



PRODUCT LEAFLET

TECHNICAL SPECS

APPLICATION NOTE

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 camera's 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 camera 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



Mechanical engineering on an eccentric press



Industrial troubleshooting on a bottling line

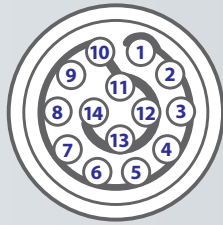
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Specifications are subject to change without prior notice – v08.2012



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Technical key specifications

Image Sensor	Progressive CMOS, 1280 x 1024 pixels, mono or color
Sensor size (@ full resolution)	17.82 x 14.33 mm, 14 µm pixel size
Light sensitivity	ISO 3200 (monochrome), ISO 1600 (color)
Dynamic range	5-, 8- or 10 bit, adjustable by user
Gain control	User selectable, High Dynamic Range (HDR) mode
Frame rate at full resolution	500 fps @ 1280 x 1024 pixels
Typical fps/resolution settings	1280 x 1024 @ up to 500fps 900 x 700 @ up to 1'000fps 800 x 600 @ up to 1'250fps
Max. frame rate	100'000 fps
Shutter type	Global electronic shutter
Shutter exposure times	4 µsec to 1/frame rate
Image memory	Built-in DRAM, circular buffer
Sequence length	2.2 sec @ 800 x 600 / 1250fps (1.3 GB memory) 4.4 sec @ 800 x 600 / 1250fps (2.6 GB memory) 8.8 sec @ 800 x 600 / 1250fps (5.2 GB memory) 17.6 sec @ 800 x 600 / 1250fps (10.4 GB memory)
Data Interface	Gigabit Ethernet (1'000 Mb/s) RJ45, other connectors on request
Frame synchronisation	Sync in, Sync out (TTL)
Multi-camera operation	Yes
Memory Interface	Built-in CF interface (optional), accepting CF cards for non-volatile data storage
Power supply	12 VDC (9...16VDC), other voltage ratings on request
Power consumption	14 W (w/o data link), 18 W (with data link)
Battery	Built-in, rechargeable NiMH battery allowing 3 hours camera operation.
Video Interface (optional)	SDI (digital) or PAL/NTSC (analog)
Operating temperature	0 ... +45 °C (32 ... 113 °F)
Storage temperature	-40 ... +70 °C (-40 ... 158 °F)
Size, weight (standard model)	72 x 72 x 122 mm, 1100 gr
I/O Connector	LEMO Type: FGG.2B.314.CLAD82Z ODU Type: S22LOC-P14MFG0-8200  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)
CE	In compliance with relevant standards

Complete technical specifications of our products are available as a separate document ('technical specs') from your AOS partner, or as a download from our webpage www.aostechnologies.com/downloads