

Basler Cameras

PRODUCT LINE OVERVIEW



SENSORS
INCORPORATED

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BASLER
the power of sight

TECHNICAL DETAILS

Area Scan Cameras



| Basler ace | Sensor | Resolution (H×V pixels) | Frame Rate [fps] | Mono/Color | Bit Depth | Interface | Pixel Size [µm ²] | Sensor Size [mm ²] | Optical Size |
|-----------------------------|-------------|-------------------------|------------------|------------|-----------|-----------|-------------------------------|--------------------------------|--------------|
| acA640-90um/uc | ICX424 | 659×494 | 90 | m/c | 8/12 | USB 3.0 | 7.4×7.4 | 4.88×3.66 | 1/3" |
| acA640-120um/uc | ICX618 | 659×494 | 120 | m/c | 8/12 | USB 3.0 | 5.6×5.6 | 3.69×2.77 | 1/4" |
| NEW acA640-750um/uc | PYTHON 300 | 640×480 | 750 | m/c | 8/10 | USB 3.0 | 4.8×4.8 | 3.07×2.30 | 1/4" |
| NEW acA800-510um/uc | PYTHON 500 | 800×600 | 510 | m/c | 8/10 | USB 3.0 | 4.8×4.8 | 3.84×2.88 | 1/3.6" |
| acA1300-30um/uc | ICX445 | 1296×966 | 30 | m/c | 8/12 | USB 3.0 | 3.75×3.75 | 4.86×3.62 | 1/3" |
| NEW acA1300-200um/uc | PYTHON 1300 | 1280×1024 | 200 | m/c | 8/10 | USB 3.0 | 4.8×4.8 | 6.14×4.92 | 1/2" |
| acA1600-20um/uc | ICX274 | 1628×1236 | 20 | m/c | 8/12 | USB 3.0 | 4.4×4.4 | 7.16×5.44 | 1/1.8" |
| acA1920-25um/uc | MT9P031 | 1920×1080 | 25 | m/c | 8/12 | USB 3.0 | 2.2×2.2 | 4.22×2.38 | 1/3.7" |
| NEW acA1920-40um/uc | IMX249 | 1920×1200 | 40 | m/c | 8/12 | USB 3.0 | 5.86×5.86 | 11.25×7.03 | 1/1.2" |
| NEW acA1920-150um/uc | PYTHON 2000 | 1920×1200 | 150 | m/c | 8/10 | USB 3.0 | 4.8×4.8 | 9.50×6.08 | 2/3" |
| NEW acA1920-155um/uc | IMX174 | 1920×1200 | 155 | m/c | 8/12 | USB 3.0 | 5.86×5.86 | 11.25×7.03 | 1/1.2" |
| acA2000-165um/uc | CMV2000 | 2048×1088 | 165 | m/c | 8/12 | USB 3.0 | 5.5×5.5 | 11.26×5.98 | 2/3" |
| acA2000-165umNIR | CMV2000 | 2048×1088 | 165 | m | 8/12 | USB 3.0 | 5.5×5.5 | 11.26×5.98 | 2/3" |
| acA2040-90um/uc | CMV4000 | 2048×2048 | 90 | m/c | 8/12 | USB 3.0 | 5.5×5.5 | 11.26×11.26 | 1" |
| acA2040-90umNIR | CMV4000 | 2048×2048 | 90 | m | 8/12 | USB 3.0 | 5.5×5.5 | 11.26×11.26 | 1" |
| acA2500-14um/uc | MT9P031 | 2590×1942 | 14 | m/c | 8/12 | USB 3.0 | 2.2×2.2 | 5.70×4.28 | 1/2.5" |
| NEW acA2500-60um/uc | PYTHON 5000 | 2590×2048 | 60 | m/c | 8/10 | USB 3.0 | 4.8×4.8 | 12.44×9.83 | 1" |
| acA3800-14um/uc | MT9J003 | 3856×2764 | 14 | m/c | 8/12 | USB 3.0 | 1.67×1.67 | 6.44×4.62 | 1/2.3" |
| acA4600-10uc | MT9F002 | 4608×3288 | 10 | c | 8/12 | USB 3.0 | 1.4×1.4 | 6.45×4.63 | 1/2.3" |

ace USB 3.0 cameras are available with C or CS-mount. (CMOSIS, ON Semiconductor and Sony IMX174 with C-mount only)

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

NIR = Near Infrared Enhanced

For availability please refer to our website www.baslerweb.com/ace

Area Scan Cameras



| Basler dart | Sensor | Resolution (H×V pixels) | Frame Rate [fps] | Mono/Color | Bit Depth | Interface | Pixel Size [µm ²] | Sensor Size [mm ²] | Optical Size |
|----------------------------|----------|-------------------------|------------------|------------|-----------|-----------|-------------------------------|--------------------------------|--------------|
| daA1280-54um/uc | AR0134 | 1280×960 | 54 | m/c | 8/12 | USB 3.0 | 3.75×3.75 | 4.80×3.60 | 1/3" |
| NEW daA1600-60um/uc | EV76C570 | 1600×1200 | 60 | m/c | 8/12 | USB 3.0 | 4.5×4.5 | 7.20×5.40 | 1/1.8" |
| daA1920-15um*1 | MT9P031 | 1920×1080 | 15 | m | 8/12 | USB 3.0 | 2.2×2.2 | 4.22×2.38 | 1/3.7" |
| daA1920-30um/uc | MT9P031 | 1920×1080 | 30 | m/c | 8/12 | USB 3.0 | 2.2×2.2 | 4.22×2.38 | 1/3.7" |
| daA2500-14um/uc | MT9P031 | 2592×1944 | 14 | m/c | 8/12 | USB 3.0 | 2.2×2.2 | 5.70×4.28 | 1/2.5" |

dart USB 3.0 cameras are available with S or CS-mount or as a bare board variant without a lens mount.

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

*1 Bare board only

For availability please refer to our website www.baslerweb.com/dart

TECHNICAL DETAILS

Area Scan Cameras



| Basler pulse | Sensor | Resolution (H×V pixels) | Frame Rate [fps] | Mono/Color | Bit Depth | Interface | Pixel Size [μm ²] | Sensor Size [mm ²] | Optical Size |
|----------------------------|----------|-------------------------|------------------|------------|-----------|-----------|-------------------------------|--------------------------------|--------------|
| puA1280-54um/uc | AR0134 | 1280×960 | 54 | m/c | 8/12 | USB 3.0 | 3.75×3.75 | 4.80×3.60 | 1/3" |
| NEW puA1600-60um/uc | EV76C570 | 1600×1200 | 60 | m/c | 8/12 | USB 3.0 | 4.5×4.5 | 7.20×5.40 | 1/1.8" |
| puA1920-30um/uc | MT9P031 | 1920×1080 | 30 | m/c | 8/12 | USB 3.0 | 2.2×2.2 | 4.22×2.38 | 1/3.7" |
| puA2500-14um/uc | MT9P031 | 2592×1944 | 14 | m/c | 8/12 | USB 3.0 | 2.2×2.2 | 5.70×4.28 | 1/2.5" |

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

For availability please refer to our website www.baslerweb.com/pulse

Area Scan Cameras



| Basler ace | Sensor | Resolution (H×V pixels) | Frame Rate [fps] | Mono/Color | Bit Depth | Interface | Pixel Size [μm ²] | Sensor Size [mm ²] | Optical Size |
|----------------------------|-------------|-------------------------|------------------|------------|-----------|-----------|-------------------------------|--------------------------------|--------------|
| acA640-90gm/gc | ICX424 | 659×494 | 90 | m/c | 8/12 | GigE, PoE | 7.4×7.4 | 4.88×3.66 | 1/3" |
| acA640-120gm/gc | ICX618 | 659×494 | 120 | m/c | 8/12 | GigE, PoE | 5.6×5.6 | 3.69×2.77 | 1/4" |
| acA645-100gm/gc | ICX414 | 659×494 | 100 | m/c | 8/12 | GigE, PoE | 9.9×9.9 | 6.52×4.89 | 1/2" |
| NEW acA640-300gm/gc | PYTHON 300 | 640×480 | 300 | m/c | 8/10 | GigE, PoE | 4.8×4.8 | 3.07×2.30 | 1/4" |
| acA750-30gm/gc | ICX409 | 752×580 | 30 | m/c | 8/12 | GigE, PoE | 6.5×6.25 | 4.89×3.64 | 1/3" |
| acA780-75gm/gc | ICX415 | 782×582 | 75 | m/c | 8/12 | GigE, PoE | 8.3×8.3 | 6.49×4.83 | 1/2" |
| NEW acA800-200gm/gc | PYTHON 500 | 800×600 | 200 | m/c | 8/10 | GigE, PoE | 4.8×4.8 | 3.84×2.88 | 1/3.6" |
| acA1300-22gm/gc | ICX445 | 1296×966 | 22 | m/c | 8/12 | GigE, PoE | 3.75×3.75 | 4.86×3.62 | 1/3" |
| acA1300-30gm/gc | ICX445 | 1296×966 | 30 | m/c | 8/12 | GigE, PoE | 3.75×3.75 | 4.86×3.62 | 1/3" |
| NEW acA1300-75gm/gc | PYTHON 1300 | 1280×1024 | 75 | m/c | 8/10 | GigE, PoE | 4.8×4.8 | 6.14×4.92 | 1/2" |
| acA1280-60gm/gc*1 | EV76C560 | 1280×1024 | 60 | m/c | 8/12 | GigE, PoE | 5.3×5.3 | 6.80×5.40 | 1/1.8" |
| acA1300-60gm/gc*2 | EV76C560 | 1280×1024 | 60 | m/c | 8/12 | GigE, PoE | 5.3×5.3 | 6.80×5.40 | 1/1.8" |
| acA1300-60gmNIR*2 | EV76C661 | 1280×1024 | 60 | m | 8/12 | GigE, PoE | 5.3×5.3 | 6.80×5.40 | 1/1.8" |
| acA1600-20gm/gc | ICX274 | 1626×1236 | 20 | m/c | 8/12 | GigE, PoE | 4.4×4.4 | 7.16×5.44 | 1/1.8" |
| acA1600-60gm/gc | EV76C570 | 1600×1200 | 60 | m/c | 8/12 | GigE, PoE | 4.5×4.5 | 7.20×5.40 | 1/1.8" |
| acA1920-25gm/gc | MT9P031 | 1920×1080 | 25 | m/c | 8/12 | GigE, PoE | 2.2×2.2 | 4.22×2.38 | 1/3.7" |
| NEW acA1920-40gm/gc | IMX249 | 1920×1200 | 40 | m/c | 8/12 | GigE, PoE | 5.86×5.86 | 11.25×7.03 | 1/1.2" |
| NEW acA1920-48gm/gc | PYTHON 2000 | 1920×1200 | 48 | m/c | 8/10 | GigE, PoE | 4.8×4.8 | 9.50×6.08 | 2/3" |
| NEW acA1920-50gm/gc | IMX174 | 1920×1200 | 50 | m/c | 8/12 | GigE, PoE | 5.86×5.86 | 11.25×7.03 | 1/1.2" |
| acA2000-50gm/gc | CMV2000 | 2048×1088 | 50 | m/c | 8/12 | GigE, PoE | 5.5×5.5 | 11.26×5.98 | 2/3" |
| acA2000-50gmNIR | CMV2000 | 2048×1088 | 50 | m | 8/12 | GigE, PoE | 5.5×5.5 | 11.26×5.98 | 2/3" |
| acA2040-25gm/gc | CMV4000 | 2048×2048 | 25 | m/c | 8/12 | GigE, PoE | 5.5×5.5 | 11.26×11.26 | 1" |
| acA2040-25gmNIR | CMV4000 | 2048×2048 | 25 | m | 8/12 | GigE, PoE | 5.5×5.5 | 11.26×11.26 | 1" |
| acA2500-14gm/gc | MT9P031 | 2592×1944 | 14 | m/c | 8/12 | GigE, PoE | 2.2×2.2 | 5.70×4.28 | 1/2.5" |
| NEW acA2500-20gm/gc | PYTHON 5000 | 2590×2048 | 20 | m/c | 8/10 | GigE, PoE | 4.8×4.8 | 12.44×9.83 | 1" |
| acA3800-10gm/gc*1 | MT9J003 | 3856×2764 | 10 | m/c | 8/12 | GigE, PoE | 1.67×1.67 | 6.44×4.62 | 1/2.3" |
| acA4600-7gc*1 | MT9F002 | 4608×3288 | 7 | c | 8/12 | GigE, PoE | 1.4×1.4 | 6.45×4.63 | 1/2.3" |

ace GigE cameras are available with C or CS-mount (CMOSIS, ON Semiconductor, and Sony IMX174 with C-mount only, acA1300-22gm/gc with CS-mount only).

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

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For availability please refer to our website www.baslerweb.com/ace

*1 rolling shutter *2 global shutter (switchable)

TECHNICAL DETAILS

Area Scan Cameras



| Basler aviator | Sensor | Resolution (H × V pixels) | Frame Rate [fps] | Mono/Color | Bit Depth | Interface | Pixel Size [μm ²] | Sensor Size [mm ²] | Optical Size |
|------------------|-----------|---------------------------|------------------|------------|-----------|-----------|-------------------------------|--------------------------------|--------------|
| avA1000-100gm/gc | KAI-01050 | 1024 × 1024 | 101 | m/c | 8/12 | GigE | 5.5 × 5.5 | 5.63 × 5.63 | 1/2" |
| avA1600-50gm/gc | KAI-02050 | 1600 × 1200 | 55 | m/c | 8/12 | GigE | 5.5 × 5.5 | 8.80 × 6.60 | 2/3" |
| avA1900-50gm/gc | KAI-02150 | 1920 × 1080 | 51 | m/c | 8/12 | GigE | 5.5 × 5.5 | 10.56 × 5.94 | 2/3" |
| avA2300-25gm/gc | KAI-04050 | 2330 × 1750 | 26 | m/c | 8/12 | GigE | 5.5 × 5.5 | 12.85 × 9.64 | 1" |

aviator cameras are available with C-mount.

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

For availability please refer to our website www.baslerweb.com/aviator

Area Scan Cameras



| Basler pilot | Sensor | Resolution (H × V pixels) | Frame Rate [fps] | Mono/Color | Bit Depth | Interface | Pixel Size [μm ²] | Sensor Size [mm ²] | Optical Size |
|-----------------|----------|---------------------------|------------------|------------|-----------|-----------|-------------------------------|--------------------------------|--------------|
| piA640-210gm/gc | KAI-0340 | 648 × 488 | 210 | m/c | 8/12 | GigE | 7.4 × 7.4 | 4.80 × 3.61 | 1/3" |
| piA1000-48gm/gc | KAI-1020 | 1004 × 1004 | 48 | m/c | 8/12 | GigE | 7.4 × 7.4 | 7.43 × 7.43 | 2/3" |
| piA1000-60gm/gc | KAI-1020 | 1004 × 1004 | 60 | m/c | 8/12 | GigE | 7.4 × 7.4 | 7.43 × 7.43 | 2/3" |
| piA1600-35gm/gc | KAI-2020 | 1608 × 1208 | 35 | m/c | 8/12 | GigE | 7.4 × 7.4 | 11.90 × 8.94 | 1" |
| piA1900-32gm/gc | KAI-2093 | 1928 × 1084 | 32 | m/c | 8/12 | GigE | 7.4 × 7.4 | 14.21 × 8.02 | 1" |
| piA2400-17gm/gc | ICX625 | 2456 × 2058 | 17 | m/c | 8/12 | GigE | 3.45 × 3.45 | 8.47 × 7.10 | 2/3" |

pilot cameras are available with C-mount.

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

For availability please refer to our website www.baslerweb.com/pilot

Area Scan Cameras



| Basler scout | Sensor | Resolution (H × V pixels) | Frame Rate [fps] | Mono/Color | Bit Depth | Interface | Pixel Size [μm ²] | Sensor Size [mm ²] | Optical Size |
|-----------------|---------|---------------------------|------------------|------------|-----------|-----------|-------------------------------|--------------------------------|--------------|
| scA640-70gm/gc | ICX424 | 659 × 494 | 70 | m/c | 8/12 | GigE | 7.4 × 7.4 | 4.88 × 3.66 | 1/3" |
| scA640-74gm/gc | ICX414 | 659 × 494 | 79 | m/c | 8/12 | GigE | 9.9 × 9.9 | 6.52 × 4.89 | 1/2" |
| scA640-120gm/gc | ICX618 | 659 × 494 | 122 | m/c | 8/12 | GigE | 5.6 × 5.6 | 3.69 × 2.77 | 1/4" |
| scA750-60gm/gc | MT9V022 | 752 × 480 | 64 | m/c | 8 | GigE | 6.0 × 6.0 | 4.51 × 2.88 | 1/3" |
| scA780-54gm/gc | ICX415 | 782 × 582 | 55 | m/c | 8/12 | GigE | 8.3 × 8.3 | 6.49 × 4.83 | 1/2" |
| scA1000-30gm/gc | ICX204 | 1034 × 779 | 31 | m/c | 8/12 | GigE | 4.65 × 4.65 | 4.81 × 3.62 | 1/3" |
| scA1300-32gm/gc | ICX445 | 1296 × 966 | 32 | m/c | 8/12 | GigE | 3.75 × 3.75 | 4.86 × 3.62 | 1/3" |
| scA1390-17gm/gc | ICX267 | 1392 × 1040 | 17 | m/c | 8/12 | GigE | 4.65 × 4.65 | 6.47 × 4.84 | 1/2" |
| scA1400-17gm/gc | ICX285 | 1392 × 1040 | 17 | m/c | 8/12 | GigE | 6.45 × 6.45 | 8.98 × 6.71 | 2/3" |
| scA1400-30gm/gc | ICX285 | 1392 × 1040 | 30 | m/c | 8/12 | GigE | 6.45 × 6.45 | 8.98 × 6.71 | 2/3" |
| scA1600-14gm/gc | ICX274 | 1626 × 1236 | 14 | m/c | 8/12 | GigE | 4.4 × 4.4 | 7.16 × 5.44 | 1/1.8" |
| scA1600-28gm/gc | ICX274 | 1626 × 1236 | 28 | m/c | 8/12 | GigE | 4.4 × 4.4 | 7.16 × 5.44 | 1/1.8" |

scout cameras are available with C-mount.

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

For availability please refer to our website www.baslerweb.com/scout

TECHNICAL DETAILS

Area Scan Cameras



| Basler scout | Sensor | Resolution (H×V pixels) | Frame Rate [fps] | Mono/Color | Bit Depth | Interface | Pixel Size [μm ²] | Sensor Size [mm ²] | Optical Size |
|-----------------|---------|-------------------------|------------------|------------|-----------|------------|-------------------------------|--------------------------------|--------------|
| scA640-70fm/fc | ICX424 | 659×494 | 71 | m/c | 8/12 | IEEE 1394b | 7.4×7.4 | 4.88×3.66 | 1/3" |
| scA640-74fm/fc | ICX414 | 659×494 | 74 | m/c | 8/12 | IEEE 1394b | 9.9×9.9 | 6.52×4.89 | 1/2" |
| scA640-120fm/fc | ICX618 | 659×494 | 122 | m/c | 8/12 | IEEE 1394b | 5.6×5.6 | 3.69×2.77 | 1/4" |
| scA750-60fm/fc | MT9V022 | 752×480 | 64 | m/c | 8 | IEEE 1394b | 6.0×6.0 | 4.51×2.88 | 1/3" |
| scA780-54fm/fc | ICX415 | 782×582 | 54 | m/c | 8/12 | IEEE 1394b | 8.3×8.3 | 6.49×4.83 | 1/2" |
| scA1000-30fm/fc | ICX204 | 1034×779 | 30 | m/c | 8/12 | IEEE 1394b | 4.65×4.65 | 4.81×3.62 | 1/3" |
| scA1300-32fm/fc | ICX445 | 1296×966 | 32 | m/c | 8/12 | IEEE 1394b | 3.75×3.75 | 4.81×3.62 | 1/3" |
| scA1390-17fm/fc | ICX267 | 1392×1040 | 17 | m/c | 8/12 | IEEE 1394b | 4.65×4.65 | 6.47×4.84 | 1/2" |
| scA1400-17fm/fc | ICX285 | 1392×1040 | 17 | m/c | 8/12 | IEEE 1394b | 6.45×6.45 | 8.98×6.71 | 2/3" |
| scA1400-30fm/fc | ICX285 | 1392×1040 | 30 | m/c | 8/12 | IEEE 1394b | 6.45×6.45 | 8.98×6.71 | 2/3" |
| scA1600-14fm/fc | ICX274 | 1626×1236 | 14 | m/c | 8/12 | IEEE 1394b | 4.4×4.4 | 7.16×5.44 | 1/1.8" |
| scA1600-28fm/fc | ICX274 | 1626×1236 | 28 | m/c | 8/12 | IEEE 1394b | 4.4×4.4 | 7.16×5.44 | 1/1.8" |

scout cameras are available with C-mount.

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

For availability please refer to our website www.baslerweb.com/scout

TECHNICAL DETAILS

Area Scan Cameras



| Basler ace | Sensor | Resolution (H × V pixels) | Frame Rate [fps] | Mono/Color | Bit Depth | Interface | Pixel Size [μm ²] | Sensor Size [mm ²] | Optical Size |
|------------------|---------|---------------------------|------------------|------------|-----------|-----------------|-------------------------------|--------------------------------|--------------|
| acA2000-340km/kc | CMV2000 | 2048 × 1088 | 340 | m/c | 8/10/12 | CL (full), PoCL | 5.5 × 5.5 | 11.26 × 5.98 | 2/3" |
| acA2000-340kmNIR | CMV2000 | 2048 × 1088 | 340 | m | 8/10/12 | CL (full), PoCL | 5.5 × 5.5 | 11.26 × 5.98 | 2/3" |
| acA2040-180km/kc | CMV4000 | 2048 × 2048 | 180 | m/c | 8/10/12 | CL (full), PoCL | 5.5 × 5.5 | 11.26 × 11.26 | 1" |
| acA2040-180kmNIR | CMV4000 | 2048 × 2048 | 180 | m | 8/10/12 | CL (full), PoCL | 5.5 × 5.5 | 11.26 × 11.26 | 1" |

ace Camera Link cameras are available with C-mount.

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NIR = Near Infrared Enhanced

For availability please refer to our website www.baslerweb.com/ace

Area Scan Cameras



| Basler aviator | Sensor | Resolution (H × V pixels) | Frame Rate [fps] | Mono/Color | Bit Depth | Interface | Pixel Size [μm ²] | Sensor Size [mm ²] | Optical Size |
|------------------|-----------|---------------------------|------------------|------------|-----------|-----------|-------------------------------|--------------------------------|--------------|
| avA1000-120km/kc | KAI-01050 | 1024 × 1024 | 120 | m/c | 8/10/12 | CL (base) | 5.5 × 5.5 | 5.63 × 5.63 | 1/2" |
| avA1600-65km/kc | KAI-02050 | 1600 × 1200 | 67 | m/c | 8/10/12 | CL (base) | 5.5 × 5.5 | 8.80 × 6.60 | 2/3" |
| avA1900-60km/kc | KAI-02150 | 1920 × 1080 | 62 | m/c | 8/10/12 | CL (base) | 5.5 × 5.5 | 10.56 × 5.94 | 2/3" |
| avA2300-30km/kc | KAI-04050 | 2330 × 1750 | 31 | m/c | 8/10/12 | CL (base) | 5.5 × 5.5 | 12.85 × 9.64 | 1" |

aviator Camera Link cameras are available with C-mount.

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For availability please refer to our website www.baslerweb.com/aviator

Area Scan Cameras



| Basler beat | Sensor | Resolution (H × V pixels) | Frame Rate [fps] | Mono/Color | Bit Depth | Interface | Pixel Size [μm ²] | Sensor Size [mm ²] | Optical Size |
|-------------------------|--------------------|---------------------------|------------------|------------|-----------|-----------|-------------------------------|--------------------------------|--------------|
| NEW beA4000-62km | CMOSIS CMV12000 | 4096 × 3072 | 62 | m | 8/10/12 | CL (full) | 5.5 × 5.5 | 22.53 × 16.90 | 1.75" |
| NEW beA4000-62kc | CMOSIS CMV12000 | 4088 × 3070 | 62 | c | 8/10/12 | CL (full) | 5.5 × 5.5 | 22.53 × 16.90 | 1.75" |

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

For availability please refer to our website www.baslerweb.com/beat

TECHNICAL DETAILS

Line Scan Cameras



| Basler racer | Sensor | Resolution | Line Rate [kHz] | Mono/Color | Bit Depth | Interface | Pixel Size [μm^2] | Sensor Length [mm] |
|--------------|------------|------------|-----------------|------------|-----------|-----------|--------------------------------|--------------------|
| raL2048-48gm | DR-2k-7 | 2048 | 51 | m | 8/12 | GigE | 7.0×7.0 | 14.3 |
| raL4096-24gm | DR-4k-7 | 4096 | 26 | m | 8/12 | GigE | 7.0×7.0 | 28.7 |
| raL6144-16gm | DR-6k-7 | 6144 | 17 | m | 8/12 | GigE | 7.0×7.0 | 43.0 |
| raL8192-12gm | DR-8k-3.5 | 8192 | 12 | m | 8/12 | GigE | 3.5×3.5 | 28.7 |
| raL12288-8gm | DR-12k-3.5 | 12288 | 8 | m | 8/12 | GigE | 3.5×3.5 | 43.0 |

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

For availability please refer to our website www.baslerweb.com/racer

Line Scan Cameras



| Basler runner | Sensor | Resolution | Line Rate [kHz] | Mono/Color | Bit Depth | Interface | Pixel Size [μm^2] | Sensor Length [mm] |
|---------------|----------|------------|-----------------|------------|-----------|-----------|--------------------------------|--------------------|
| ruL2098-10gc | KLI-2113 | 3×2098 | 9.2 | c | 8/12 | GigE | 14.0×14.0 | 29.37 |

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For availability please refer to our website www.baslerweb.com/runner

Line Scan Cameras



| Basler racer | Sensor | Resolution | Line Rate [kHz] | Mono/Color | Bit Depth | Interface | Pixel Size [μm^2] | Sensor Length [mm] |
|---------------|------------|------------|-----------------|------------|-----------|-----------|--------------------------------|--------------------|
| raL2048-80km | DR-2k-7 | 2048 | 80 | m | 8/10/12 | CL*1 | 7.0×7.0 | 14.3 |
| raL4096-80km | DR-4k-7 | 4096 | 80 | m | 8/10/12 | CL*2 | 7.0×7.0 | 28.7 |
| raL6144-80km | DR-6k-7 | 6144 | 80 | m | 8/10/12 | CL (full) | 7.0×7.0 | 43.0 |
| raL8192-80km | DR-8k-3.5 | 8192 | 80 | m | 8/10/12 | CL (full) | 3.5×3.5 | 28.7 |
| raL12288-66km | DR-12k-3.5 | 12288 | 66 | m | 8/10/12 | CL (full) | 3.5×3.5 | 43.0 |

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

*1 CL (base), PoCL, *2 CL (medium), PoCL

For availability please refer to our website www.baslerweb.com/racer

TECHNICAL DETAILS

Line Scan Cameras



| Basler sprint | Sensor | Resolution | Line Rate [kHz] | Mono/Color | Bit Depth | Interface | Pixel Size [μm^2] | Sensor Length [mm] |
|------------------------------|----------------|------------|-----------------|------------|-----------|------------------|--------------------------------|--------------------|
| spL2048-39kc | Dual Line CMOS | 2048 | 38.6 | c | 8/10/12 | CL (base) | 10.0×10.0 | 20.48 |
| spL2048-50km/kc | Dual Line CMOS | 2048 | 50 | m/c | 8/10/12 | CL* ¹ | 10.0×10.0 | 20.48 |
| spL2048-70km/kc | Dual Line CMOS | 2048 | 70 | m/c | 8/10/12 | CL* ¹ | 10.0×10.0 | 20.48 |
| spL2048-140km | Dual Line CMOS | 2048 | 140 | m | 8/10/12 | CL (b/m/f) | 10.0×10.0 | 20.48 |
| spL4096-39km/kc | Dual Line CMOS | 4096 | 38.6 | m/c | 8/10/12 | CL (b/m/f) | 10.0×10.0 | 40.96 |
| spL4096-50km/kc | Dual Line CMOS | 4096 | 50 | m/c | 8/10/12 | CL (b/m/f) | 10.0×10.0 | 40.96 |
| spL4096-70km/kc | Dual Line CMOS | 4096 | 70 | m/c | 8/10/12 | CL (b/m/f) | 10.0×10.0 | 40.96 |
| spL4096-140km/kc | Dual Line CMOS | 4096 | 140 | m/c | 8/10/12 | CL (b/m/f) | 10.0×10.0 | 40.96 |
| spL8192-39kc | Dual Line CMOS | 8192 | 38.6 | c | 8/10/12 | CL (b/m/f) | 10.0×10.0 | 81.92 |
| spL8192-39kcCI* ² | Dual Line CMOS | 8192 | 38.6 | c | 8/10/12 | CL (b/m/f) | 10.0×10.0 | 81.92 |
| spL8192-50km | Dual Line CMOS | 8192 | 50 | m | 8/10/12 | CL (b/m/f) | 10.0×10.0 | 81.92 |
| spL8192-70km | Dual Line CMOS | 8192 | 70 | m | 8/10/12 | CL (b/m/f) | 10.0×10.0 | 81.92 |

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

¹Mono: base, Color: base/medium/full, ² with Color Improvement Feature, without Line Stamp Feature

For availability please refer to our website www.baslerweb.com/sprint

Line Scan Cameras



| Basler Line Scan | Sensor | Resolution | Line Rate [kHz] | Mono/Color | Bit Depth | Interface | Pixel Size [μm^2] | Sensor Length [mm] |
|------------------|----------------|------------|-----------------|------------|-----------|-----------|--------------------------------|--------------------|
| L301k/kc | Tri-linear CCD | 3×2098 | 9.2 | m/c | 8/10 | CL (base) | 14.0×14.0 | 29.37 |
| L304k/kc | Tri-linear CCD | 3×4080 | 7.2 | m/c | 8/10 | CL (base) | 10.0×10.0 | 40.80 |

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

For availability please refer to our website www.baslerweb.com/L300

TECHNICAL DETAILS



IP Cameras

| IP Fixed Box | Sensor | Resolution | Max. Frame Rate [fps] | Interface | Pixel Size [μm^2] | Optical Size | Video Compression | Lens | Day/Night |
|--------------------------|--------|------------|-----------------------|---------------|--------------------------------|--------------|----------------------|-------------------|-----------------------|
| BIP2-640c | CCD | 640×480 | 95 | Fast Ethernet | 5.60×5.60 | 1/4" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | --- |
| BIP2-640c-dn | CCD | 640×480 | 95 | Fast Ethernet | 5.60×5.60 | 1/4" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | Movable IR-cut filter |
| BIP2-1000c | CCD | 1024×768 | 30 | Fast Ethernet | 4.65×4.65 | 1/3" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | --- |
| BIP2-1000c-dn | CCD | 1024×768 | 30 | Fast Ethernet | 4.65×4.65 | 1/3" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | Movable IR-cut filter |
| BIP2-1300c | CCD | 1280×960 | 30 | Fast Ethernet | 3.75×3.75 | 1/3" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | --- |
| BIP2-1300c-dn | CCD | 1280×960 | 30 | Fast Ethernet | 3.75×3.75 | 1/3" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | Movable IR-cut filter |
| BIP2-1600c | CCD | 1600×1200 | 12.5 | Fast Ethernet | 4.40×4.40 | 1/1.8" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | --- |
| BIP2-1600c-dn | CCD | 1600×1200 | 12.5 | Fast Ethernet | 4.40×4.40 | 1/1.8" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | Movable IR-cut filter |
| BIP2-1600-25c | CCD | 1600×1200 | 25 | Fast Ethernet | 4.40×4.40 | 1/1.8" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | --- |
| BIP2-1600-25c-dn | CCD | 1600×1200 | 25 | Fast Ethernet | 4.40×4.40 | 1/1.8" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | Movable IR-cut filter |
| BIP2-1280c | CMOS | 1280×720 | 30 | Fast Ethernet | 3.30×3.30 | 1/3" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | --- |
| BIP2-1280c-dn | CMOS | 1280×720 | 30 | Fast Ethernet | 3.30×3.30 | 1/3" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | Movable IR-cut filter |
| BIP2-1920c | CMOS | 1920×1080 | 30 | Fast Ethernet | 2.20×2.20 | 1/3" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | --- |
| BIP2-1920c-dn | CMOS | 1920×1080 | 30 | Fast Ethernet | 2.20×2.20 | 1/3" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | Movable IR-cut filter |
| NEW BIP2-1920-30c | CMOS | 1920×1080 | 30 | Fast Ethernet | 5.86×5.86 | 1/1.3" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | --- |
| BIP2-2500c | CMOS | 2560×1920 | 15 (3 MP) | Fast Ethernet | 2.20×2.20 | 1/2.5" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | --- |
| BIP2-2500c-dn | CMOS | 2560×1920 | 15 (3 MP) | Fast Ethernet | 2.20×2.20 | 1/2.5" | MJPEG, MPEG-4, H.264 | CS-mount, DC iris | Movable IR-cut filter |

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

For availability please refer to our website www.baslerweb.com/box

IP Cameras



| IP Fixed Dome | Sensor | Resolution | Max. Frame Rate [fps] | Interface | Pixel Size [μm^2] | Optical Size | Video Compression | Lens | Day/Night |
|------------------------------|--------|------------|-----------------------|---------------|--------------------------------|--------------|----------------------|------------------------------------|-----------------------|
| BIP2-D1000c-dn | CCD | 1024×768 | 30 | Fast Ethernet | 4.65×4.65 | 1/3" | MJPEG, MPEG-4, H.264 | Varifocal 2.8-10 mm, F1.3, DC iris | Movable IR-cut filter |
| BIP2-D1300c-dn | CCD | 1280×960 | 30 | Fast Ethernet | 3.75×3.75 | 1/3" | MJPEG, MPEG-4, H.264 | Varifocal 2.8-10 mm, F1.3, DC iris | Movable IR-cut filter |
| BIP2-D1920c-dn (Indoor) | CMOS | 1920×1440 | 30 (Full HD) | Fast Ethernet | 2.20×2.20 | 1/3" | MJPEG, MPEG-4, H.264 | Varifocal 2.8-10 mm, F1.3, DC iris | Movable IR-cut filter |
| BIP2-D1920c-dn (Indoor, AF) | CMOS | 1920×1440 | 30 (Full HD) | Fast Ethernet | 2.20×2.20 | 1/3" | MJPEG, MPEG-4, H.264 | Varifocal 2.8-10 mm, F1.3, DC iris | Movable IR-cut filter |
| BIP2-D1920c-dn (Outdoor) | CMOS | 1920×1440 | 30 (Full HD) | Fast Ethernet | 2.20×2.20 | 1/3" | MJPEG, MPEG-4, H.264 | Varifocal 2.8-10 mm, F1.3, DC iris | Movable IR-cut filter |
| BIP2-D1920c-dn (Outdoor, AF) | CMOS | 1920×1440 | 30 (Full HD) | Fast Ethernet | 2.20×2.20 | 1/3" | MJPEG, MPEG-4, H.264 | Varifocal 2.8-10 mm, F1.3, DC iris | Movable IR-cut filter |

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

For availability please refer to our website www.baslerweb.com/dome

TECHNICAL DETAILS

Basler Lenses

Get Perfectly Proportioned Performance With Basler Lenses

Trends in sensor technology have moved to CMOS with smaller sensor sizes. Only Basler offers lenses that are optimally designed for cameras with sensors sized of < 1/2". The sensor size our new lens series is optimized for is 1/2.5" (7.3 mm) – a range which accommodates nearly every standard machine vision application. Basler Lenses have a diameter of just 29 mm – affording you the same space efficiency of the ace camera. Best of all, they set a new standard in terms of price-performance ratio, starting at just € 99.



| Basler Lenses | C125-0418-5M | C125-0618-5M | C125-0818-5M | C125-1218-5M | C125-1620-5M | C125-2522-5M |
|---------------------------|-----------------|--------------|--------------|--------------|--------------|--------------|
| Maximum image circle | 1/2.5" (7.3 mm) | | | | | |
| Mount | C-mount | | | | | |
| Focal Length | 4 mm | 6 mm | 8 mm | 12 mm | 16 mm | 25 mm |
| Maximum relative aperture | 1:1.8 | | | 1:2.0 | | 1:2.2 |

Specifications are subject to change without prior notice. Latest specifications can be found on www.baslerweb.com/manuals.

For availability please refer to our website www.baslerweb.com/lenses

Accessories for Basler Cameras

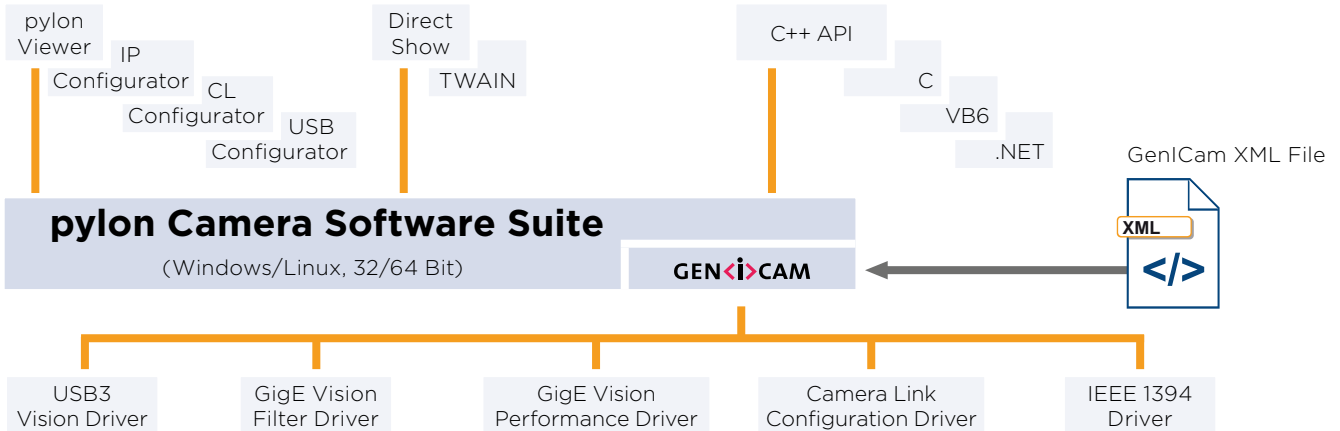
Basler offers a wide variety of accessories designed to help you get the most out of your camera. To ensure full compatibility, all accessories are tested with our cameras. Cables and power supplies are all EMC proven for industrial conditions by our support team. Our portfolio includes several accessories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

- Lenses
- I/O Cables and/or Power Supplies
- Data Cables
- Lens Accessories
- Cards, Hubs, Switches
- Housings
- Dome Accessories
- Others

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

Basler pylon Camera Software Suite

The pylon Camera Software Suite operates with all Basler line scan and area scan cameras - no matter what interface they use. It offers stable, reliable and flexible data exchange between Basler cameras and PCs, for Windows and Linux on x86 and ARM based systems - at a very low CPU load.



The architecture of the pylon Camera Software Suite is based on GeniCam Technology, which offers you easy access to the newest camera models and the latest features. Changes to an existing camera device in your application essentially become a plug-and-play process.

An easy-to-use set of tools lets you configure the camera's interface. Use the **pylon Viewer** to set camera parameters, to capture and display images, and to evaluate the camera.

The pylon **USB3 Vision Driver** fully supports the USB3 Vision standard. It allows Basler USB 3.0 cameras to use the full speed and bandwidth of USB 3.0 for image transmission while reducing resource load and using off-the-shelf hardware components.

The pylon **GigE Vision Performance Driver** quickly separates incoming packets carrying image data from other traffic on the network and makes the data available for use by your vision application while requiring the lowest CPU resources. This driver can only be used with network cards that include specific Intel chipsets. The pylon **GigE Vision Filter Driver** supports all kinds of hardware, common GigE network cards, and GigE ports on your motherboard as well.

The pylon **IEEE 1394b Driver** gives you access to a well-established interface technology, and the pylon

Camera Link Configuration Driver offers comfortable access to all camera parameters of Basler's latest Camera Link families ace, aviator, and racer.

The pylon Camera Software Suite also contains a powerful SDK that supports any type of application development. The pylon package contains the following main modules. Each one can be individually selected/unselected during the installation process, preventing the installation of unneeded modules on your system:

- USB3 Vision Driver
- GigE Vision Filter Driver
- GigE Vision Performance Driver
- IEEE 1394 Driver
- Camera Link Serial Communication Driver
- pylon Viewer
- SDK for all cameras; C, C++, .NET (C#, VB.NET, ...), and VB6 (the 'pylon for Linux' version only supports the GigE and USB 3.0 interface via a C++ API)

The pylon Camera Software Suite can be downloaded for free at www.baslerweb.com/pylon. For more information on the installation process, refer to the pylon Installation Guide. The helpful pylon Release Notes contain all improvements and bug fixes since the first pylon version.

OTHER INFORMATION

How Does Basler Measure and Define Image Quality?



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 Basler Lenses. 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

Founded in 1988, Basler is a leading global manufacturer of high quality digital cameras and lenses for factory automation, medical & life sciences, retail and traffic applications. The company employs 500 people at its headquarters in Ahrensburg, Germany and subsidiaries in the United States and Asia.

Basler's portfolio of products offers customers the vision industry's widest selection of industrial and network cameras as well as lenses. Today it includes some 300 camera models – and it's still growing. We're committed to developing technology that drives business results for our customers: cameras and lenses that are easy to use, easy to integrate, and deliver an exceptional price/performance ratio.



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www.baslerweb.com/sales

