

# Basler Scout light



**Preliminary**

Fully Digital, Attractively Priced

# scout light Series – Are You Looking for a Cost-effective Digital FireWire Camera?

### **Basler scout light Family – 4 Different Models – Sophisticated in Detail, Versatile, Fully Digital, and Attractively Priced**

The Basler scout light 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 Micron. With FireWire-b™ (IEEE1394b) interface technology, the cameras in this family are defined by state of the art technology that lets you get the maximum performance from each sensor:

Your benefits from the Basler scout light family include:

- Resolutions from VGA to 2 megapixels with FireWire-b interface
- Up to 12 bit depths and no bandwidth limitation on 8 bit data flow inside the camera
- Free driver and SDK
- Small, rugged housing for easy integration
- Compatible with the newest vision industry standards like GenICam
- 100% quality checked and calibrated to give you consistent performance and reliability

The Basler scout light family features a GenICam compliant API and uses new drivers. Along with the drivers, GUI based software is provided that lets users easily set camera parameters, adjust image quality, and control cameras from a remote computer.

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

Users of interlaced analog cameras can easily switch to a scout light camera equipped with Micron's MT9V022 CMOS progressive scan sensor:

# TECHNICAL DETAILS

## Specifications FireWire



Basler scout light	Sensor Size (HxV pixels)	Sensor Type	Sensor Technology	Optical Size	Pixel Size (in $\mu\text{m}$ )	Max. Frame Rate (at full resolution)	Typical Power Consumption at 12V	Weight (typical)
sIA750-60fm	752 x 480	Micron MT9V022	Progressive scan CMOS	1/3"	6.0 x 6.0	60	2.5 W	150 g
sIA1000-30fm	1034 x 779	Sony ICX204	Progressive scan CCD	1/3"	4.65 x 4.65	30	2.5 W	150 g
sIA1390-17fm	1392 x 1040	Sony ICX267	Progressive scan CCD	1/2"	4.65 x 4.65	17	2.5 W	150 g
scAI600-14fm	1628 x 1236	Sony ICX274	Progressive scan CCD	1/1.8"	4.4 x 4.4	14	3 W	150 g

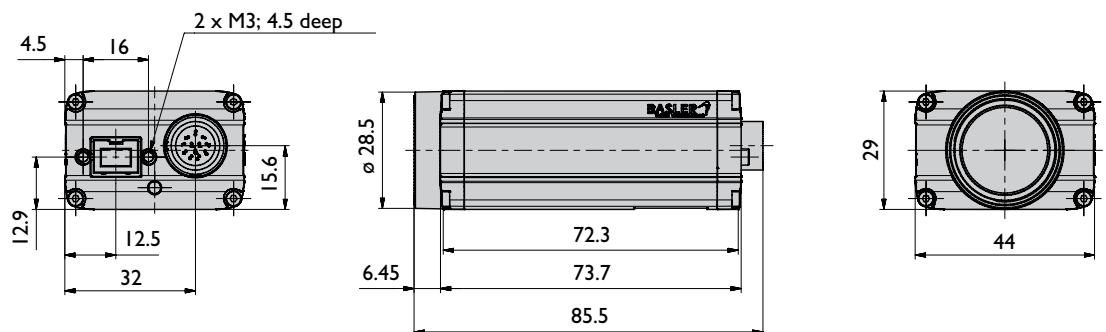
Specifications are subject to change without prior notice.

## Specifications Applicable For All scout light FireWire Models:

Mono/Color	Yes/No
Video Output Type (Interface)	IEEE1394b (screw lock possible)
Video Output Format	Mono 8: 8 bits/pixel   Mono 16: 12 bits/pixel sIA750-60fm (8 bits/pixel only)
Synchronization	Via external trigger; via the IEEE1394 bus, or free run
Exposure Control	Programmable via the 1394 bus
Power Requirements	8 – 36VDC; provided via the IEEE1394 cable; < 1% ripple
Lens Mount	C-mount
Housing Size (L x W x H)	73.7 mm x 44 mm x 29 mm (without lens adapter)
Conformity	CE, FCC, DCAM, RoHS, IP 30
I/O Ports	1 opto-isolated input port, 1 opto-isolated output port
Software Driver	Basler pylon driver package, IEEE1394b driver
GenICam Compatible	Yes

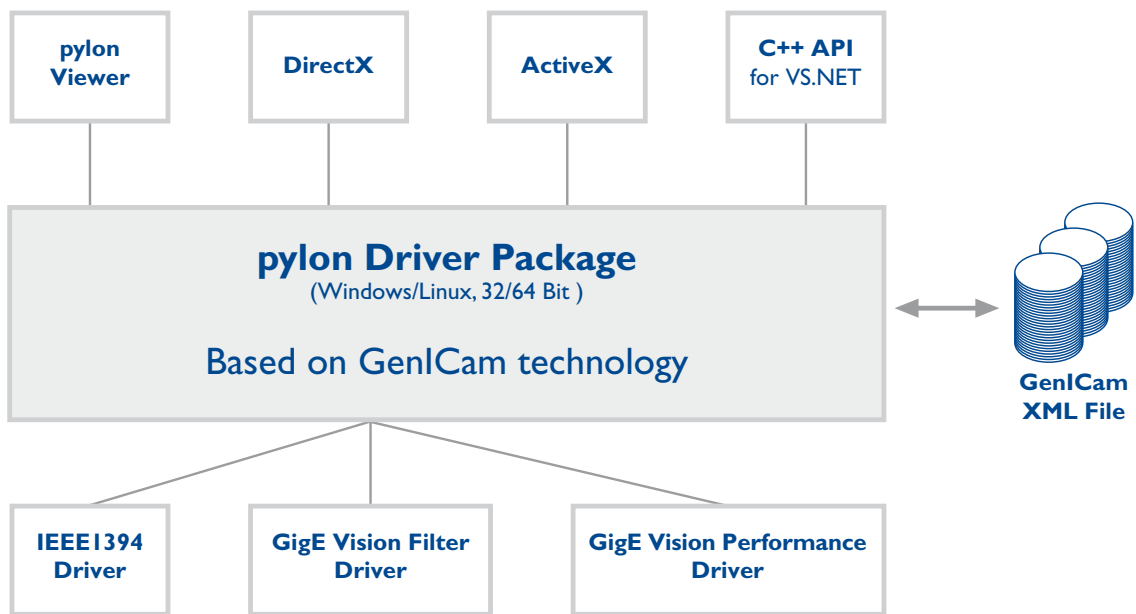
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## Dimensions (in mm)



## Basler pylon Driver Package

The pylon driver package is designed to work with all Basler cameras that have a FireWire or GigE Vision interface. You can select the interface technology that best fits your application or you can use both interface technologies simultaneously in your application. The pylon driver offers reliable, real-time image data transport into the memory of your PC with 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, but with double the bandwidth offered in the past. And by using the newest driver stack technology, Basler increases the quality of this service beyond the Microsoft standard.

The pylon Viewer offers you a convenient application for testing and evaluating Basler cameras. The new tree oriented design and the different levels of user access let you quickly and easily determine the best camera settings for your application.

## Innovative Technologies in the Basler scout light Family

### FireWire-b – Doubled Bandwidth – Easy to Use



The scout light 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 light 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 light 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 light family is also backward compatible with FireWire-a.

### Unified API – Simple Programming – Interface Independent



The Basler scout light camera will be GeniCam compatible and will

include an IEEE 1394 driver, GigE filter driver, and GigE performance driver. The scout light software 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.

## What Makes Basler Camera Quality So Special?



### Basler Camera Test Tool

To ensure consistently high product quality, we employ several quality inspection procedures during manufacturing. This 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 light series is RoHS compliant. This is especially important in applications where the end-user requires strict RoHS compliance in all system components.



[www.baslerweb.com](http://www.baslerweb.com)

**Germany, Headquarters**  
Phone +49 4102 463 500  
Fax +49 4102 463 599  
[bc.sales.europe@baslerweb.com](mailto:bc.sales.europe@baslerweb.com)

**USA**  
Phone +1 610 280 0171  
Fax +1 610 280 7608  
[bc.sales.usa@baslerweb.com](mailto:bc.sales.usa@baslerweb.com)

**Singapore**  
Phone +65 6425 0472  
Fax +65 6425 0473  
[bc.sales.asia@baslerweb.com](mailto:bc.sales.asia@baslerweb.com)