

FLIR *GRASSHOPPER*[®] 1394b



HIGH RESOLUTION + HIGH FPS + COMPACT

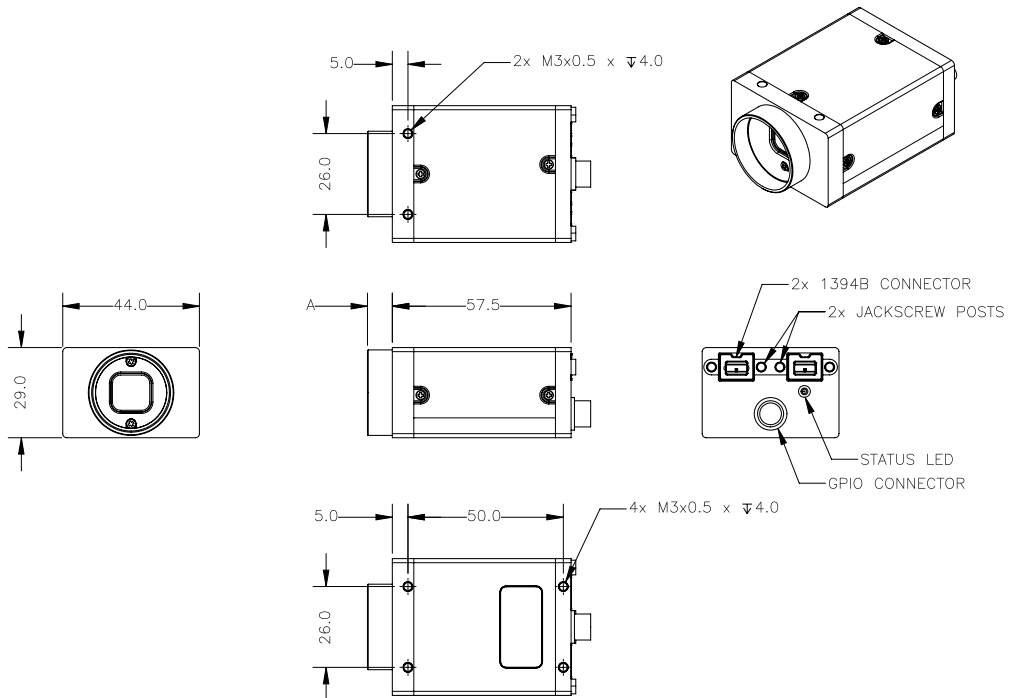
The Grasshopper digital camera line is a complete, cost effective and reliable imaging solution. A variety of large format, high resolution image sensors, combined with an IEEE-1394b 800Mb/s interface, makes the Grasshopper an ideal choice for demanding imaging applications such as semiconductor inspection and high-speed assembly.

KEY FEATURES

- High speed 14-bit A/D converter
- Dual IEEE-1394b ports for daisy chaining
- Industry standard design, compact case



FireWire



Specifications

| MODEL | VERSION | MP | IMAGING SENSOR |
|------------------------|---|--------|--|
| GRAS-03K2C-C | Color | 0.3 MP | <ul style="list-style-type: none">■ Kodak KAI0340 CCD, 1/3", 7.4 μm■ Global Shutter■ 640x480 at 200 FPS |
| GRAS-03K2M-C | Mono | | |
| GRAS-03S3M-C | Mono | 0.3 MP | <ul style="list-style-type: none">■ Sony ICX414 CCD, 1/2", 9.9 μm■ Global Shutter■ 648x488 at 74 FPS |
| GRAS-14S3C-C | Color | 1.4 MP | <ul style="list-style-type: none">■ Sony ICX267 CCD, 1/2", 4.65 μm■ Global Shutter■ 1384x1032 at 21 FPS |
| GRAS-14S3M-C | Mono | | |
| GRAS-14S5C-C | Color | 1.4 MP | <ul style="list-style-type: none">■ Sony ICX285 CCD, 2/3", 6.45 μm■ Global Shutter■ 1384x1036 at 15 FPS |
| GRAS-14S5M-C | Mono | | |
| GRAS-20S4C-C | Color | 2.0 MP | <ul style="list-style-type: none">■ Sony ICX274 CCD, 1/1.8", 4.4 μm■ Global Shutter■ 1624x1224 at 30 FPS |
| GRAS-20S4M-C | Mono | | |
| GRAS-50S5C-C | Color | 5.0 MP | <ul style="list-style-type: none">■ Sony ICX625 CCD, 2/3", 3.45 μm■ Global Shutter■ 2448x2048 at 15 FPS |
| GRAS-50S5M-C | Mono | | |
| A/D Converter | 14-bit | | |
| Image Data Output | 8, 12, 16 and 24-bit digital data | | |
| Image Data Formats | Y8, Y16 (all models), RGB, YUV411, YUV422, YUV 444, 8- bit and 16-bit raw Bayer data (color models) | | |
| Partial Image Modes | Pixel binning and region of interest (ROI) modes | | |
| Image Processing | Gamma, lookup table, white balance | | |
| Gain | Automatic/Manual/One-Push Gain modes | | |
| | 0 dB to 24 dB | | |
| Gamma | 0.50 to 4.00, programmable lookup table | | |
| White Balance | Automatic/manual modes, programmable via software | | |
| Color Processing | On-camera in YUV or RGB format, or on-PC in Raw format | | |
| Digital Interface | Two IEEE-1394b interfaces with screw locks for camera control, video data transmission, and power | | |
| Transfer Rates | 100, 200, 400, 800 Mb/s | | |
| GPIO | 8-pin Hirose HR25 GPIO connector for power, trigger, strobe, PWM, and RS232 | | |
| External Trigger Modes | IIDC Trigger Modes 0, 1, 3, 14, and 15 | | |
| Synchronization | Via external trigger or software trigger | | |
| Shutter | Global Shutter | | |
| | Automatic/Manual/One-Push/Extended Shutter modes | | |
| | 0.02 ms to >10 seconds (extended shutter mode) | | |
| Image Buffer | 32 MB frame buffer | | |
| Memory Channels | 2 memory channels for custom camera settings | | |
| Flash Memory | 512 KB | | |
| Dimensions | 58 mm x 44 mm x 29 mm (excluding lens holder and connectors) | | |
| Mass | 104 g (without optics or tripod mounting bracket) | | |
| Power Consumption | 8 to 30 V, 3.5 W at 12 V via GPIO or FireWire interface | | |
| Camera Specification | IIDC v1.31 | | |
| Camera Control | via FlyCapture SDK, CSRs, or third party software | | |
| Camera Updates | In-field firmware updates | | |
| Lens Mount | C-mount | | |
| Temperature | Operating: 0° to 40°C; Storage: -30° to 60°C | | |
| Emissions Compliance | CE, FCC, RoHS | | |
| Operating System | Vista SP1, Windows7, Linux Ubuntu 8.04 | | |
| Warranty | Three years | | |

FLIR Integrated Imaging Solutions

CANADA

12051 Riverside Way
Richmond, BC, Canada
V6W 1K7
T: +1 866.765.0827 (toll free)
T: +1 604.242.9937
F: +1 604.242.9938
E: mv-sales@flir.com
www.flir.com/iis

USA

T: +1 866.765.0827 (toll free)
E: mv-na-sales@ptgrey.com

EUROPE

T: +49 7141 488817-0
F: +49 7141 488817-99
E: mv-eusales@flir.com

CHINA

T: +86 10 8215 9938
F: +86 10 8215 9936
E: mv-chinasales@flir.com

ASIA

E: mv-asiasales@ptgrey.com

DISTRIBUTORS

JAPAN

ViewPLUS Inc. (www.viewplus.co.jp)

KOREA

CYLOD Co., Ltd. (www.cylod.com)

CHINA

LUSTER LightVision (www.lusterinc.com)

SINGAPORE, THAILAND, MALAYSIA

Voltrium Systems (www.voltrium.com.sg)

TAIWAN

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UNITED KINGDOM AND IRELAND

ClearView Imaging (www.clearviewimaging.co.uk)

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