

GigE Vision Camera GP-Series

GP-151400 (2/3" SXGA) NIR sensitive GigE camera



Features

- 1Gigabit/s high speed point-to-point transmission
- No frame grabber required for image capture
- 100m with Gigabit Ethernet cable CAT5e or CAT6
- GigE Vision standard compliance
- Field upgradeable firmware via Ethernet
- Excellent S/N (>60dB) for 12-bit, 10-bit or 8-bit output, 12 to 8-bit Gamma conversion and custom LUT
- No-delay asynchronous reset with time stamp and async shutter
- GPIO for local I/O, RS-485 communication for auxiliary devices, Audio I/O, Auto-iris lens drive
- Color (RGB Bayer) versions
- Miniature, robust package (34 x 34 x 68 mm)
- Industrial Ethernet and GPIO connectors
- Various drivers available for existing machine vision software
- Extensive software developer's kit (SDK)
- Best of all, Low-cost High-performance GigE camera

General Description

GEViCAM GP-Series are Gigabit Ethernet cameras for industrial applications. They are designed on a common platform and comply with the GigE Vision standard for plug-and-play performance as well as proprietary high performance SDK. GP-151400 uses 2/3" SXGA (1392 x 1040) high sensitivity CCD (ICX285) with a 12-bit A/D converter. The normal data output is selectable for 12-bit, 10-bit (MSB), or 8-bit (MSB) at 40 MHz to maintain excellent over-all camera S/N ratio of >60 dB at factory default. The frame rate is 22 fps for full resolution and 30 fps for HDTV format partial scan (1392 x 720).

For multiple camera applications, it accepts external trigger via GPIO (general purpose I/O) and resets the internal timing with no-delay and time stamp to provide exact image locations. This eliminates a need for external sync (HD/VD), which tends to generate some PLL jitters.

Streamlined design for the camera and GigE section reduces the component count and make these cameras very compact and low cost for the performance. This is ideal for machine vision applications to move up from conventional analog cameras (+frame grabber) to frame grabber-less

systems for improved cost-performance.

GigE Vision itself has further advantages to conventional systems. It allows multiple camera operations on the net, multicasting (multiple computers per camera), long cable distance (100m without repeaters), auxiliary device control via GPIO, plug-and-play compatibility with commonly available software and camera systems, common camera control protocol or GUI, etc. The firmware or software is field upgradeable via Ethernet even if the original camera is installed in a remote area.

The GPIO uses a 14-pin MDR connector and interfaces with TTL (trigger and strobe), RS-485 or CAN, opto-isolated I/Os, and digital audio. A customer can download its control protocol for the local auxiliary devices such as PLC, surveillance controls, where the GigE camera operates as a local server. Auto-iris or DC-iris lens control is available as an option. Audio CODEC is standard for remote audio input and output via Ethernet.

The platform provides full progressive scan, partial scan, various exposure control, and other special functions. GigE buffer also allows various size of images (Region of Interest) to capture and transmit.

Please refer GP series data sheet for the detail.

Specifications

(C: Color version)

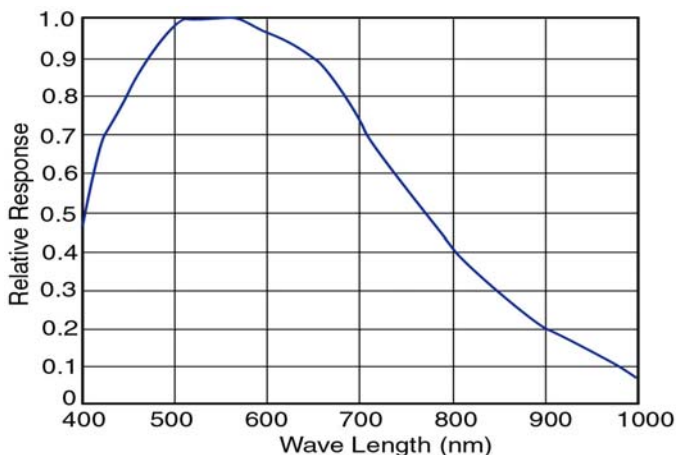
	GP-151400 / 151400C
CCD Imager	2/3" SXGA
Active Pixels (data out)	1392 x 1040
Pixel Size (µm)	6.45 x 6.45
Active Area (mm)	10.2 (H) x 8.3 (V)
Scanning Mode	Progressive scan full
Frame Rate	22 fps @ 40 MHz (15 fps optional)
Data Clock	40 MHz
Data Output	Gigabit Ethernet
Resolution	1392 x 1040
S/N Ratio	>60 dB
Minimum Illumination	0.5 lux at 22 fps
Gamma	1.0 / 0.45 LUT
Power Requirement	12 V DC ±10%, 4W
Lens Mount	C-mount or CS
Operating Temperature	-10°C to +50°C
Vibration	7G
Shock	70G
Size (mm)	34 x 34 x 68
Weight	115g (4oz)

NIR sensitive CCD

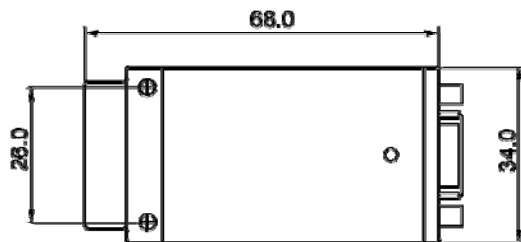
GP-151400 is specifically designed to provide high sensitivity, excellent S/N ratio and Near IR spectral responses. The characteristics assures excellent applications for scientific field, high end surveillance, high performance ITS and traffic camera, and medical applications.

The camera is designed for the best signal integrity at the highest speed. Therefore, the frame rate is not pushed to 30 fps as it starts exhibiting some degradation of performances. If higher frame rate is required please contact GEViCAM for the option.

Gevicam uses the best quality grade of the CCD.

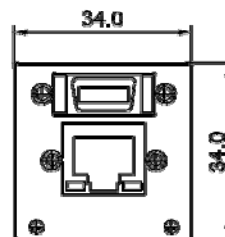
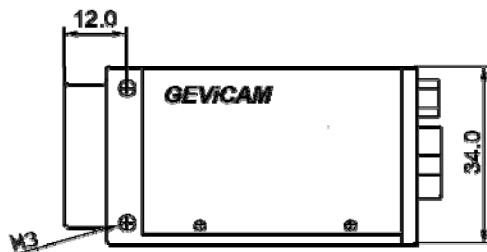
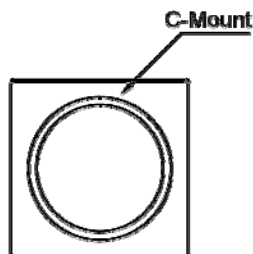


Physical Dimensions



GPIO Pin Assignment

1	12V RTN (GND)	8	Power in 12V
2	GND	9	Trigger in (TTL)
3	Strobe out	10	RS-485 -
4	RS-485 +	11	Opto D1 in -
5	Opto D1 in +	12	Opto D2 out -
6	Opto D2 out +	13	Audio out
7	GND	14	Audio in



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