GE1650

Description

2 megapixel CCD camera with GigE Vision interface - More than 30 fps

The 2 Megapixel GE1650 is a high-resolution CCD camera with Gigabit Ethernet interface (GigE Vision®). The GE1650 incorporates a high-quality Kodak KAI-2020 CCD sensor providing excellent monochrome and color image quality in 4:3 format. The GE1650 runs over 30 frames per second at 1600x1200 resolution and even faster with region of interest readout.
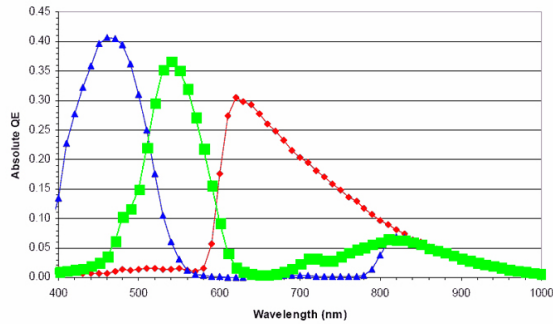
- Kodak KAI-2020 Progressive scan CCD
- Global shutter (Snapshot shutter)
- Fast frame rate - 32 fps at full-resolution

- **Models:**
    - GE1650, 1600x1200, 32 fps, CCD, mono
    - GE1650C, 1600x1200, 32 fps, CCD, color

- **Modular options:**
    - Nikon F-mount (Factory conversion)
    - Canon EF Lens Mount (Factory conversion via RS232 I/O)
    - IRC Filter on Monochrome cameras (Factory installation)
    - Taped glass and microlens (Factory built)
    - Taped glass No microlens (Factory built)

Specifications

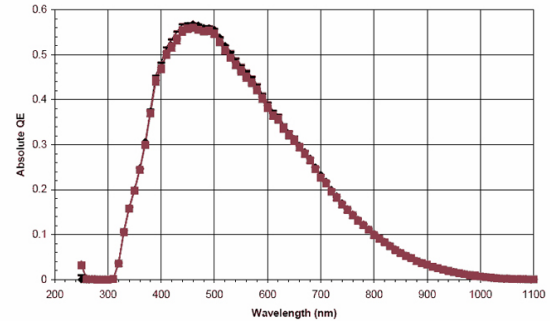| Prosilica GE	1650
Interface	IEEE 802.3 1000baseT
Resolution	1600 x 1200
Sensor	Kodak KAI-2020
Type	CCD Progressive
Sensor Size	Type 1
Cell size	7.4 µm
Lens mount	C
Max frame rate at full resolution	32 fps
A/D	12 bit
On-board FIFO	32 MB
	Output
Bit depth	8/12 bit
Mono modes	Mono8, Mono12, Mono16
Color modes YUV	YUV411, YUV422, YUV444
Color modes RGB	RGB24, BGR24, RGBA24, BGRA24
Raw modes	Bayer8, Bayer12, Bayer16
	General purpose inputs/outputs (GPIOs)
TTL I/Os	1 input, 3 outputs (with galvanic isolation)
Opto-coupled I/Os	0
RS-232	1
	Power/Mass/Dimensions/Regulations
Power requirements (DC)	5V - 24V
Power consumption (12 V)	5 W
Mass	169 g
Body Dimensions (L x W x H in mm)	80x51x39 including connectors, w/o tripod and lens
Regulations	CE, FCC, Class A, RoHS

Download Prosilica GE1650 technical drawing (click here)

Sensor Response (Color)

Sensor Response (monochrome)

Smart features

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

Application Notes:

Canon EF Adapter on Prosilica GE and Prosilica GX Cameras (PDF - 466KB)

Applications

The 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

Application Case Studies:

- **Prosilica Cameras Capture the Thrill of Roller Coaster Rides**
  Multimedia & Entertainment: 3db Solutions Inc. of Canada uses Prosilica GigE Vision
  cameras for systems producing souvenir photos in amusement parks.

- **3D Quantitative Analysis of Cancer Biosignatures**
  Healthcare & Medical: Cell-CT Platform uses Prosilica GE1650 GigE camera in 3D imaging
  system.