

# S-Motion – High-speed camera



## S-MOTION – the modular, compact high speed camera for industrial and research applications. More light sensitive than ever.

### Applications

The S-MOTION is particularly suited for all applications where a compact and portable yet robust camera is essential:

- Industrial applications such as the installation and setting up of machinery and assembly lines as well as the subsequent troubleshooting.
- Research applications in mechanical, electrical and process engineering, material stress testing, medical research, sports analysis, etc.

### Why the S-MOTION

- Full camera performance in a compact housing – full image resolution with all camera features built-in. No need to buy options to unleash the cameras full potential. The S-MOTION is always ready to face the most challenging applications.
- Robust design – designed for many years of industrial handling and harsh environments (extruded aluminium housing with heavy duty connectors)
- Simple to use – the camera control software is easy to use, even for novices and occasional users; operator training is not necessary – yet provides full control of the camera settings and functions

### Unique features

- **High Sensitivity** – the S-MOTION offers a light sensitivity greater than in previous cameras models. In many applications and settings, the camera delivers well-lit images without extra illumination, while in others only minimal extra light is necessary.
- **High light sensitivity** also allows for crisper images as motion blur, associated with fast moving objects can be substantially reduced by a shorter shutter time, and depth of field can be extended by stopping down the lens – both parameters are essential to create better, more informative images
- **Modular concept** – Have your S-MOTION extended with extra modules by choosing from an extensive range of extensions like CF interface (for image storage inside the camera) or a Video Interface to connect a video monitor
- **Selectable ROI** – the customer can select the most suitable image format (ROI, region of interest) almost without limitations, for best camera performance and image quality



## Technical key specifications

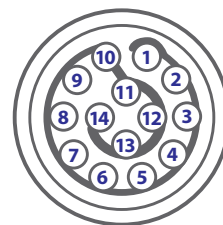
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| <b>Image Sensor</b>                    | Progressive CMOS, 1280 x 1024 pixels, mono or color  |
| <b>Sensor size (@ full resolution)</b> | 17.82 x 14.33 mm, 14 µm pixel size   |
| <b>Light sensitivity</b>               | ISO 3200 (monochrome), ISO 1600 (color)  |
| <b>Dynamic range</b>                   | 5-, 8- or 10 bit, adjustable by user   |
| <b>Gain control</b>                    | User selectable, High Dynamic Range (HDR) mode   |
| <b>Frame rate at full resolution</b>   | 500 fps @ 1280 x 1024 pixels   |
| <b>Typical fps/resolution settings</b> | 1280 x 1024 @ up to 500fps<br>900 x 700 @ up to 1'000fps<br>800 x 600 @ up to 1'250fps   |
| <b>Max. frame rate</b>                 | 100'000 fps  |
| <b>Shutter type</b>                    | Global electronic shutter  |
| <b>Shutter exposure times</b>          | 4 µsec to 1/frame rate   |
| <b>Image memory</b>                    | Built-in DRAM, circular buffer   |
| <b>Sequence length</b>                 | 2.2 sec @ 800 x 600 / 1250fps (1.3 GB memory)<br>4.4 sec @ 800 x 600 / 1250fps (2.6 GB memory)<br>8.8 sec @ 800 x 600 / 1250fps (5.2 GB memory)<br>17.6 sec @ 800 x 600 / 1250fps (10.4 GB memory) |
| <b>Data Interface</b>                  | Gigabit Ethernet (1'000 Mb/s)<br>RJ45, other connectors on request   |
| <b>Frame synchronisation</b>           | Sync in, Sync out (TTL)  |
| <b>Multi-camera operation</b>          | Yes  |
| <b>Memory Interface</b>                | Built-in CF interface (optional),<br>accepting CF cards for non-volatile data storage  |
| <b>Power supply</b>                    | 12 VDC (9...16VDC),<br>other voltage ratings on request  |
| <b>Power consumption</b>               | 14 W (w/o data link), 18 W (with data link)  |
| <b>Battery</b>                         | Built-in, rechargeable NiMH battery<br>allowing 3 hours camera operation.  |
| <b>Video Interface (optional)</b>      | SDI (digital) or PAL/NTSC (analog)   |
| <b>Operating temperature</b>           | 0 ... +45 °C (32 ... 113 °F)   |
| <b>Storage temperature</b>             | -40 ... +70 °C (-40 ... 158 °F)  |
| <b>Size, weight (standard model)</b>   | 72 x 72 x 122 mm, 1100 gr  |

### I/O Connector

- 1 GND (-)
- 2 V In (In)
- 3 Remote On (In)
- 4 Sync In (In)
- 5 Sync Out (Out)
- 6 Set-to-Rec (In)
- 7 Trigger (In)
- 8 Strobe (Out)
- 9 Armed (Out)
- 10 Triggered (Out)
- 11 Status 1 (In/Out)
- 12 Status 2 (In/Out)
- 13 Status 3 (In/Out)
- 14 Status 4 (In/Out)

**LEMO** Type: FGG.2B.314.CLAD82Z

**ODU** Type: S22LOC-P14MFG0-8200



different pinout configuration and connectors on request

### CE

In compliance with relevant standards



Mechanical engineering on an eccentric press



Industrial troubleshooting on a bottling line



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