

# Prosilica GE

## 1650



- 32 fps @ full resolution
- ON Semi KAI-2020 sensor
- Galvanically isolated I/O
- Various lens mount options

## Description

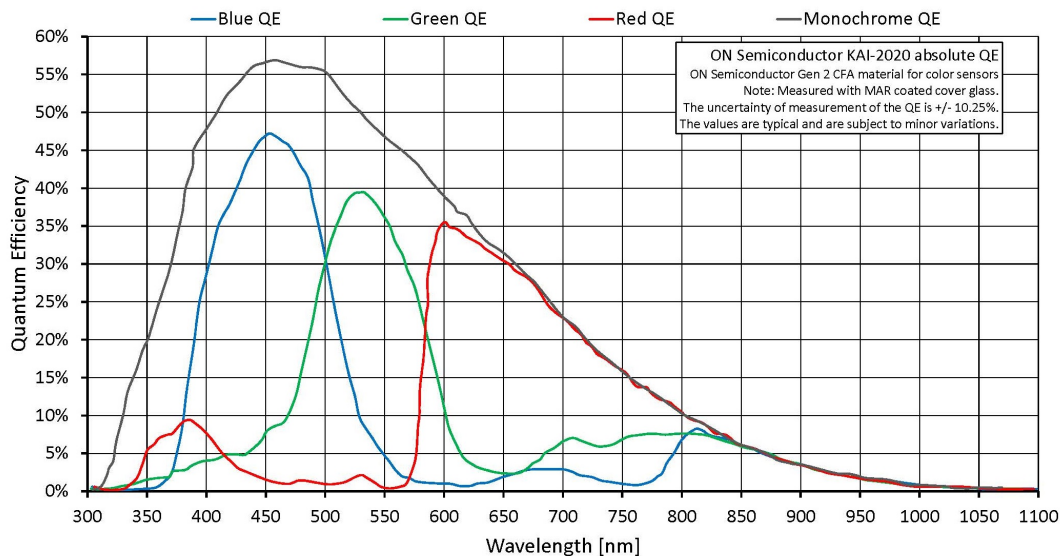
2 Megapixel CCD camera, GigE Vision interface, 32 frames per second

Prosilica GE1650 is a high-resolution CCD camera with Gigabit Ethernet interface (GigE Vision). This camera incorporates a high-quality ON Semiconductor KAI-2020 CCD sensor providing excellent monochrome and color image quality in 4:3 format. At full resolution, this camera has a frame rate of 32 frames per second. With a smaller region of interest higher frame rates are possible. By default monochrome models ship with no optical filter and color models ship with an IRC30 IR cut filter.

## Specifications

Prosilica GE	1650
Interface	IEEE 802.3 1000baseT
Resolution	1600 (H) × 1200 (V)
Sensor	ON Semi KAI-2020
Sensor type	CCD Progressive
Sensor size	Type 1
Pixel size	7.4 μm × 7.4 μm
Lens mount (default)	C-Mount
Max. frame rate at full resolution	32 fps
ADC	12 bit
Image buffer (RAM)	32 MByte
<b>Output</b>	
Bit depth	8/12 bit
Monochrome pixel formats	Mono8, Mono12, Mono12Packed
YUV color pixel formats	YUV411Packed

<b>Prosilica GE</b>	<b>1650</b>
RGB color pixel formats	RGB8Packed, BGR8Packed, RGBA8Packed, BGRA8Packed, RGB12Packed
Raw pixel formats	BayerGR8, BayerGR12, BayerGR12Packed
<b>General purpose inputs/outputs (GPIOs)</b>	
TTL I/Os	1 input, 3 outputs (with galvanic isolation)
RS232	1
<b>Operating conditions/dimensions</b>	
Operating temperature	0 °C to +50 °C ambient (without condensation)
Power requirements (DC)	5 to 24 VDC
Power consumption	5 W at 12 VDC
Mass	169 g
Body dimensions (L × W × H in mm)	80 × 51 × 39 (including connectors)
Regulations	CE: 2014/30/EU (EMC), 2011/65/EU, including amendment 2015/863/EU (RoHS); FCC Class A



## Features

Prosilica GE1650 features include:

- Region of interest (ROI), DSP subregion (selectable ROI for auto features)
- Binning (Sum)
- Auto gain (manual gain control: 0 to 34 dB)
- Auto exposure (manual exposure controls: 50 µs to 53.7 s)



- Auto white balance
- StreamBytesPerSecond (bandwidth control)
- Stream hold
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Global shutter (digital shutter)
- Recorder and Multiframe acquisition modes
- Event channel
- Image chunk data
- Storable user sets

## Technical drawing



\* Nominal value Add 0.3mm for color cameras.



## Applications

Prosilica GE1650 is ideal for a wide range of applications including:

- Industrial inspection
- Machine vision
- LCD panel inspection
- Medical imaging
- Ophthalmology
- Aeronautical and aerospace
- Public security
- Surveillance
- Traffic imaging
- OEM applications