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# GS3-U3-51S5M-C 2/3" FLIR Grasshopper®3 High Performance USB 3.0 Monochrome Camera

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Teledyne FLIR IIS Grasshopper®3 USB 3.0 Cameras (Front)



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Monochrome

Spectrum:

**General**

Type:

Monochrome Camera

GS3-U3-51S5M-C **Model Number:**

FLIR **Manufacturer:**

Grasshopper®3 **Camera Series:**

## Physical & Mechanical Properties

**Dimensions (mm):**  
44 x 29 x 57.5 (excludes connectors and lens mount)

90 **Weight (g):**

Full **Housing:**

## Sensor

128MB **Image Buffer:**

2/3" **Sensor Format:**

5.00 **Resolution (Megapixels):**

75.00 **Frame Rate (fps):**

2,448 x 2,048 **Pixels (H x V):**

3.45 x 3.45 **Pixel Size, H x V (µm):**

8.45 x 7.07 **Sensing Area, H x V (mm):**

Sony IMX250 **Imaging Sensor:**

Progressive Scan CMOS **Type of Sensor:**

Global **Shutter Type:**

10/12 bit **Pixel Depth:**

6µs - 32s **Exposure Time:**

65.20 (Mode 0) / 71.15 (Mode 7) **Dynamic Range (dB):**

USB3 Vision v1.0 **Machine Vision Standard:**

## Electrical

4.5 **Power Consumption (W):**

## Hardware & Interface Connectivity

USB 3.0 **Interface:**

USB 3.1 Gen 1, Micro-B with Screw Locks **Connector:**

Power over USB (required for operation) [#86-770](#) or via GPIO with [#86-784](#) **Power Supply:**

1 opto-isolated input, 2 opto-isolated outputs, 2 non-isolated bi-directional ports **GPIOs:**

Hardware Trigger (GPIO) or Software Trigger **Synchronization:**

Back Panel **Interface Port Orientation:**

8-pin Hirose (HR25) **GPIO Connector Type:**

5.00 **Transfer Speed (Gbit/s):**

## Threading & Mounting

C-Mount **Mount:**

**Mounting Threads:**

## Environmental & Durability Factors

0 to +50 **Operating Temperature (°C):**

-30 to +60 **Storage Temperature (°C):**

## Regulatory Compliance

[Exempt](#) **RoHS 2015:**

[View](#) **Certificate of Conformance:**

[Contains SVHC\(s\)](#) **Reach 240:**

## Product Details

- Feature High Resolution, High Sensitivity Sensors
- High Frame Rates Driven by USB 3.0 Interface
- Includes Image Capture Software and SDK



Teledyne  
Authorized  
Distributor

### Teledyne FLIR IIS Grasshopper®3: Machine Vision area scan camera

The **Grasshopper®3** offers a cost-effective, powerful and easy-to-use alternative to Camera Link and dual GigE LAG solutions.

The **Grasshopper®3** camera line combines the benefits of CCD with the affordability and data throughput of either USB 3.0 or GigE interfaces. This high-performance camera model provides a range of characteristics with either CMOS or CCD sensors. Its FPGA and frame buffer-based architecture provides optimal reliability, a rich set of features, and a full image processing pipeline including color interpolation, gamma, and lookup table functionality.

**Note:** USB 3.0 cable (sold separately) is required for operation. Optional power supply ([#86-784](#)) available. Software available for [download](#). FLIR was previously known as Point Grey.

#### Features

- Compact form factor
- USB 3.0 models with resolutions from 2.3 to 12 Megapixel sensors
- GigE interface model at 2.3 Megapixel for high bandwidth performance
- Various high-resolution, large format CCD and CMOS sensor options
- Color transformation tools for true-to-life color
- GigE models feature PoE for simplified setup and maintenance
- Spinnaker SDK and code samples

#### Applications

- Factory automation
- 3D Measurement
- Flat Panel Inspection
- Life science instrumentation
- Biometrics kiosk solutions
- Ophthalmology
- Intelligent traffic systems