

# Micro-G1 – miniature rugged high speed camera



## Micro-G1 – An ultra small, rugged high speed camera

**Hi-G-rated for 200+ G and ready to function in the most limited spaces.  
A camera for spots that can't be reached otherwise.**

The Micro-G1 is particularly suited for all applications where space restrictions apply. The highly light sensitive sensor is built around extremely compact electronics, combined with unique mechanical design. This makes Micro-G1 the world's smallest stand-alone high speed camera.

The camera is designed to withstand G-forces in excess of 200 G / 10 msec (all axes) and spikes of up to 250 G. The Micro-G1 is a small camera for automotive crash test applications where space is limited.

### Unique features and benefits

- **Size** – The world's smallest stand-alone high speed camera
- **Camera that fits** – A 2 Mpixel sensor and built-in memory
- **Easy connectivity** – Gigabit Ethernet data interface with Power-Over-Ethernet and additional discrete trigger input
- **Standalone** – No PC connection for recording required
- **Small** – A camera the size of a matchbox!

# Micro-G1 – Key Specifications

## Typical frame rates vs resolution

	1920	1280	912	800	512	256
1080	250	350	500	600	900	1700
1024	270	400	550	650	1000	1800
720	350	500	800	900	1200	2500
700	400	600	820	920	1400	2600
600	450	700	900	1000	1600	2800
512	550	800	1000	1200	1800	3000
256	1000	1500	2000	2200	3000	5000

Table shows typical resolution vs. fps, Resolution is freely adjustable within limitations of camera/sensor

## Memory

Resolution	Maximum speed	Number of frames
800 x 600	1000 fps	500
1920 x 1080	250 fps	125
1280 x 720	500 fps	250
256 x 256	5000 fps	4000

## Optical/Sensor specifications

<b>Image Sensor</b>	CMOS Sensor
<b>Pixel size</b>	4.8 micron
<b>Light Sensitivity</b>	ISO 3000 (monochrome), ISO 2000 (color)
<b>Dynamic Range</b>	8 Bit
<b>Shutter Type</b>	Global, independent of frame rate
<b>Exposure Time</b>	Free adjustable from 50 µsec to 1 / framing rate by software
<b>Lens Mount</b>	C-Mount or CS-Mount

## Camera and control features

<b>Power</b>	Power-over-Ethernet (PoE) 48 VDC / 5 Watts
<b>I/O Tolerance</b>	TTL level, all I/O are 0–24 V tolerant
<b>Power On/Off</b>	By PoE power supply
<b>Trigger Modes, Positions</b>	Pre-post recording, freely adjustable in steps of 1% of total camera memory
<b>Auto-Download</b>	Auto download to PC for 24/7 recording when PC is connected
<b>OSD</b>	Information on camera, recording features, time stamp, and event marker may be added in image data, Position of OSD is set by user.
<b>Recording</b>	Recording parameters are stored in camera permanently. Upon power up camera goes into recording mode as in pre-sets defined. No connection or PC required. After recording re-connect camera for downloading data

## Imaging studio features

<b>Imaging Studio</b>	Software suite to parameterize and control camera, handle data download and conversion of native files into most common single images and movie formats. Runs on Win 7/8, 32/64 Bit
<b>Parameterization</b>	Set all camera parameters for recording by convenient and easy-to-use software interface supports graphical setting of resolution
<b>Display</b>	Display up to multiple cameras simultaneously in live mode or compare saved sequences with live view of cameras
<b>Editing</b>	Play back, edit and save sequences after recording with few clicks
<b>OSD (on screen display)</b>	OSD with per-defined information such as camera, resolution fps etc. Free user text input for customer specific comments.
<b>Overlay</b>	Overlay of recorded image with user adjustable opacity
<b>Point &amp; Click</b>	Easy point and click measurement and manual tracking features
<b>Export</b>	Export of AOS native file format to avi, mpeg, mpeg4, bmp, tif, png, jpg
<b>Image Processing</b>	Manual or automatic color correction and white balance functionality, Image data compression in camera
<b>Batch Converter</b>	Convert native files to movie files using off-line batch conversion

## Data interface

<b>Data Interface</b>	M12 Gigabit Ethernet connector
<b>I/O Interface</b>	Hirose connector
<b>Synchronization</b>	Phase-lock sync input
<b>Trigger In</b>	Trigger input, rising, falling edge, TTL, switch closing/opening

## Physical specifications

<b>Size &amp; Weight</b>	width: 59 mm / height 30 mm / length: 32 mm / 200 gr width: 2.32" / height: 1.18" / length: 1.26" / 0.5 lb
<b>Operating Temperature</b>	-10 ... + 45 °C / +14 ... + 113 °F
<b>Storage Temperature</b>	-40 ... + 70 °C / -40 ... + 158 °F
<b>Shock Resistance</b>	200 G / 10 msec all axis, spikes up to 250 G
<b>I/O Connector (mating connector for cable)</b>	Hirose SR38-4P-3P(71)
<b>CE</b>	In compliance with relevant standards
<b>Mounting</b>	4 x M4 mounting threads on 3 sides



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SERVICES, INC.

imaging@techimaging.com  
978-740-0063  
WWW.TECHIMAGING.COM



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