

## FlyCapture® SDK

The FlyCapture software development kit (SDK) is included with all Point Grey IEEE-1394 imaging products. The SDK is compatible with Microsoft Windows and includes a camera device driver, full software library with Application Programming Interface (API), demo programs and C/C++ example source code. FlyCapture also includes the PGR1394b-PRO™ driver, which provides enhanced debugging and diagnostics and allows 1394b devices to run at 800Mb/s.

## Region of Interest and Pixel Binning

To achieve faster frame rates and higher sensitivity, Point Grey imaging products implement several DCAM Format\_7 partial image video modes such as region of interest (ROI) and pixel binning.

## Automatic Inter-Camera Synchronization

Image acquisition from multiple Point Grey imaging products (with the exception of the Firefly MV) on the same IEEE-1394 bus is automatically synchronized to within 125µs. This occurs at the hardware level and is independent of the operating system. Point Grey cameras can also be synchronized across 1394 buses using Point Grey MultiSync™ software.

## Triggering and GPIO

All Point Grey imaging products come equipped include with a general purpose input/output connector. GPIO pins can be configured as inputs for external triggering, or outputs for sending strobe or PWM signals to external devices. Trigger modes supported on some cameras include: 0 (standard trigger); 1 (bulb shutter); 4 and 5 (multiple exposure); and 14 (overlapped exposure and readout.)

## Compatibility

Point Grey imaging products are compatible with many third-party software development kits, applications, camera drivers, and integrated development environments, such as those provided by Cognex, IOxperts, Mathworks, Matrox, MVTec, National Instruments and NorPix. For a complete list, visit [http://www.ptgrey.com/support/kb/data/Third\\_party\\_sw\\_compatibility.pdf](http://www.ptgrey.com/support/kb/data/Third_party_sw_compatibility.pdf)

## Quality Guaranteed

Point Grey Research pays particular attention to product quality and reliability – from worldwide sourcing of the highest quality components, to strict quality control measures and rigorous testing throughout the manufacturing process. These measures ensure that our customer can rely on Point Grey cameras for their demanding imaging applications.

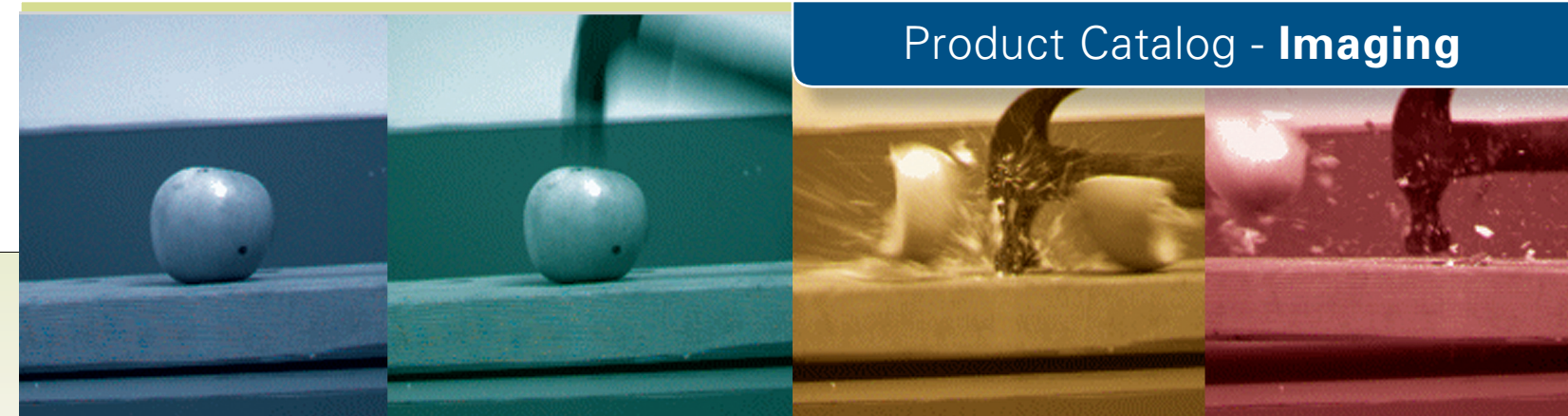
## Industry Leading Technical Support

Point Grey Research is proud to offer world-class support on installation, configuration, customization and troubleshooting, to ensure our customers derive significant value from their camera systems. Our goal is to deliver a superior ownership experience through online user manuals and Knowledge Base articles, regular software and firmware updates and quick response email and phone support.



POINT GREY  
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## Product Catalog - Imaging



## About Point Grey Research

Point Grey Research Inc. is a worldwide leader in the development of advanced digital camera technology products. Point Grey designs, manufactures and distributes IEEE-1394 cameras, stereo vision cameras and spherical digital video cameras, directly and through a network of distributors, to a broad spectrum of industries. Through a close working relationship with its customers, Point Grey continues to be at the forefront of innovation.

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# Product Specifications<sup>†</sup>

For more information or to place an order contact [sales@ptgrey.com](mailto:sales@ptgrey.com)

	Firefly <sup>®</sup> MV	Dragonfly <sup>®</sup> 2	Dragonfly Express <sup>™</sup>	Flea <sup>®</sup> 2	Flea <sup>®</sup>	Scorpion <sup>™</sup>
<b>Sensor Options</b>						
640x480 Sony <sup>®</sup> CCD, 1/3" (Color or Mono)		60 FPS		80 FPS <sup>1</sup>	60 FPS	60 FPS
640x480 Kodak <sup>®</sup> CCD, 1/3" (Color or Mono)			200 FPS <sup>1</sup>			
640x480 Sony <sup>®</sup> CCD, 1/2" (Mono)						60 FPS
1024x768 Sony <sup>®</sup> CCD, 1/3" (Color or Mono)		30 FPS		30 FPS	30 FPS	
1360x1024 Sony <sup>®</sup> CCD, 1/2" (Color or Mono)						19 FPS <sup>1</sup>
1600x1200 Sony <sup>®</sup> CCD, 1/2" (Color or Mono)						15 FPS
640x480 Micron <sup>®</sup> CMOS 1/3" (Color or Mono)	60 FPS					
<sup>1</sup> Frame rate achieved using Format_7						
<b>Mechanics and Hardware</b>						
Board size (mm)	40x25	64x51	64x51	29x29x30	30x31x29	50x50x40
Case size (mm)		75x65x25	75x65x25			
Mass (g) without optics	14g	40g (board)	25g (board)	58g	46g	125g
Micro lens mount	•	•	•	•	•	•
C / CS lens mount	CS	CS	CS	C	CS	CS
Auto iris		•				
Removeable protective glass / IR filter <sup>2</sup>	•	•	•	•		•
Interface	1394a	1394a	1394b	1394b	1394a	1394a
Power requirements (max)	1W	2W	4W	2.5W	3W	3.5W
<sup>2</sup> Not available with microlens options						
<b>Image Acquisition</b>						
Auto synchronization		•	•	•	•	•
Trigger modes (see back for descriptions)	0,3	0,1,3,4,5,14	0,1,3,14	0,1,3,4,5,14	0,1,3,14	0,1,3,14
Regions of interest and binning	•	•	•	•	•	•
Extended shutter times (> 10s)		•	•	•	•	•
<b>Image Processing</b>						
On-board color processing		•		•		
Gamma	•	•	•	•	•	•
Sharpness, hue, saturation		•		•		
Embedded image information	•	•	•	•	•	•
Signal-to-noise ratio	> 54dB	> 60dB	> 59dB	> 60dB	> 55dB	> 55dB
Test pattern		•	•	•		
Horizontal image flip (mirror)		•		•		
<b>Camera and Device Control</b>						
Trigger in, strobe out	•	•	•	•	•	•
RS232 serial port		•	•	•	•	•
GPIO pins for trigger or strobe	2	4	4	4	4	4
Digital output (bits)	8,10	8,12	8,10	8,12	8,12	8,12
Memory channels for power-up defaults	•	•	•	•		
User data flash storage		•				
Upgradeable firmware	•	•	•	•	•	•
IIDC 1394 DCAM compliance	v1.31	v1.31	v1.31	v1.31	v1.31	v1.31

<sup>†</sup> Product specifications and features are subject to change without notice.

