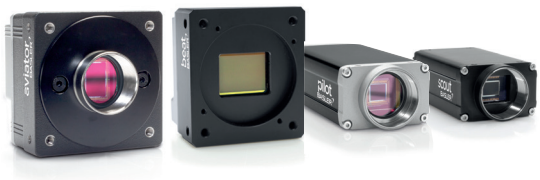
Features Check List

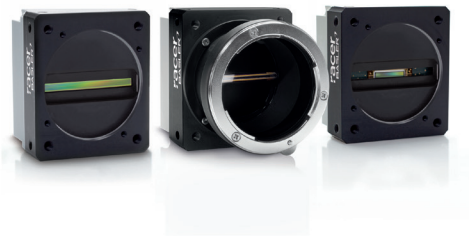
INDUSTRIAL CAMERAS

GiGE VISION USB3 VISION CAMERA Link BCON for LVDS BCON for MIPI

BASLER
the power of sight

OVERVIEW





All specifications in this brochure are subject to change without notice. Latest specifications and availability can be found on our website *baslerweb.com*. Please visit *baslerweb.com/manuals* for the detailed camera User's Manual and *baslerweb.com/thirdparty* for information on third party software.

Features ace USB 3.0

Sensors ace USB 3.0 Camera Models	Sony CCD acA640-90ux acA640-120ux acA1300-30ux acA1600-20ux		CMOSIS acA2000-165ux acA2040-90ux		ON Semi-conductor MT9P acA1920-25ux acA2500-14ux		ON Semi-conductor MT9J/F acA3800-14ux acA4600-10ux		ON Semi-conductor PYTHON acA640-750ux acA800-510ux acA1300-200ux acA1920-150ux acA2500-60ux		Sony Pregius acA720-520ux acA1440-220ux acA1920-155ux acA1920-40ux acA2040-120ux acA2040-55ux acA2440-35ux acA2440-75ux acA4096-30ux acA4096-40ux acA4112-20ux acA4112-30ux		Sony STARVIS acA3088-57ux acA4024-29ux Sony Exmor R acA5472-17ux	
	mono	color	mono	color	mono	color	mono	color	mono	color	mono	color	mono	color
Physical Interface and I/O Control														
Configurable Input/Output Lines														
Inputs	1		1		1		1		1		1		1	
Outputs	1		1		1		1		1		1		1	
General Purpose I/O	2		2		2		2		2		2		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	●		●		●		●		●		●		●	
Test Images	●		●		●		●		●		●		●	
Sequencer	●		●		●		●		●		●		●	
Stacked ROI									●		●[1]			
Ultra Short Exposure Time Mode											●[2]			

[1] not available for acA1920-40um/uc, acA2040-55um/uc, acA2440-35um/uc, acA4096-30um/uc, acA4112-20um/uc
[2] only available for acA720-520um/uc, acA1440-220um/uc

Features ace USB 3.0

Sensors ace USB 3.0 Camera Models	Sony CCD acA640-90ux acA640-120ux acA1300-30ux acA1600-20ux		CMOSIS acA2000-165ux acA2040-90ux		ON Semi-conductor MT9P acA1920-25ux acA2500-14ux		ON Semi-conductor MT9J/F acA3800-14ux acA4600-10ux		ON Semi-conductor PYTHON acA640-750ux acA800-510ux acA1300-200ux acA1920-150ux acA2500-60ux		Sony Pregius acA720-520ux acA1440-220ux acA1920-155ux acA1920-40ux acA2040-120ux acA2040-55ux acA2440-35ux acA2440-75ux acA4096-30ux acA4096-40ux acA4112-20ux acA4112-30ux		Sony STARVIS acA3088-57ux acA4024-29ux Sony Exmor R acA5472-17ux	
	mono	color	mono	color	mono	color	mono	color	mono	color	mono	color	mono	color
Miscellaneous														
Remove Parameter Limits	●		●		●		●		●		●		●	
User Defined Values	●		●		●		●		●		●		●	
Device Information Parameters	●		●		●		●		●		●		●	
User Sets (Configuration Sets)	●		●		●		●		●		●		●	
Device Temperature									●		●		●	
Vignetting Correction											●[1]		●[2]	
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									●		●		●[3]	●
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		●								●		●		●

[1] not available for acA720-520ux, acA1440-220ux, acA2040-55ux, acA2040-120ux, acA2440-35ux, acA2440-75ux
[2] only available for acA3088-57ux, acA4024-29ux
[3] only available for acA5472-17um

Features ace GigE

Sensors ace GigE Camera Models	Sony CCD acA640-90gx acA640-120gx acA780-75gx acA1300-22gx acA1300-30gx acA1600-20gx		CMOSIS acA2000-50gx acA2040-25gx		e2V acA1280-60gx acA1300-60gx acA1600-60gx		ON Semi-conductor MT9P acA1920-25gx acA2500-14gx		ON Semi-conductor MT9J/F acA3800-10gx acA4600-7gc		ON Semi-conductor PYTHON acA640-300gx acA800-200gx acA1300-75gx acA1920-48gx acA2500-20gx		Sony Pregius acA640-121gm acA720-290gx acA1440-73gx acA1920-40gx acA1920-50gx acA2040-35gx acA2440-20gx acA4096-11gx acA4112-8gx		Sony STARVIS acA3088-16gx acA4024-8gx Sony Exmor R acA5472-5gx	
	mono	color	mono	color	mono	color	mono	color	mono	color	mono	color	mono	color	mono	color
Physical Interface and I/O Control																
Configurable Input/Output Lines																
Inputs	1		1		1		1		1		1		1		1	
Outputs	1		1		1		1		1		1		1		1	
General Purpose I/O											1		1		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																
Acquisition Start Trigger	●		●		●		●		●		●		●		●	
Frame Start Trigger	●		●		●		●		●		●		●		●	
Triggered by Software	●		●		●		●		●		●		●		●	
Triggered by Hardware	●		●		●		●		●		●		●		●	
Trigger Delay	●		●		●		●		●		●		●		●	
Acquisition Status	●		●		●		●		●		●		●		●	
GigE Vision 2.0											●		●		●	
Standard Features																
Gain	●		●		●		●		●		●		●		●	
Gain Auto	●		●		●		●		●		●		●		●	
Black Level	●		●		●		●		●		●		●		●	
DigitalShift	●		●		●		●		●				●		●	
Region of Interest (ROI)	●		●		●		●		●		●		●		●	
Binning Horizontal	●		●		●		●		●		●		●		●	
Binning Vertical	●		●		●		●		●		●		●		●	
Decimation Horizontal					●[1]				●							
Decimation Vertical			●		●[1]				●							
Scaling Horizontal									●							
Scaling Vertical									●							
Reverse X (Horizontal Mirroring)	●		●		●		●		●		●		●		●	
Reverse Y (Vertical Mirroring)			●								●		●[2]		●	
Stacked Zone Imaging			●													
Gamma Correction	●		●		●		●		●		●		●		●	
Exposure Mode: Trigger Width (Control via external trigger)	●		●								●		●			
Exposure Auto	●		●		●		●		●		●		●		●	
Auto Function Profile	●		●		●		●		●		●		●		●	
Lookup Table (LUT)	●		●		●		●		●		●		●		●	
Test Images	●		●		●		●		●		●		●		●	
Sequencer	●		●		●		●		●		●		●		●	
Stacked ROI											●		●[3]			
Ultra Short Exposure Time Mode													●[4]			
GigE Vision 2.0																
Precision Time Protocol (IEEE 1588)											●		●		●	
Action Commands (Synchronous Triggering)											●		●		●	
Scheduled Action Commands											●		●		●	

[1] not available for acA1280-60gm/gc
[2] not available for acA640-121gm
[3] only available for acA720-290gm/gc, acA1440-73gm/gc, acA1920-50gm/gc
[4] only available for acA720-290gm/gc, acA1440-73gm/gc, acA640-121gm

Sensors ace GigE Camera Models	Sony CCD acA640-90gx acA640-120gx acA780-75gx acA1300-22gx acA1300-30gx acA1600-20gx		CMOSIS acA2000-50gx acA2040-25gx		e2V acA1280-60gx acA1300-60gx acA1600-60gx		ON Semi-conductor MT9P acA1920-25gx acA2500-14gx		ON Semi-conductor MT9J/F acA3800-10gx acA4600-7gc		ON Semi-conductor PYTHON acA640-300gx acA800-200gx acA1300-75gx acA1920-48gx acA2500-20gx		Sony Pregius acA640-121gm acA720-290gx acA1440-73gx acA1920-40gx acA1920-50gx acA2040-35gx acA2440-20gx acA4096-11gx acA4112-8gx		Sony STARVIS acA3088-16gx acA4024-8gx Sony Exmor R acA5472-5gx	
	mono	color	mono	color	mono	color	mono	color	mono	color	mono	color	mono	color	mono	color
Miscellaneous																
Remove Parameter Limits	●		●		●		●		●		●		●		●	
User Defined Values	●		●		●		●		●		●		●		●	
Device Information Parameters	●		●		●		●		●		●		●		●	
User Sets (Configuration Sets)	●		●		●		●		●		●		●		●	
Device Temperature											●		●		●	
Vignetting Correction													●[1]		●[2]	
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 Adjustment (6 axis Hue/Saturation)		●		●		●		●		●		●		●		●
PGI											●		●[3]		●[4]	●
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)		●		●		●		●		●				●		●

[1] not available for acA640-121gm, acA720-290gx, acA1440-73gx, acA2040-35gx, acA2440-20gx
[2] only available for acA3088-16gx, acA4024-8gx
[3] not available for acA640-121gm
[4] only available for acA5472-5gm

Features ace Camera Link

Sensors ace Camera Link Camera Models	CMOSIS acA2000-340kx acA2040-180kx	
	mono	color
Physical Interface and I/O Control		
Configurable Input/Output Lines	●	
General Purpose I/O	1	
Debouncer	●	
I/O Signals: Exposure Active Signal	●	
Minimum Output Pulse Width	●	
Image Acquisition Control		
Trigger Delay	●	
Acquisition Status	●	
Trigger Wait / Trigger Ready Signal	●	
Selectable Camera Link Baud Rate	●	
Color Creation and Enhancement		
Balance White (Manual White Balance)		●
sRGB Gamma Correction		●
Color Transformation		●
Standard Features		
Gain	●	
Black Level	●	
Area of Interest	●	
Gain Auto	●	
Exposure Mode: Timed (Control via API)	●	
Exposure Mode: Trigger Width (Control via external trigger)	●	
Auto Function Profile	●	
Decimation Vertical	●	
Binning	●	
Reverse X (Horizontal Mirroring)	●	
Reverse Y (Vertical Mirroring)	●	
Lookup Table (LUT)	●	
Remove Parameter Limits	●	
Test Images	●	
Sequencer	●	
Device Information Parameters	●	
Chunks		
Sequence Set Index	●	
Exposure Time	●	
Pixel Formats		
Mono 8	●	
Mono 10	●	
Mono 12	●	
Bayer GB 8		●
Bayer GB 10		●
Bayer GB 12		●
Adjustable Camera Link Pixel Clock Speed	●	
Miscellaneous		
User Defined Values	●	
Remove Parameter Limits	●	
User Sets (Configuration Sets)	●	

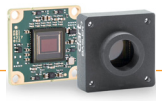
Features dart

Basler Cameras	dart USB		dart BCON for LVDS	
Interface	USB3 VISION		BCON for LVDS	
	mono	color	mono	color
Interface Features				
USB 3.0 Superspeed	●			
USB 2.0 Backward Compatible	●			
Physical Interface and I/O Control				
Debouncer	●		●	
Minimum Output Pulse Width	●		●	
I/O Signals				
Exposure Active Signal	●		●	
Flash Window Signal	●[1]		●[2]	
User Output	●		●	
Line Source Signals: User Output	●		●	
Image Acquisition Control				
Frame Start Trigger	●		●	
Triggered by Hardware	●		●	
Triggered by Software	●		●	
Acquisition Status	●		●	
Standard Features				
Gain	●		●	
Gain Auto	●		●	
Black Level	●		●	
Region of Interest (ROI)	●		●	
Binning Horizontal	●		●	
Binning 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)	●[1]		●[2]	
Exposure Auto	●		●	
Auto Function Profile	●		●	
Test Images	●		●	
Miscellaneous				
User Defined Values	●		●	
Device Information Parameters	●		●	
User Sets (Configuration Sets)	●		●	
Color Creation and Enhancement				
Balance White Auto (Automatic White Balance)		●		●
Hue/Saturation		●		●
PGI		●		●
Light Source Presets		●		●
Backlight Compensation	●		●	
Anti-Flicker	●		●	
Contrast Enhancement	●		●	
Balance White (Manual White Balance)		●		●
S-Curve Contrast Mode		●		●
sRGB Gamma Correction		●		●
Pixel Formats				
Mono8	●		●	
Mono12	●		●	
YCbCr422_8		●		●
Bayer8		●		●
Bayer12		●		●
RGB8		●		●

[1] not available for daA1280-54uc, daA1280-54um, daA1600-60uc, daA1600-60um

[2] only for daA2500-14lm/lc

Features dart



Basler Cameras	dart BCON for MIPI	
Interface	BCON for MIPI	
	mono	color
Image Acquisition Control		
Triggered by Software	●	●
Acquisition Single Frame	●	●
Acquisition Start	●	●
Acquisition Stop	●	●
Standard Features		
Gain	●	●
Gain Auto	●	●
Black Level	●	●
Gamma Correction	●	●
Exposure Mode: Timed (Control via API)	●	●
Exposure Auto	●	●
Test Images	●	●
Exposure Time	●	●
Miscellaneous		
Device Information Parameters	●	●
Color Creation and Enhancement		
Hue/Saturation		●
Light Source Presets	●	
Anti-Flicker	●	●
Contrast Enhancement	●	●
Balance White (Manual White Balance)	●	●
Balance White Auto (Automatic White Balance)	●	●
Sharpness	●	●
Brightness	●	●
Pixel Formats		
Mono8	●	
YCbCr422_8		●

Features pulse

Basler Cameras	pulse	
Interface	USB3 VISION	
	mono	color
Interface Features		
USB 3.0 Superspeed	●	●
USB 2.0 Backward Compatible	●	●
Image Acquisition Control		
Frame Start Trigger	●	●
Triggered by Software	●	●
Acquisition Status	●	●
Standard Features		
Gain	●	●
Gain Auto	●	●
Black Level	●	●
Region of Interest	●	●
Binning Horizontal	●	●
Binning Vertical	●	●
Reverse X (Horizontal Mirroring)	●	●
Reverse Y (Vertical Mirroring)	●	●
Gamma Correction (User)	●	●
Exposure Control via API	●	●
Automatic Exposure Control	●	●
Auto Function Profile	●	●
Test Images	●	●
Miscellaneous		
User Defined Values	●	●
Device Information Parameters	●	●
Configuration Sets	●	●
Color Creation and Enhancement		
Balance White Auto (Automatic White Balance)		●
Color Adjustment (6 axis Hue/Saturation)		●
PGI		●
Light Source Presets		●
Backlight Compensation	●	●
Anti-Flicker	●	●
Contrast Enhancement	●	●
Balance White (Manual White Balance)		●
S-Curve Contrast Mode		●
sRGB Gamma Correction		●
Pixel Formats		
Mono8	●	
Mono12	●	
YCbCr422_8		●
Bayer8		●
Bayer12		●
RGB8		●

Features aviator, Basler beat, pilot and scout Cameras

Basler Cameras	aviator	aviator	Basler beat	pilot	scout
Interface	GigE Vision	Camera Link	Camera Link	GigE Vision	GigE Vision
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	●	●	●	●	●
Individual Tap Black Level Adjustment	●	●		●	
Manual White Balance*	●	●	●	●	●
Digital Shift*	●	●		●	●
Area of Interest	●	●	●	●	●
Prelines	●	●			
Automatic White Balance*	●	●	●	●	●
Automatic Gain Control*	●	●	●	●	●
Automatic Exposure Control*	●	●	●	●	●
Auto Function Profile*	●	●	●	●	●
Binning up to 4×4* (Mono)	●	●		●	●
Stacked Zone Imaging*			●		
Reverse X (Horizontal Mirroring)	●	●	●	●	●
Reverse Y (Vertical Mirroring)	●	●	●		
Lookup Table	●	●	●	●	●
Gamma Correction (User)	●	●	●	●	●
sRGB Gamma Correction*	●	●	●	●	●
Enhanced Color*	●	●	●	●	●
User Defined Values	●	●	●		
Remove Parameter Limits	●	●		●	●
Debouncer	●	●	●	●	●
Minimum Output Pulse Width*	●	●	●	●	●
Trigger Delay	●	●	●	●	●
Acquisition Status	●	●	●	●	●
Event Reporting	●			●	●
Test Images	●	●	●	●	●
Device Information Parameters	●	●	●	●	●
Configuration Sets	●	●	●	●	●
Temperature Readout	●	●		●	●
Flash Window Signal*					
Trigger Wait / Trigger Ready Signal*	●	●	●	●	●
Exposure Active Signal	●	●	●	●	●
Sequencer	●	●		●	●
Chunk Features					
Time Stamp	●			●	●
Trigger Input Counter	●			●	●
I/O Line Status	●			●	●
CRC Checksum	●			●	●
Frame Counter	●			●	●
Sequence Set Index*	●			●	●
Exposure Time	●			●	●

* This feature may not be available on all camera versions

Features aviator, Basler beat, pilot and scout Cameras

Basler Cameras	aviator	aviator	Basler beat	pilot	scout
Interface	GigE Vision	Camera Link	Camera Link	GigE Vision	GigE Vision
Software					
Software Triggering	●	●	●	●	●
Pixel Data Formats					
Mono 8	●	●	●	●	●
Mono 10*		●	●		
Mono 12	●	●	●		
Mono 16*				●	●
Mono 12 Packed*	●			●	●
YUV 4:2:2 Packed (Ylber 422)	●			●	●
YUV 4:2:2 (YUYV) Packed	●			●	●
Raw 8					
RGB 8 Packed*					●
RGB 8*	●			●	
Bayer GB 8*	●		●	●	
Bayer RG 8*					●
Bayer BG 8*				●	●
Bayer GR 8*		●			
Bayer GB 10*			●		
Bayer GR 10*		●			
Bayer GB 12*	●				
Bayer GR 12*		●			
Raw 16			●		
Bayer GB 16*				●	
Bayer BG 16*				●	●
Bayer GB 12 Packed*	●			●	
Bayer BG 12 Packed*				●	●
Hardware					
90° Head Housing				●	●
Inputs	2	2	4	2	2
Outputs	4	1	1	4	4
Camera Link Tab Geometries					
1X-1Y		●			
1X2-1Y		●	●		
1X3-1Y			●		
1X8-1Y			●		
1X10-1Y			●		
1X-2YE		●			

* This feature may not be available on all camera versions

Features Line Scan Cameras

Basler Cameras	racer	racer
Interface	GigE Vision	Camera Link
Standard Features		
Configurable Input/Output Lines	●	●
Selectable Camera Link Pixel Clock Speed		●
Selectable Camera Link Baud Rate		●
Adjustable Gain	●	●
Analog Gain	●	●
Digital Gain	●	●
Adjustable Black Level All (Offset)	●	●
AOI (Area of Interest)	●	●
Offset Shading (DSNU Shading Correction)	●	●
Gain Shading (PRNU Shading Correction)	●	●
Automatic Gain Control*	●	●
Automatic Exposure Control*	●	●
Automatic Function Profile*	●	●
Binning	●	●
Lookup Table	●	●
Gamma Correction	●	●
User Defined Values	●	●
Remove Parameter Limits	●	●
Rotary Encoder Module	●	
Frequency Converter	●	●
Debouncer*	●	●
Trigger Delay	●	
Acquisition Status	●	
Event Reporting	●	
Test Images	●	●
Device Information	●	●
Configuration Sets	●	●
Temperature Readout	●	●
Trigger Wait/Trigger Ready Signal*	●	●
Exposure Active Signal	●	●
Stamp Features*	●	
Error Condition Detection	●	●
Exposure Time Control	●	●
Dark Noise Cancellation	●	●
Chunk Features		
Frame Counter	●	
Timestamp	●	
Input Status @ Line Trigger	●	
CRC Checksum	●	
Trigger Counters	●	
Encoder Counter	●	

* This feature may not be available on all camera versions

Features Line Scan Cameras

Basler Cameras	racer	racer
Interface	GigE Vision	Camera Link
Software		
Software Triggering	●	●
Pixel Data Formats		
Mono 8	●	
Mono 12	●	
Mono12 Packed	●	
YUV 4:2:2 Packed	●	
YUV 4:2:2 (YUYV) Packed	●	
8 Bit Output		●
10 Bit Output		●
12 Bit Output		●
Hardware		
Inputs	3	4[2]
Outputs	2	1[3]
Camera Link Tap Geometries		
1X		●
1X2		●
1X3[1]		●
1X4[1]		●
1X6[1]		●
1X8		●
1X10		●
1X16[1]		●
4X2[1]		●

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.

Specifications are subject to change without prior notice.

[1] This feature may not be available on all camera versions
[2] CC1 to CCF4
[3] via Camera Link spare bit

Basler´s Components Enhance Your Vision

Basler offers you extensively tested cables and lenses, which are optimized for use with our Basler cameras. Our cooperation with certified suppliers facilitates the operation of a high-performance image processing system.

An image processing system needs more than just a camera, lens and light source. A stable vision system also requires accessories for handling data transfer.

Basler offers a wide variety of accessories such as lenses, I/O cables, power supplies, data cables, host adapter cards, hubs or switches 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 tested for industrial conditions by our support team.

Basler Original Equipment

The accessories market for machine vision cameras is broad and deep. Therefore, Basler offers products specially developed for our cameras, meaning camera and lens or cables harmonize perfectly with one another. The products are produced exclusively for us and are available only from Basler. All products with the Basler Original Equipment seal allow top performance when combined with Basler cameras.

Why Components from Basler?

- Perfect match with our Basler cameras
- Extensive and qualified portfolio
- One-stop-shopping for your image processing system
- Performance stability through premium quality standards
- Qualified selection of components avoids changes in existing systems
- Professional consultancy during preselection

USB 3.0 Accessories from Basler

Especially with a USB 3.0 interface, it is important to think about the right accessories to achieve stability in a system with one or more cameras. In particular USB 3.0 accessories from the consumer sector may lead to major disadvantages for the user, as they are not designed to handle the higher demands of machine vision applications.

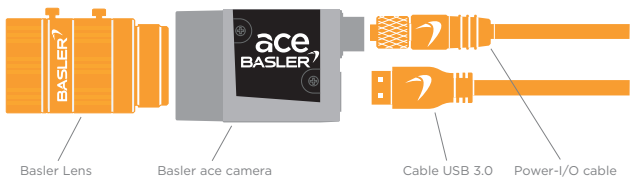
Our portfolio of USB 3.0 accessories covers a broad selection of cables, host adapter cards and a USB 3.0 hub.

Your Benefits Through USB 3.0 Accessories:

- High stability of your USB 3.0 set up
- Simple integration into all image processing applications
- Tested USB 3.0 accessories with reliable premium quality for industrial applications
- Carefully selected accessories for a perfect match
- Plug and play functionality

Have a look at the matching components for your camera model at
baslerweb.com/accessories

Typcial set-up of a camera system:



OTHER INFORMATION

How Does Basler Measure and Define Image Quality?

1288 EMVA Standard Compliant

Basler is leading the effort to standardize image quality and sensitivity measurement for cameras and sensors. We are giving the EMVA 1288 standard our strongest support because it describes a unified method to measure, compute, and present the specification parameters for cameras and image sensors. Our cameras are characterized and measured in 100% compliance with the EMVA 1288 standard. Measurement reports can be downloaded from our website.

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. We have developed a unique combination of optics, hardware, and software tools that can quickly and efficiently calibrate a camera and measure its performance against a set of standard performance criteria. Regardless of what technology or camera model you choose you can be assured of consistent performance.

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 and 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.

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