ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Basler scA1400-30fm* at our website: *Click HERE*

Basler scout

Area Scan Cameras



- VGA to 2 megapixels and up to 120 fps
- Selected high quality CCD and CMOS sensors
- Gigabit Ethernet and FireWire-b interfaces
- Perfect fit for a variety of applications - extremely versatile thanks to different mounts, I/O's, and housing types

BASLER

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 Aptina. With their Gigabit Ethernet (GigE) and FireWire-b™ (IEEE 1394b) interface technologies, the cameras are defined by state of the art 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.

Basler pylon Driver Package

Basler provides its own fully tested Gigabit Ethernet drivers for the Basler scout camera family compatible with the GigE Vision standard. The pylon driver package offers reliable and flexible image data exchange between your Basler cameras and the PC, at a low CPU load.

Your benefits include:

- Resolutions from VGA to 2 megapixels with either a FireWire-b or 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
- Compatible with the newest vision industry standards including GenICam, GigE Vision, and EMVA 1288
- 100% quality checked and calibrated to give you consistent performance and reliability
- Field-proven Basler pylon driver package with both filter and performance drivers

Specifications

FireWire

Basler scout	Resolution (H×V pixels)	Sensor	Sensor Technology	Sensor Size (optical)	Pixel Size (µm)	Frame Rate	Power Consumption (typical)	Weight (typical)
scA640-70fm/fc	659 x 494	Sony ICX424	Progressive scan CCD	1/3"	7.4 x 7.4	71	2.5 W	160 g
scA640-74fm/fc	659 x 494	Sony ICX414	Progressive scan CCD	1/2"	9.9 x 9.9	74	2.5 W	160 g
scA640-120fm/fc	659 x 494	Sony ICX618	Progressive scan CCD	1/4"	5.6 x 5.6	120	3 W	160 g
scA750-60fm/fc	752 x 480	Aptina MT9V022	Progressive scan CMOS	1/3"	6.0 x 6.0	64	1.7 W	160 g
scA780-54fm/fc	782 x 582	Sony ICX415	Progressive scan CCD	1/2"	8.3 x 8.3	58	2.5 W	160 g
scA1000-30fm/fc	1034 x 779	Sony ICX204	Progressive scan CCD	1/3"	4.65 x 4.65	30	2.5 W	160 g
scA1300-32fm/fc	1296 x 966	Sony ICX445	Progressive scan CCD	1/3"	3.75 x 3.75	33	3 W	160 g
scA1390-17fm/fc	1392 x 1040	Sony ICX267	Progressive scan CCD	1/2"	4.65 x 4.65	17	2.75 W	160 g
scA1400-17fm/fc	1392 x 1040	Sony ICX285	Progressive scan CCD	2/3"	6.45 x 6.45	17	3 W	170 g
scA1400-30fm/fc	1392 x 1040	Sony ICX285	Progressive scan CCD	2/3"	6.45 x 6.45	30	3.7 W	170 g
scA1600-14fm/fc	1628 x 1236	Sony ICX274	Progressive scan CCD	1/1.8"	4.4 x 4.4	14	2.75 W	160 g
scA1600-28fm/fc	1628 x 1236	Sony ICX274	Progressive scan CCD	1/1.8"	4.4 x 4.4	28	4.2 W	160 g

Specifications Applicable For All scout FireWire Models:

Mono / Color	Mono / Color
Interface	IEEE 1394b (screw lock possible)
Video Output Format	Mono 8: 8 bits/pixel | Mono 16: 12 bits/pixel | YUV 4:2:2: 16 bits/pixel average | YUV 4:2:2: (YUYV):16 bits/pixel average Raw 8: 8 bits/pixel (R,G, or B) | Raw 16: 12 bits/pixel (R,G, or B) | scA750-60fm/fc (8 bits/pixel only)
Synchronization	Via external trigger, via the IEEE 1394 bus, or free run
Exposure Control	Programmable via the 1394 bus
Housing Size (L x W x H)	73.7 mm x 44 mm x 29 mm (without lens adapter)
Housing Size 90° (L x W x H)	97 mm x 44 mm x 41.8 mm (incl. lens adapter)
Housing Temperature	Up to 50°C
Lens Mount	C-mount; CS-mount (optional)
I/O Ports	2 opto-isolated input ports, 4 opto-isolated output ports
Power Requirements	8 – 36 VDC; provided via the IEEE 1394 cable; < 1% ripple
Conformity	CE, FCC, DCAM, RoHS, IP 30
Software Driver	Basler pylon, IEEE 1394b driver

Specifications are subject to change without prior notice.

For detailed technical information, please see the camera manual that can be found on our website: www.baslerweb.com/manuals

Specifications GiGE VISION

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 x 494	Sony ICX424	Progressive scan CCD	1/3"	7.4 x 7.4	70	3 W	160 g
scA640-74gm/gc	659 x 494	Sony ICX414	Progressive scan CCD	1/2"	9.9 x 9.9	79	3 W	160 g
scA640-120gm/gc	659 x 494	Sony ICX618	Progressive scan CCD	1/4"	5.6 x 5.6	122	3.5 W	160 g
scA750-60gm/gc	752 x 480	Aptina MT9V022	Progressive scan CMOS	1/3"	6.0 x 6.0	64	2.5 W	160 g
scA780-54gm/gc	782 x 582	Sony ICX415	Progressive scan CCD	1/2"	8.3 x 8.3	55	3 W	160 g
scA1000-30gm/gc	1034 x 779	Sony ICX204	Progressive scan CCD	1/3"	4.65 x 4.65	31	3 W	160 g
scA1300-32gm/gc	1296 x 966	Sony ICX445	Progressive scan CCD	1/3"	3.75 x 3.75	32	3.5 W	160 g
scA1390-17gm/gc	1392 x 1040	Sony ICX267	Progressive scan CCD	1/2"	4.65 x 4.65	17	3.5 W	160 g
scA1400-17gm/gc	1392 x 1040	Sony ICX285	Progressive scan CCD	2/3"	6.45 x 6.45	17	3.5 W	170 g
scA1400-30gm/gc	1392 x 1040	Sony ICX285	Progressive scan CCD	2/3"	6.45 x 6.45	30	4.2 W	170 g
scA1600-14gm/gc	1628 x 1236	Sony ICX274	Progressive scan CCD	1/1.8"	4.4 x 4.4	14	3.5 W	160 g
scA1600-28gm/gc	1628 x 1236	Sony ICX274	Progressive scan CCD	1/1.8"	4.4 x 4.4	28	4.3 W	160 g

Specifications Applicable For All scout GigE Models:

Mono / Color	Mono / Color
Interface	Gigabit Ethernet (screw lock possible)
Video Output Format	Mono 8: 8 bits/pixel | Mono 16: 12 bits/pixel | YUV 4:2:2: 16 bits/pixel average | YUV 4:2:2: (YUYV):16 bits/pixel average Raw 8: 8 bits/pixel (R,G, or B) | Raw 16: 12 bits/pixel (R,G, or B) | scA750-60gm/gc (8 bits/pixel only)
Synchronization	Via external trigger, or free run
Exposure Control	Programmable via GigE Vision (camera API)
Housing Size (L x W x H)	73.7 mm x 44 mm x 29 mm (without lens adapter)
Housing Size 90° (L x W x H)	97 mm x 44 mm x 41.8 mm (incl. lens adapter)
Housing Temperature	Up to 50°C
Lens Mount	C-mount; CS-mount (optional)
Digital I/O	2 opto-isolated input ports, 4 opto-isolated output ports
Power Requirements	12 – 24 V; via Hirose 12-pin connector (max. 10 meter cable length)
Conformity	CE, FCC, RoHS, IP 30, GigE Vision, GenICam
Software Driver	Basler pylon (Basler filter and performance driver), GigE Vision compliant

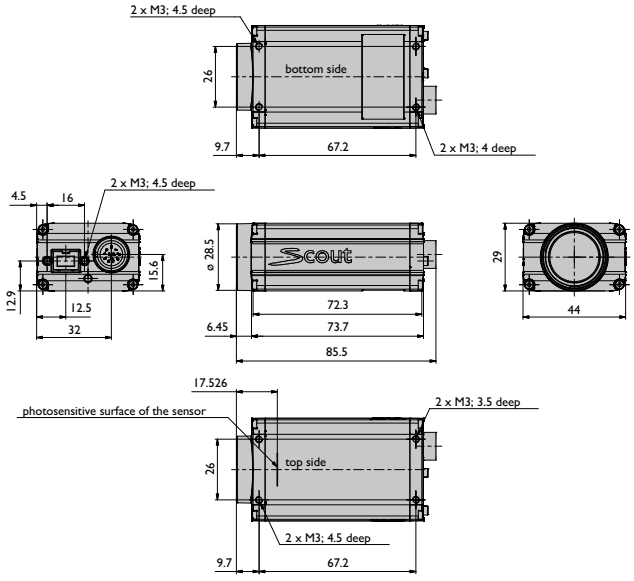
Specifications are subject to change without prior notice.

For detailed technical information, please see the camera manual that can be found on our website: www.baslerweb.com/manuals

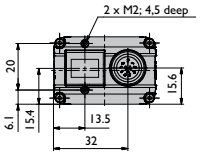
Dimensions (in mm)

Standard housing

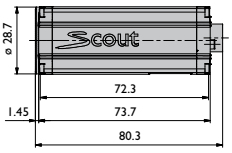
scout General/IEEE 1394



scout GigE Vision

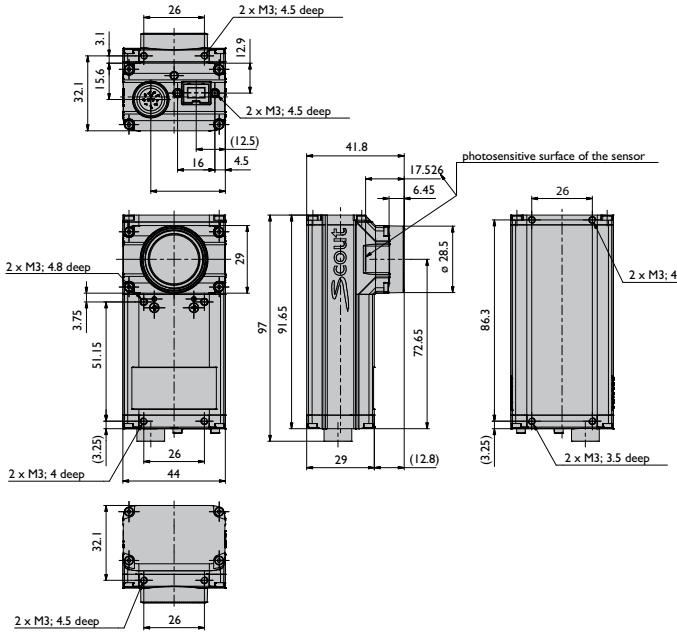


scout CS-Mount

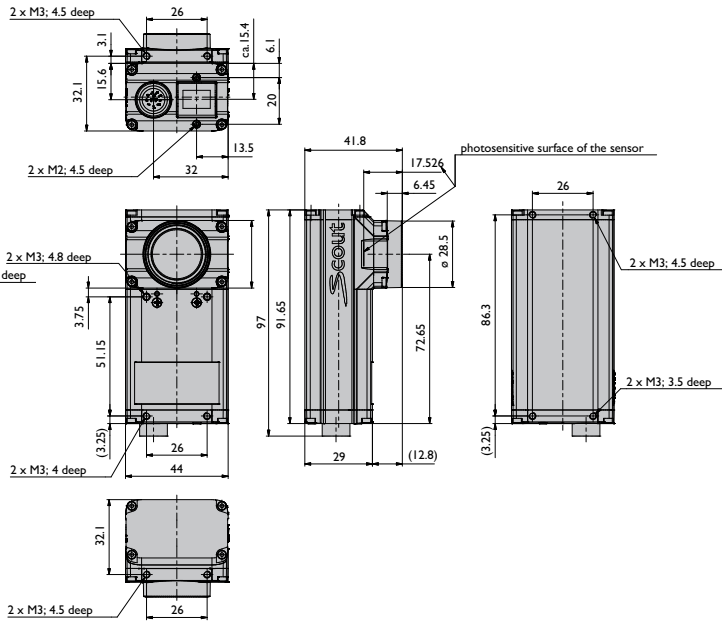


90 deg housing

scout-90°/IEEE 1394



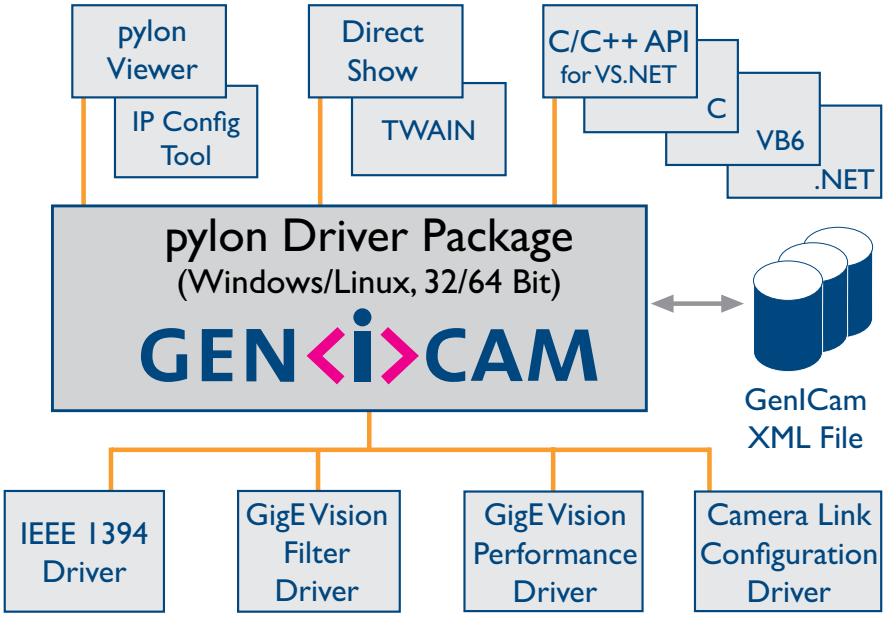
scout-90° GigE Vision



Get your free version for Windows or Linux

Basler pylon Driver Package

The pylon driver package operates with all Basler line scan and area scan cameras. It offers stable, reliable and flexible data exchange between Basler cameras and PCs, at a very low CPU load.



The internal architecture of the pylon driver package 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.

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

The pylon Viewer offers you a convenient application for testing and evaluating Basler cameras. The pylon IP Configuration tool helps you to set up multi-camera systems easily via local network boundaries. The pylon SDK 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.

- GigE Vision Filter Driver
- GigE Vision Performance Driver
- IEEE 1394 Driver
- Camera Link Serial Communication Driver
- pylon Viewer
- IP Configuration Tool
- pylon SDK for all Cameras; C,C++, C# and VB6 (the 'pylon for Linux' Version only supports the GigE interface via a C++ API)

The pylon driver package can be downloaded for free from our website. 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.

Innovative Technologies in the Basler scout Family

100 Meter Cable Length – High Bandwidth – No Frame Grabber

Basler's scout family has a Gigabit Ethernet (GigE) interface compliant with the GigE Vision standard. GigE has become a synonym for the new interface technology used in machine vision systems and in related industries like intelligent traffic systems and medical imaging. High bandwidth, long cable lengths, and wide usage in the consumer and industrial markets are the key elements that make GigE attractive for your application.

Because Gigabit Ethernet breaks the bandwidth barrier that was set by FireWire, switching from Camera Link® to Gigabit Ethernet is now attractive for you. Another clear advantage of the scout family is a quantifiable reduction in the cost of a total vision solution because a frame grabber is no longer required. No less important is the 100 meter cable lengths offered by Gigabit Ethernet. These expanded capabilities open exciting new possibilities for vision system design and break through existing limitations to reach a new level that is especially beneficial for factory floor applications.

FireWire-b – Doubled Bandwidth – Easy to Use

The scout family continues Basler's success with the FireWire interface and takes it to a new level of performance. FireWire, also known as IEEE 1394, has become a standard image data and camera command transmission mechanism in the machine vision industry. Its key benefit is real-time communication between your camera and remote computer.

The scout family breaks the existing 400 Mbit/s data rate limitation of FireWire-a and offers up to 800 Mbit/s as specified by FireWire-b. This means that scout cameras can provide maximum performance in terms of frame rate and bit depth compared to cameras limited by the FireWire-a data rate. In addition, FireWire integration is easy, cost-effective, and standardized. It supports plug-and-play and there is no need for a frame grabber. The scout family is also backward compatible with FireWire-a.

Basler scout cameras are GenICam compliant and include an IEEE 1394 driver, a GigE filter driver, and a GigE performance driver. The software supplied with the scout will also implement a newly designed image viewer.

The core of GenICam is a description of the camera's properties in an XML descriptor file. Using this file, a translator can directly generate either a C++ application programming interface (API) called GenAPI or the elements of a graphical user interface (GUI). This lets the user easily identify the camera type, as well as the features and functions available on the camera and the parameters associated with each camera function. Future extensions of GenICam will also provide mechanisms for grabbing and streaming images from the camera. The proposed GigE Vision standard stipulates that cameras must provide the XML descriptor file. A descriptor file for IEEE 1394 compliant cameras will be available as well.

How Does Basler Measure and Define Image Quality?

Basler is leading the effort to standardize image quality and sensitivity measurement for machine vision cameras and sensors. All measurements done by Basler will be in 100% compliance with the new European Machine Vision Association EMVA 1288 standard. Because it describes a unified method to measure, compute, and present the specification parameters for cameras and image sensors used in machine vision applications, Basler is giving the EMVA 1288 standard our strongest support.

The scout family will be characterized and measured to provide information about the quality and sensitivity of our products. All data can be found on Basler's website www.baslerweb.com

What Makes Basler Camera Quality So Special?

To ensure consistently high product quality, we employ several quality inspection procedures during manufacturing. The following list describes some of the most essential actions we take to meet your highest requirements:

- The back focal length on each camera is carefully measured and adjusted. This guarantees an optimum distance between the lens flange and the sensor and ensures compliance with optics standards.
- Our advanced Camera Test Tool (CTT+), the first fully-automated inspection system for digital cameras, checks all of the significant quality aspects of each camera we produce. The CTT+ is a unique combination of optics, hardware, and software that can be quickly and efficiently used to calibrate a camera and to measure its performance against a set of standards. For defined sets of conditions, an automated software program examines the camera's output, makes any calibration adjustments necessary, and compares the output to a strictly defined set of performance criteria.

RoHS Compliance

The Basler scout series is RoHS compliant. This is especially important in applications where the the end-user requires strict RoHS compliance in all system components.

90 degree Housing Option

The most significant improvement in the new 90deg (90 degree) housing version of the scout is a remarkable reduction in the camera depth. The total depth of the camera body, included the lens mount, is less than 42 millimeters. The scout 90deg has its connectors on the bottom. Many other small footprint cameras have their connectors on the rear end, which expands their total depth by 20 to 30 millimeters. Taking all of this into account, the scout fits better in many applications.

All of the features included on the standard housing scout have been transferred to this new housing option. The uncompromisingly high scout image quality and speed compared to other small housing cameras in the market were also transferred to the 90deg models. This was the most important design goal for Basler's engineers.



Basler AG
Germany, Headquarters
Phone +49 4102 463 500
Fax +49 4102 463 599
bc.sales.europe@baslerweb.com

USA
Phone +1 610 280 0171
Fax +1 610 280 7608
bc.sales.usa@baslerweb.com

Japan
Phone +81 45 227 6210
Fax +81 45 227 6220
bc.sales.japan@baslerweb.com

Singapore
Phone +65 6425 0472
Fax +65 6425 0473
bc.sales.asia@baslerweb.com

Korea
Phone +82 707 1363 114
Fax +82 707 0162 705
bc.sales.korea@baslerweb.com

www.baslerweb.com

09/2011 ©

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP