

# EVEN THE BEST CAN GET BETTER. ACE 2. ENGINEERED FOR YOU.

## Basler ace 2

One camera series, two product lines. Always the right choice!

Welcome to the next ace generation! With its optimized hardware design, the latest CMOS sensor technology and our unique Beyond features, the ace 2 addresses both: rising customer needs for cost-effective solutions for standard applications, and increased performance requirements.

Tailored to fulfil the individual tasks of your vision system, the two product lines – ace 2 Basic and ace 2 Pro – ensure higher frame rates, reduced data volumes and superior image quality. And the best part is: you only pay for what you really need. Engineered for you. ace 2.

### Highlights

- Two product lines: ace 2 Basic and ace 2 Pro – tailored to different vision needs
- Including unique value-add features like Compression Beyond, Pixel Beyond and PGI
- Fast and cost-effective software integration
- Resolutions up to 24 MP
- 5GigE interface on ace 2 Basic

For more information, please visit [baslerweb.com/ace2](https://baslerweb.com/ace2)



## Unique Features from Basler

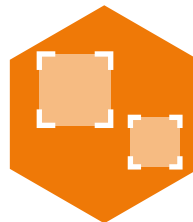
Besides the popular PGI feature set the ace 2 Pro cameras also include our new Beyond features which are especially characterized by the fact that their functionality is unique in the market and often even patented or patent-pending.



### COMPRESSION BEYOND

This feature allows you to significantly expand the GigE bandwidth of your ace 2 Pro. Lossless compression enables faster frame rates and therefore higher throughput. To find the optimal balance between image size and image quality for your application, you can individually adjust the compression factor and also choose an even stronger, but then lossy compression.

More information: [baslerweb.com/compression-beyond](https://baslerweb.com/compression-beyond)

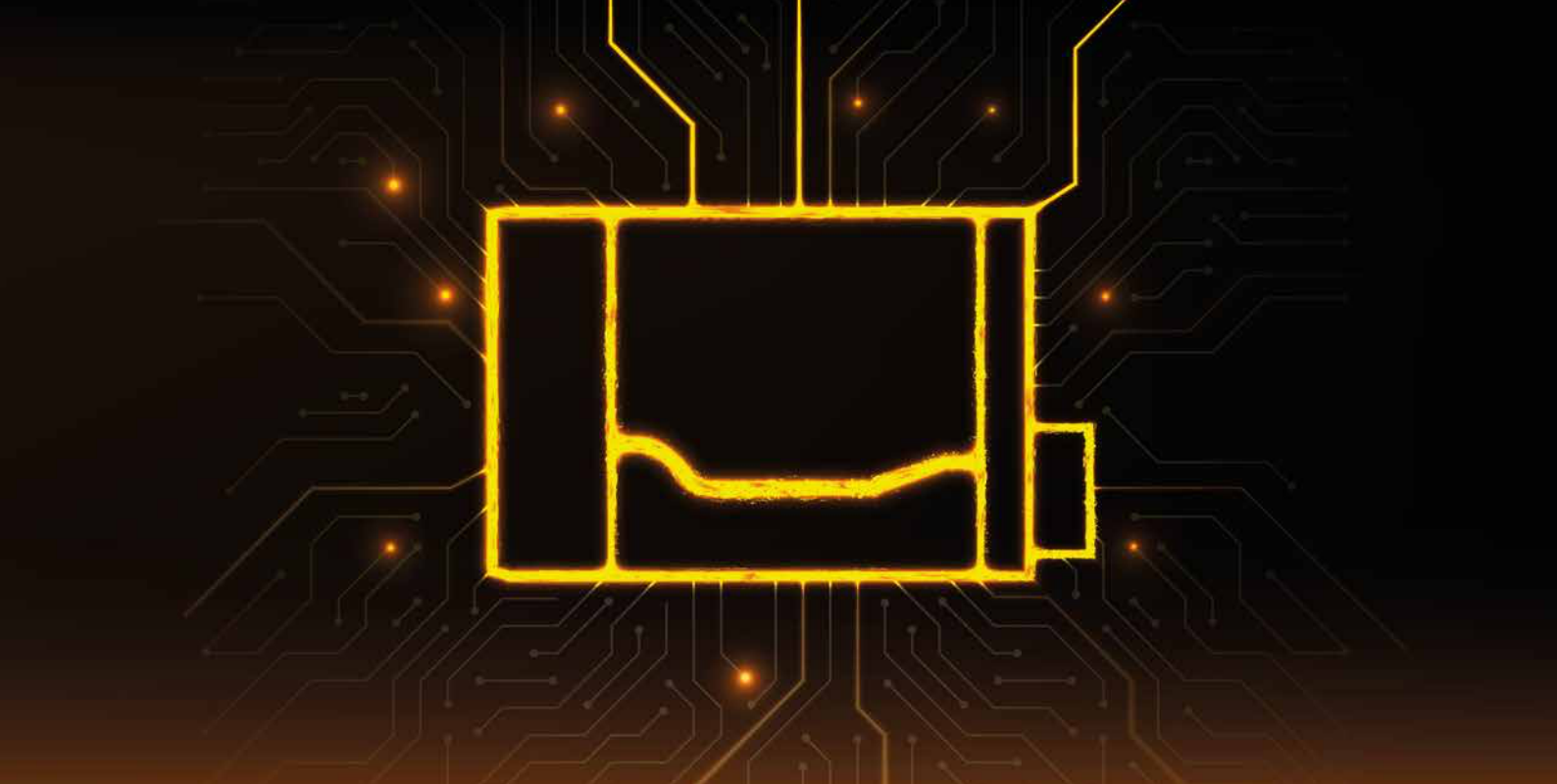


### PIXEL BEYOND

With this feature you can change pixel sizes yourself and simulate certain sensor characteristics, such as those of discontinued sensors for example, which allows for an uncomplicated redesign.

Based on a novel interpolation method developed by Basler, Pixel Beyond overcomes the limits of conventional binning by allowing the use of decimal numbers in addition to integer factors. This results in significantly more flexibility.

More information: [baslerweb.com/pixel-beyond](https://baslerweb.com/pixel-beyond)



### ace 2 Basic

Basler's proven reliability with extensive computer vision feature set for standard machine vision applications.

#### Highlights:

- Optimized hardware meets state-of-the-art CMOS sensor technology
- Powerful computer vision feature set
- Unbeatable price/performance ratio for standard vision applications
- Available with 5GigE interface

### ace 2 Pro

All the benefits of the ace 2 Basic plus PGI feature set plus new, unique Beyond features for maximum performance.

#### Highlights:

- Compression Beyond for higher bandwidth on GigE using lossless compression
- Pixel Beyond for uncomplicated sensor redesign through individual adjustment of pixel size and sensor characteristics
- Popular PGI feature set from Basler included
- Excellent price/performance ratio for more demanding vision applications



Watch our [simpleshow](#) video to learn all about the benefits of the ace 2 camera series and Basler's Beyond features.





ace 2 Basic



ace 2 Pro

## ACE 2 USB

### Product Group Specifications

Interface	USB 3.0
Housing Size [L × W × H]	42.8 mm × 29 mm × 29 mm
Housing Temperature during operation	ace 2 Basic: -10°C – 60°C, ace 2 Pro: 0°C - 50°C
Typical Weight	85 g
Lens Mount	C-mount
Power Supply	Via USB 3.0 interface
Digital I/O	1 opto-isolated input + 2 GPIO
Synchronization	Via hardware trigger, via software trigger or free-run
Exposure Control	Via hardware trigger or programmable via the camera API
Conformity	CE, RoHS, GenICam, USB3 Vision, IP30, UL, FCC, KC, EAC
Driver	Basler pylon Camera Software Suite or 3rd party USB3 Vision Software
Operating System	Windows, Linux, macOS

CAMERA MODEL	SENSOR	RESOLUTION [H×V PIXELS]	RESOLUTION [MP]	SENSOR TYPE	SHUTTER	FRAME RATE [FPS]	PIXEL SIZE [μm <sup>2</sup> ]	OPTICAL SIZE
<b>ace 2 Basic</b>								
a2A1920-160um/ucBAS	IMX392	1920×1200	2.3	CMOS	Global	160	3.45×3.45	1/2.3"
a2A2590-60um/ucBAS	IMX334ROI	2592×1944	5	CMOS	Rolling	60	2.0×2.0	1/2.8"
a2A2448-75um/ucBAS	IMX547	2448×2048	5	CMOS	Global	75	2.74×2.74	1/1.8"
a2A2600-64um/ucBAS	GMAX2505	2600×2160	5.6	CMOS	Global	64	2.5×2.5	1/2"
a2A2840-48um/ucBAS	IMX546	2840×2840	8	CMOS	Global	48	2.74×2.74	2/3"
a2A3840-45um/ucBAS	IMX334	3840×2160	8.3	CMOS	Rolling	45	2.0×2.0	1/1.8"
a2A4200-40um/ucBAS	GMAX2509	4200×2160	9.1	CMOS	Global	40	2.5×2.5	2/3"
a2A4096-30um/ucBAS	IMX545	4096×3000	12.3	CMOS	Global	30	2.74×2.74	1/1.1"
a2A5320-23um/ucBAS	IMX542	5320×3032	16.1	CMOS	Global	23	2.74×2.74	1.1"
a2A4504-18um/ucBAS	IMX541	4504×4504	20.2	CMOS	Global	18	2.74×2.74	1.1"
a2A5328-15um/ucBAS	IMX540	5328×4608	24.4	CMOS	Global	15	2.74×2.74	1.2"
<b>ace 2 Pro</b>								
a2A1920-160um/ucPRO	IMX392	1920×1200	2.3	CMOS	Global	160 <sup>1</sup>	3.45×3.45	1/2.3"
a2A2590-60um/ucPRO	IMX334ROI	2592×1944	5	CMOS	Rolling	60	2.0×2.0	1/2.8"
a2A2448-75um/ucPRO	IMX547	2448×2048	5	CMOS	Global	75	2.74×2.74	1/1.8"
a2A2600-64um/ucPRO	GMAX2505	2600×2160	5.6	CMOS	Global	64	2.5×2.5	1/2"
a2A2840-48um/ucPRO	IMX546	2840×2840	8	CMOS	Global	48	2.74×2.74	2/3"
a2A3840-45um/ucPRO	IMX334	3840×2160	8.3	CMOS	Rolling	45	2.0×2.0	1/1.8"
a2A4200-40um/ucPRO	GMAX2509	4200×2160	9.1	CMOS	Global	40	2.5×2.5	2/3"
a2A4096-30um/ucPRO	IMX545	4096×3000	12.3	CMOS	Global	30	2.74×2.74	1/1.1"
a2A5320-23um/ucPRO	IMX542	5320×3032	16.1	CMOS	Global	23	2.74×2.74	1.1"
a2A4504-18um/ucPRO	IMX541	4504×4504	20.2	CMOS	Global	18	2.74×2.74	1.1"
a2A5328-15um/ucPRO	IMX540	5328×4608	24.4	CMOS	Global	15	2.74×2.74	1.2"

<sup>1</sup>Higher frame rates possible with Compression Beyond. Please refer to our website [baslerweb.com/ace2](https://baslerweb.com/ace2) for detailed information.



ace 2 Basic



ace 2 Pro

## ACE 2 GIGE / 5GIGE

### Product Group Specifications

Interface	Fast Ethernet (100 Mbit/s), GigE (1000 Mbit/s), 2.5GigE (2500 Mbit/s), 5GigE (5000 Mbit/s)
Housing Size [L × W × H]	55.5 mm × 29 mm × 29 mm
Housing Temperature during operation	ace 2 Basic <sup>1</sup> : -10°C - 60°C, ace 2 Pro: 0°C - 50°C
Typical Weight	100 g
Lens Mount	C-mount
Power Supply	Power over Ethernet (IEEE 802.3af) <sup>2</sup> or 12-24 VDC (+/- 10%)
Digital I/O	1 opto-isolated input + 2 GPIO
Synchronization	Via hardware trigger, via software trigger or free-run
Exposure Control	Via hardware trigger or programmable via the camera API
Conformity	CE, RoHS, GenICam, GigE Vision 2.0, IP30, UL <sup>2</sup> , FCC, KC, EAC
Driver	Basler pylon Camera Software Suite or 3rd party GigE Vision Software
Operating System	Windows, Linux, macOS

<sup>1</sup>Please visit our website for latest specification information on ace 2 Basic 5GigE models.

<sup>2</sup>not available for ace 2 Basic 5GigE models

CAMERA MODEL	SENSOR	RESOLUTION [H×V PIXELS]	RESOLUTION [MP]	SENSOR TYPE	SHUTTER	FRAME RATE [FPS]	PIXEL SIZE [μm <sup>2</sup> ]	OPTICAL SIZE
<b>ace 2 Basic - GigE</b>								
a2A1920-51gm/gcBAS	IMX392	1920×1200	2.3	CMOS	Global	51	3.45×3.45	1/2.3"
a2A2590-22gm/gcBAS	IMX334ROI	2592×1944	5	CMOS	Rolling	22	2.0×2.0	1/2.8"
a2A2448-23gm/gcBAS	IMX547	2448×2048	5	CMOS	Global	23	2.74×2.74	1/1.8"
a2A2600-20gm/gcBAS	GMAX2505	2600×2160	5.6	CMOS	Global	20	2.5×2.5	1/2"
a2A2840-14gm/gcBAS	IMX546	2840×2840	8	CMOS	Global	14	2.74×2.74	2/3"
a2A3840-13gm/gcBAS	IMX334	3840×2160	8.3	CMOS	Rolling	13	2.0×2.0	1/1.8"
a2A4200-12gm/gcBAS	GMAX2509	4200×2160	9.1	CMOS	Global	12	2.5×2.5	2/3"
a2A4096-9gm/gcBAS	IMX545	4096×3000	12.3	CMOS	Global	9	2.74×2.74	1/1.1"
a2A5320-7gm/gcBAS	IMX542	5320×3032	16.1	CMOS	Global	7	2.74×2.74	1.1"
a2A4504-5gm/gcBAS	IMX541	4504×4504	20.2	CMOS	Global	5	2.74×2.74	1.1"
a2A5328-4gm/gcBAS	IMX540	5328×4608	24.4	CMOS	Global	4	2.74×2.74	1.2"
<b>ace 2 Pro - GigE</b>								
a2A1920-51gm/gcPRO	IMX392	1920×1200	2.3	CMOS	Global	51 <sup>1</sup>	3.45×3.45	1/2.3"
a2A2590-22gm/gcPRO	IMX334ROI	2592×1944	5	CMOS	Rolling	22 <sup>1</sup>	2.0×2.0	1/2.8"
a2A2448-23gm/gcPRO	IMX547	2448×2048	5	CMOS	Global	23 <sup>1</sup>	2.74×2.74	1/1.8"
a2A2600-20gm/gcPRO	GMAX2505	2600×2160	5.6	CMOS	Global	20 <sup>1</sup>	2.5×2.5	1/2"
a2A2840-14gm/gcPRO	IMX546	2840×2840	8	CMOS	Global	14 <sup>1</sup>	2.74×2.74	2/3"
a2A3840-13gm/gcPRO	IMX334	3840×2160	8.3	CMOS	Rolling	13 <sup>1</sup>	2.0×2.0	1/1.8"
a2A4200-12gm/gcPRO	GMAX2509	4200×2160	9.1	CMOS	Global	12 <sup>1</sup>	2.5×2.5	2/3"
a2A4096-9gm/gcPRO	IMX545	4096×3000	12.3	CMOS	Global	9 <sup>1</sup>	2.74×2.74	1/1.1"
a2A5320-7gm/gcPRO	IMX542	5320×3032	16.1	CMOS	Global	7 <sup>1</sup>	2.74×2.74	1.1"
a2A4504-5gm/gcPRO	IMX541	4504×4504	20.2	CMOS	Global	5 <sup>1</sup>	2.74×2.74	1.1"
a2A5328-4gm/gcPRO	IMX540	5328×4608	24.4	CMOS	Global	4 <sup>1</sup>	2.74×2.74	1.2"

<sup>1</sup>Higher frame rates possible with Compression Beyond. Please refer to our website [baslerweb.com/ace2](http://baslerweb.com/ace2) for detailed information.

CAMERA MODEL	SENSOR	RESOLUTION [H×V PIXELS]	RESOLUTION [MP]	SENSOR TYPE	SHUTTER	FRAME RATE [FPS]	PIXEL SIZE [μm <sup>2</sup> ]	OPTICAL SIZE
<b>ace 2 Basic - 5GigE</b>								
★ a2A1920-165g5m/g5cBAS	IMX392	1920×1200	2.3	CMOS	Global	168	3.45×3.45	1/2.3"
★ a2A2448-105g5m/g5cBAS	IMX547	2448×2048	5	CMOS	Global	106	2.74×2.74	1/1.8"
★ a2A2840-67g5m/g5cBAS	IMX546	2840×2840	8	CMOS	Global	67	2.74×2.74	2/3"
★ a2A4096-44g5m/g5cBAS	IMX545	4096×3000	12.3	CMOS	Global	44	2.74×2.74	1/1.1"
★ a2A5320-34g5m/g5cBAS	IMX542	5320×3032	16.1	CMOS	Global	34	2.74×2.74	1.1"
★ a2A4504-27g5m/g5cBAS	IMX541	4504×4504	20.2	CMOS	Global	27	2.74×2.74	1.1"
★ a2A5328-22g5m/g5cBAS	IMX540	5328×4608	24.4	CMOS	Global	22	2.74×2.74	1.2"

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