

# Grasshopper<sup>®</sup>2



- Sony progressive scan CCD image sensor, mono or color
- FireWire IEEE 1394b 800 Mbit/s interface
- Compact 44 x 29 x 58 mm case with C-mount lens holder
- Complies with IIDC 1.32

The fully redesigned Grasshopper2 camera series is the next generation version of the high performance Grasshopper. The Grasshopper2 uses the same form factor as the existing Grasshopper, and adds several new features, including enhanced opto-isolated general purpose I/O and improved imaging performance.



## IEEE 1394b Models

GS2-FW-14S5M/C-C	<b>1.4 MP</b>	Sony ICX285 CCD, 2/3", 6.45 x 6.45 $\mu$ m	1384 x 1036 at 30 FPS
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SPECIFICATIONS	GS2-FW-14S5M / C
<b>Image Sensor Type</b>	Sony progressive scan interline transfer CCD with square pixels and global shutter
<b>Image Sensor Model</b>	Sony ICX285 2/3"
<b>Max Res and Max Frame Rate</b>	1384 x 1036 at 30 FPS
<b>Pixel Size</b>	6.45 x 6.45 $\mu$ m
<b>Analog-to-Digital Converter</b>	Analog Devices 14-bit ADC
<b>Video Data Output</b>	8, 12, 16 and 24-bit digital data
<b>Image Data Formats</b>	Y8, Y16, Mono8, Mono12, Mono16, Raw16 (all models) RGB, YUV411, YUV422, YUV444, Raw8, Raw12, Raw16 (color model)
<b>Digital Interface</b>	IEEE 1394b 800 Mbit/s interface with screw locks for camera control, data, and power
<b>Partial Image Modes</b>	Pixel binning and region of interest modes available via Format_7
<b>General Purpose I/O Ports</b>	8-pin 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>Gain Control</b>	automatic / manual / one-push gain modes, programmable via software, -3.6dB to 24dB
<b>Shutter Speed</b>	automatic / manual / one-push modes, programmable via software, 0.03ms to 330s (extended shutter mode)
<b>Synchronization</b>	via external trigger; software trigger (on same bus) or free running
<b>External Trigger Modes</b>	External hardware or software trigger Multiple exposure, bulb shutter, multi-shot, and overlapped trigger modes
<b>Voltage / Power</b>	Voltage: 8-30 V Power: less than 2.5 W
<b>Dimensions (W x H x L)</b>	44mm x 29mm x 58mm (not including lens holder and GPIO connector)
<b>Mass</b>	104 grams (without optics)
<b>Memory Storage</b>	32MB frame buffer; 512 KB non-volatile data flash
<b>Memory Channels</b>	2 memory channels for custom camera settings
<b>Camera Specification</b>	Complies with IIDC 1.32
<b>Lens Mount</b>	C-mount
<b>Emissions Compliance</b>	CE, FCC, RoHS
<b>Operating Temperature</b>	0° to 45°C
<b>Storage Temperature</b>	-30° to 60°C
<b>Vibration Resistance</b>	10 G (14 Hz to 200 Hz)
<b>Status Monitoring</b>	Bi-color LED that can be red, green, or yellow
<b>Warranty</b>	2 Years