

## FLIR FLEA<sup>®</sup>3 GigE Vision



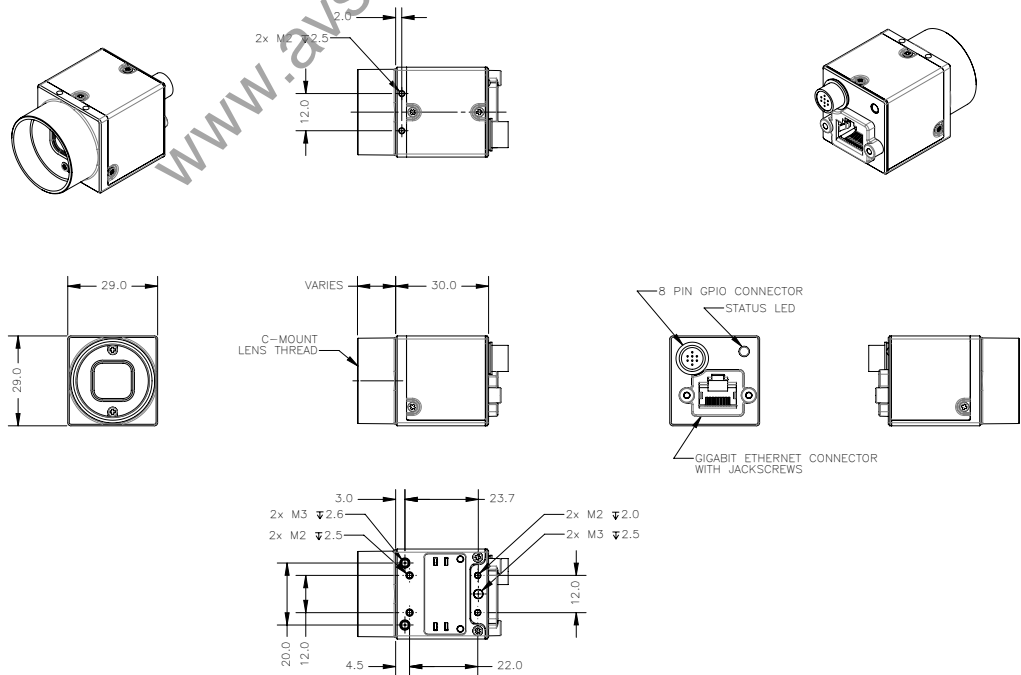
### ULTRA-COMPACT + VERSATILE + COST EFFECTIVE

The Flea3 FL3-GE line of the world's smallest Gigabit Ethernet cameras offers a total of twelve monochrome and color CCD models, ranging from VGA to 5.0 MP. Measuring just 29 x 29 x 30 mm and weighing only 38 grams, the Flea3 has the same small, lightweight form factor as many industry-standard "ice cube" analog cameras. The Flea3 also offers a host of new features, including enhanced opto-isolated GPIO; an on-camera frame buffer; non-volatile user data storage; new trigger modes; and improved imaging performance.



### KEY FEATURES

- Sony progressive scan CCD image sensors, mono or color
- GigE Vision Compliant, 1000 Mbit/s interface
- Compact 29 x 29 x 30 mm case



## Specifications

Model	Version	MP	Imaging Sensor
FL3-GE-03S1C-C FL3-GE-03S1M-C	Color Mono	0.3 MP	<ul style="list-style-type: none"> <li>■ Sony ICX618, 1/4", 5.6 μm</li> <li>■ Global Shutter</li> <li>■ 120 FPS at 648 x 488</li> </ul>
FL3-GE-03S2C-C FL3-GE-03S2M-C	Color Mono	0.3 MP	<ul style="list-style-type: none"> <li>■ Sony ICX424, 1/3", 7.4 μm</li> <li>■ Global Shutter</li> <li>■ 82 FPS at 648 x 488</li> </ul>
FL3-GE-08S2C-C FL3-GE-08S2M-C	Color Mono	0.8 MP	<ul style="list-style-type: none"> <li>■ Sony ICX204, 1/3", 4.65 μm</li> <li>■ Global Shutter</li> <li>■ 31 FPS at 1032 x 776</li> </ul>
FL3-GE-13S2C-C FL3-GE-13S2M-C	Color Mono	1.3 MP	<ul style="list-style-type: none"> <li>■ Sony ICX445, 1/3", 3.75 μm</li> <li>■ Global Shutter</li> <li>■ 31 FPS at 1288 x 964</li> </ul>
FL3-GE-14S3C-C FL3-GE-14S3M-C	Color Mono	1.4 MP	<ul style="list-style-type: none"> <li>■ Sony ICX267, 1/2", 4.65 μm</li> <li>■ Global Shutter</li> <li>■ 18 FPS at 1384 x 1032</li> </ul>
FL3-GE-20S4C-C FL3-GE-20S4M-C	Color Mono	2.0 MP	<ul style="list-style-type: none"> <li>■ Sony ICX274, 1/1.8", 4.4 μm</li> <li>■ Global Shutter</li> <li>■ 15 FPS at 1624 x 1224</li> </ul>
FL3-GE-28S4C-C FL3-GE-28S4M-C	Color Mono	2.8 MP	<ul style="list-style-type: none"> <li>■ Sony ICX687, 1/1.8", 3.69 μm</li> <li>■ Global Shutter</li> <li>■ 15 FPS at 1928 x 1448</li> </ul>
FL3-GE-50S5C-C FL3-GE-50S5M-C	Color Mono	5.0 MP	<ul style="list-style-type: none"> <li>■ Sony ICX655, 2/3", 3.45 μm</li> <li>■ Global Shutter</li> <li>■ 8 FPS at 2448 x 2048</li> </ul>

<b>Imaging Performance (EMVA 1288)</b>	See the <a href="#">Imaging Performance Specification</a> , which includes quantum efficiency, saturation capacity (full well depth), read noise, dynamic range and signal to noise ratio.
<b>A/D Converter</b>	12-bit
<b>Video Data Output</b>	8, 12, 16 and 24-bit digital data
<b>Image Data Formats</b>	Y8, Y16, Mono8, Mono12, Mono16, Raw8, Raw12, Raw16 (all models); RGB, YUV411, YUV422, YUV 444 (color models)
<b>Partial Image Modes</b>	Pixel binning and region of interest (ROI) modes
<b>Image Processing</b>	Gamma, lookup table, hue, saturation, and sharpness
<b>Shutter</b>	Global Shutter; Automatic/manual/one-push/extended shutter modes See product webpage for specific model's range
<b>Gain</b>	Automatic/manual/one-push modes See product webpage for specific model's range
<b>Gamma</b>	0.50 to 4.00, programmable lookup table
<b>White Balance</b>	Automatic/manual/one-push modes
<b>High Dynamic Range</b>	Cycle 4 gain and exposure presets
<b>Color Processing</b>	On-camera in YUV or RGB format, or on-PC in Raw format
<b>Digital Interface</b>	Gigabit Ethernet interface with screw locks for camera control and data
<b>Transfer Rates</b>	10/100/1000 Mbit/s
<b>GPIO</b>	8-pin Hirose HR25 GPIO connector for power, trigger, strobe, PWM, and serial I/O, 1 opto-isolated input, 1 opto-isolated output, 2 bi-directional I/O pins
<b>External Trigger Modes</b>	Trigger Modes 0, 1, 3, 4, 5, 13 (FL3-GE-13S2 only), 14 and 15
<b>Image Buffer</b>	32 MB frame buffer
<b>Memory Channels</b>	2 memory channels for custom camera settings
<b>Flash Memory</b>	1 MB non-volatile memory
<b>Dimensions</b>	29 mm x 29 mm x 30 mm excluding lens holder, without optics (metal case)
<b>Mass</b>	38 grams (without optics)
<b>Power Consumption</b>	12-24 V, <2.5 W, via GPIO
<b>Machine Vision Standard</b>	GigE Vision v1.2
<b>Camera Control</b>	via FlyCapture SDK, or GigE Vision third party software
<b>Camera Updates</b>	In-field firmware updates
<b>Lens Mount</b>	C-mount (FL3-GE-13S2 also available with CS-mount)
<b>Temperature</b>	Operating: 0° to 45°C; Storage: -30° to 60°C
<b>Humidity</b>	Operating: 20 to 80% (no condensation); Storage: 20 to 95% (no condensation)
<b>Compliance</b>	CE, FCC, RoHS
<b>Operating System</b>	Windows 7, Linux Ubuntu
<b>Warranty</b>	3 years

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