GEViCAM

Preliminary

GigE Vision Camera GP-Series

GP-3460/C (1/3” WVGA) CMOS GigE camera

World’s Smallest Gigabit Ethernet Camera from GEViCAM

also available

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 compliant version also available
- Field upgradeable firmware via Ethernet
- High performance CMOS with global shutter and AEC and AGC functions
- 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
- NIR sensitive
- Color (RGB Bayer) versions available
- 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)
- Most importantly, low-cost yet high-performance

General Description

The GEViCAM GP-Series is comprised of 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 a proprietary high performance SDK. The GP-3460 uses a 1/3” WVGA (748 x 480), CMOS with global shutter. The normal data output is selectable for 10-bit, or 8-bit (MSB) at 27 MHz to maintain excellent over-all camera S/N ratio of >48 dB as factory default. The frame rate is 60 fps for full resolution and faster frame rate in ROI scanning.

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

Streamlined designs for the camera and GigE section reduce the component count and make these cameras very compact and low cost, yet high performance. This is an ideal opportunity to upgrade high end security, traffic monitoring, and machine vision applications from conventional analog cameras (and frame grabber) to a frame grabberless systems for improved cost-performance.

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

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 user can download the control protocol for local auxiliary devices such as a PLC or surveillance controls, where the GigE camera then operates as a local server. Instead of the auto-iris lens, the GP-3460 has built-in AEC (auto-exposure control) and AGC (auto-gain control) capability.

The platform provides full progressive scan, partial scan, various exposure controls, and other special functions. GigE buffer also allows various sizes of images (Region of interest) to be captured and transmitted.

Please refer to GP-series data sheet for the detail.

*Product specifications and features are subject to change without notice.

Specifications

(C:Bayer Color version)

	GP-3460 / 3460C
CCD Imager	1/3", WVGA
Active Pixels (data out)	752 x 480
Pixel Size (μm)	6.0 x 6.0
Active Area (mm)	4.51 (H) x 2.88 (V)
Scanning Mode	Progressive scan full
Frame Rate	60 fps @ 26.7 MHz (30 fps at partial scan)
Data Clock	26.7 MHz
Data Output	Gigabit Ethernet
Resolution	752 x 480
Dynamic Range	>55 dB linear, >100 dB knee
Minimum Illumination	2.0 lux at 60 fps
Gamma	1.0 or knee control
Power Requirement	12 V DC ±10%, 4W
Lens Mount	C-mount or CS
Operating Temperature	-10°C to +50°C
Vibration	7Grms
Shock	70G
Size (mm)	34 x 34 x 68
Weight	115g (4oz)

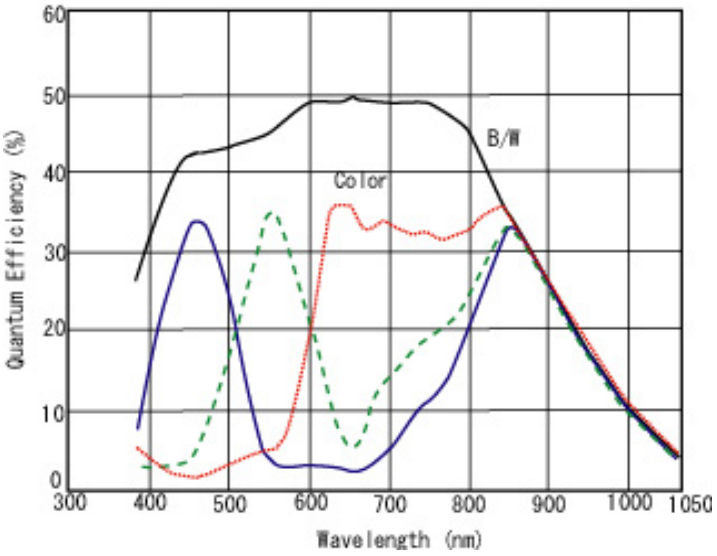
CMOS Image sensor

GP-3460 is specifically designed to provide the highest performance achieved only by the MT9V032 CMOS sensor. The characteristics assure exceptional relevance for traffic monitoring, high security applications, machine vision and scientific field and medical applications.

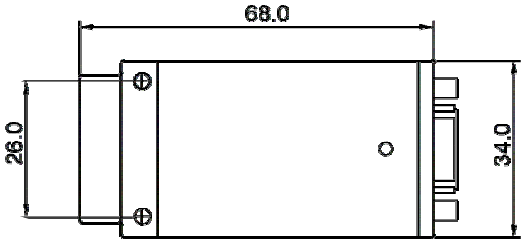
The camera is designed for the best signal integrity at the highest speed.

Since GP-3460 is sensitive to the NIR spectrum, the camera can be used with IR illumination. Because of the CMOS sensor, no smear effect is present as is the case with CCD sensors.

<GP-3460/C Spectral Response>

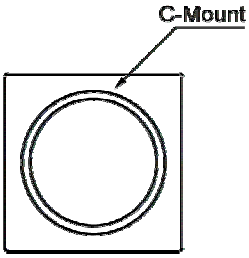


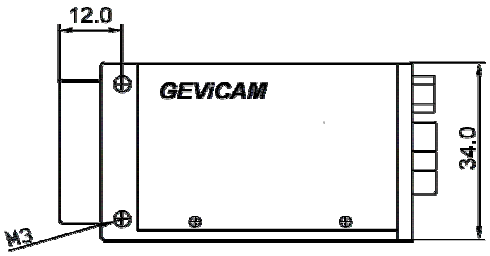
Physical Dimensions

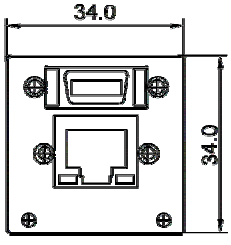


GPIO Pin Assignment

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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