

GC650



Description

Very small VGA CCD camera with GigE Vision

The GC650 is a fast, VGA-resolution, high-performance machine vision camera with Gigabit Ethernet interface (GigE Vision®). The CCD sensor has excellent image quality and sensitivity. The camera is suitable for applications where speed and excellent image quality are key requirements.

- 90 fps at 659x493
- Sony ICX424 CCD Sensor
- **Models:**
 - GC650, 659x493, 90 fps, CCD, mono
 - GC650C, 659x493, 90 fps, CCD, color

Important information: [Prosilica GC Power Voltage Specification Update \(April 1, 2011\)](#)

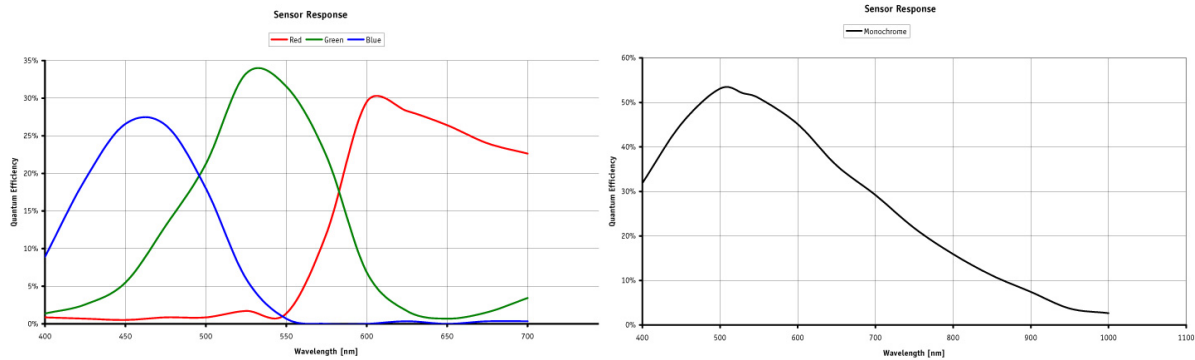
Specifications

Prosilica GC		650
Interface	IEEE 802.3 1000baseT	
Resolution	659 x 493	
Sensor	Sony ICX424	
Sensor type	CCD Progressive	
Sensor size	Type 1/3	
Cell size	7.4 μ m	
Lens mount	C/CS	
Max frame rate at full resolution	90 fps	
A/D	12 bit	
On-board FIFO	16 MB	
Output		
Bit depth	8/12 bit	
Mono modes	Mono8, Mono12Packed, Mono16	
Color modes YUV	YUV411, YUV422, YUV444	
Color modes RGB	RGB24, BGR24, RGBA24, BGRA24	
Raw modes	Bayer8, Bayer12Packed, Bayer16	
General purpose inputs/outputs (GPIOs)		
TTL I/Os	1 input, 1 output	
Opto-coupled I/Os	1 input, 1 output	
RS-232	1	
Operating conditions/Dimensions		
Power requirements (DC)	5-16 V*	
Power consumption (12 V)	3 W	
Mass	99 g	
Body Dimensions (L x W x H in mm)	59x46x33 including connectors, w/o tripod and lens	
Regulations	CE, FCC, Class A, RoHS	

* Cameras shipped after April 1, 2011 support 5-25 VDC. Please review the [Prosilica GC](#)

[Power Voltage Specification Update](#) for further information.

[Download Prosilica GC650 technical drawing \(click here\)](#)



Smart features

The GC650 features include:

- Auto Exposure
- Auto Gain
- Auto White balance
- Flexible Binning
- Region of Interest readout (AOI partial scan)
- StreamBytesPerSecond (easy bandwidth control)
- Stream hold
- Asynchronous external trigger and sync I/O
- Global shutter (digital shutter)
- Recorder and Multiframe Acquisition Modes

Applications

The GC650 is suitable for applications where speed and excellent image quality are key requirements. These include:

- machine vision
- industrial inspection
- public security
- traffic monitoring
- robotics

Application Case Studies:

- **Prosilica GC650C in DARPA Urban Challenge**

Prosilica GC cameras track lanes in experimental robotic vehicle designed by GeorgiaTech University and SAIC.

- **GC650 in Wood Industry Measurement System**

Optical measurement system from Forintek checks wood strand size in OSB production process.

- **Prosilica GigE Vision Cameras Tested for New NASA Recording System**

Prosilica's GigE Vision GC Series Cameras are being tested by NASA as the Agency is looking to upgrade one of its existing space shuttle video/camera recording systems.