# Basler scout

## AREA SCAN CAMERAS


GiGE VISION

- VGA to 2 megapixels and up to 70 fps
- Selected high quality CCD and CMOS sensors
- Gigabit Ethernet interface
- Perfect fit for a variety of applications - extremely versatile thanks to different mounts, I/O's, and housing types

BASLER
the power of sight

# OVERVIEW

## Sophisticated in Detail, Versatile and Proven Worldwide

The Basler scout family is based on a selection of the best Sony CCD sensors and offers a wide variety of resolutions and speeds. The family also includes a high-performance CMOS sensor from ON Semiconductor. With their Gigabit Ethernet (GigE) interface technology, the cameras are defined by standard complient technology that lets you get the maximum performance from each sensor.

Basler scout cameras are a perfect fit for a variety of vision applications including semiconductor and component inspection, manufacturing quality control, food and beverage inspection, intelligent traffic systems, microscopy and medical imaging, biometrics, and many others.

### Outstanding Image Quality

The scout family is equipped with assorted Sony CCD sensors in mono and color. These sensors were selected to provide outstanding image quality in combination with the scout's read-out and processing electronics. For precise imaging results, all scout cameras run in progressive scan mode.

### Precise Sensor Alignment

In addition to Basler's standard CTT+ automated quality assurance and calibration system, the scout camera family is tested and measured with another production tool. This unique tool is an ultrahigh precision sensor alignment device. The device automatically mounts the sensor board on the camera's front module in six degrees of freedom with reference to the optical axis.

### Your benefits include:

- Resolutions from VGA to 2 megapixels with a Gigabit Ethernet interface
- 100 meter cable length provided by Gigabit Ethernet to give you the highest flexibility
- Up to 12 bit depths and no bandwidth limitation on 8 bit data flow inside the camera
- Small, rugged housing for easy integration
- 100% quality checked and calibrated to give you consistent performance and reliability
- Field-proven pylon Camera Software Suite with both filter and performance drivers

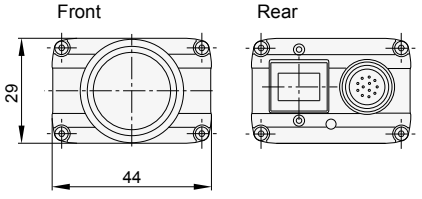
# TECHNICAL DETAILS

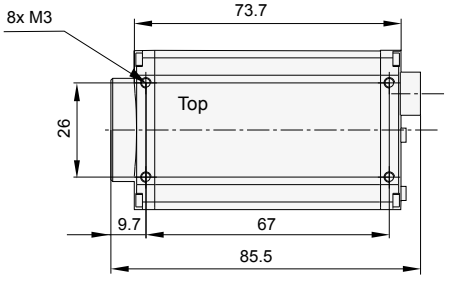
| Basler scout GigE | |
|---|---|
| **Product Group Specifications** | |
| Mono / Color | Mono / Color |
| Interface | Gigabit Ethernet (screw lock possible) |
| Video Output Format | Mono 8: 8 bits/pixel \| Mono 16: 16 bits/pixel \| YUV 4:2:2: 16 bits/pixel average<br>YUV 4:2:2: (YUYV):16 bits/pixel average \| Raw 8: 8 bits/pixel (R,G, or B)<br>Raw 16: 16 bits/pixel (R,G, or B) \| scA750-60gm/gc (8 bits/pixel only) \| RGB 8 packed |
| Synchronization | Via external trigger or free run |
| Exposure Control | Programmable via GigE Vision (camera API) |
| Housing Size (L × W × H) | 73.7 mm × 44 mm × 29 mm (without lens adapter) |
| Housing Temperature | Up to 50 °C |
| Lens Mount | C-mount |
| Digital I/O | 2 opto-isolated input ports, 4 opto-isolated output ports |
| Power Requirements | 12-24 VDC; via Hirose 12-pin connector (max. 10 meter cable length) |
| Conformity | CE, FCC, RoHS, IP 30, GigE Vision, GenICam |
| Driver | Basler pylon Camera Software Suite or 3rd party GigE Vision Software |

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

| Basler scout | Resolution (H × V pixels) | Sensor | Sensor Technology | Sensor Size (optical) | Pixel Size (µm) | Frame Rate | Power Consumption (typical) | Weight (typical) |
|---|---|---|---|---|---|---|---|---|
| scA640-70gm/gc | 659 × 494 | Sony ICX424 | Progressive Scan CCD | 1/3″ | 7.4 × 7.4 | 70 | 3 W | 160 g |
| scA750-60gm/gc | 752 × 480 | ON Semiconductor MT9V022 | Progressive Scan CMOS | 1/3″ | 6.0 × 6.0 | 64 | 2.5 W | 160 g |
| scA1300-32gm/gc | 1296 × 966 | Sony ICX445 | Progressive Scan CCD | 1/3″ | 3.75 × 3.75 | 32 | 3.5 W | 160 g |
| scA1400-17gm | 1392 × 1040 | Sony ICX285 | Progressive Scan CCD | 2/3″ | 6.45 × 6.45 | 17 | 3.5 W | 170 g |
| scA1400-30gm | 1392 × 1040 | Sony ICX285 | Progressive Scan CCD | 2/3″ | 6.45 × 6.45 | 30 | 4.2 W | 170 g |
| scA1600-14gm/gc | 1628 × 1236 | Sony ICX274 | Progressive Scan CCD | 1/1.8″ | 4.4 × 4.4 | 14 | 3.5 W | 160 g |
| scA1600-28gm/gc | 1628 × 1236 | Sony ICX274 | Progressive Scan CCD | 1/1.8″ | 4.4 × 4.4 | 28 | 4.3 W | 160 g |

## **Dimensions** (in mm)



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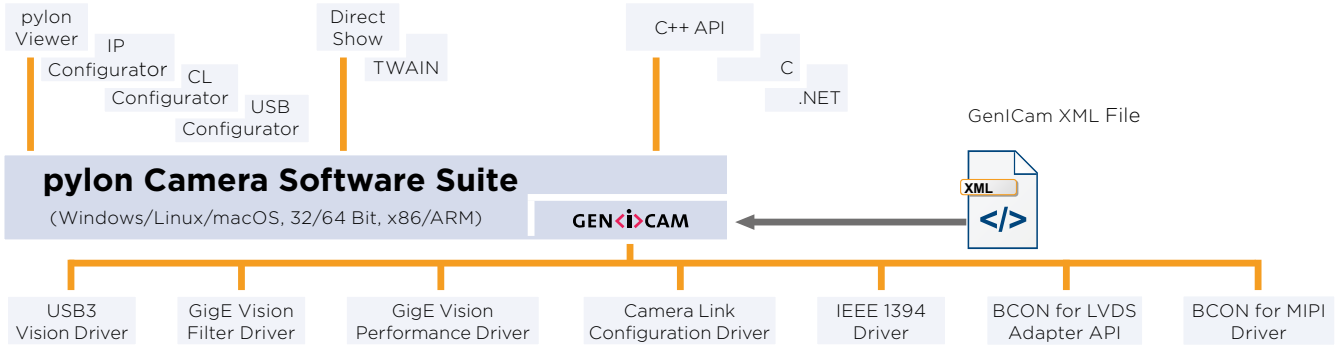
## Basler pylon Camera Software Suite

**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, macOS, 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 Drivers** quickly separate incoming packets carrying image data from other traffic on the network and make the data available for use by your vision application while requiring the lowest CPU resources.

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 **BCON Adapter API** allows easy implementation of an adapter to communicate with the systems $I^2C$ interface. A ready to use sample adapter implementation is also provided.

The **MIPI Driver Package** offers plug and play experience with Basler MIPI-CSI-2 camera modules for supported plaltforms

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
- BCON Adapter API
- MIPI Driver Package
- Camera Link Serial Communication Driver
- pylon Viewer
- SDK for all cameras; C, C++, .NET (C#, VB.NET, ...); 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 *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?

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 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 vision 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 Basler Group is home to approximately 800 employees at its headquarters in Ahrensburg, Germany, and at other locations in Europe, Asia, and North America.

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