

X-EMA high-speed camera

- Compact and rugged (100 G and harsh vibration)
- Gigabit Ethernet data interface
- No dedicated camera controller necessary
- Image-while-recording
- Built-in battery
- Stand-alone operation
- CF interface
- Certified according relevant MIL standard 810 and 461



Image shows X-EMA with CF extension interface (card slot open)

X-EMA offers features and functions for applications in the most demanding environmental conditions.

Key features

- Gigabit Ethernet data interface (other data interfaces available on request)
- Image-while-recording: Live image visible while camera is in record mode
- Shockproof up to 100 G/15 msec
- Built-in rechargeable battery with a capacity of 1 hour in standby mode or 1/2 hour in active mode
- CompactFlash memory
- Status input/output line for integration of an external status signal
- Power / Data management for best data safety
- Multi-buffer-mode for multiple-session recording
- Selectable dynamic level for best image quality
- Auto-save function for automatic image data download after recording. Recording can be restarted after download
- AOS Imaging Studio PC application featuring on-screen display and time stamping (also IRIG-B), motion analysis and other practical functions
- Ideal for extended environmental specs (vibration, temperature etc.)

Applications

The X-EMA is particularly suitable for all applications where a rugged, shockproof camera is essential:

- Airborne applications
- Range and ballistic tests
- On-Board MIL vehicle test
- Harsh industrial environments where cameras are exposed to vibration, impacts, dust, moisture and other challenging conditions
- Automotive crash tests (full-size or sled)

Advantages

- Ultra-compact, fits tight spaces (aircraft, MIL vehicles)
- No bulky hub or controller necessary
- Stand-alone operation and built-in battery for maximum data security
- 1.3 Mpixel resolution for superior image quality
- Easy and reliable to operate
- Rugged, all-metal aluminum housing
- IRIG-B time stamping



Software

All X-EMA cameras come complete with AOS Imaging Studio. Although very easy to use, AOS Imaging Studio offers the powerful features necessary for the most demanding applications. Motion analysis functions (manual) for point-and-click measuring. On-screen display allows text (or your logo) to be added to each frame of the image sequence. Time stamp function marks every frame with an IRIG-B time stamp.

X-EMA specifications

Sensor	Color or monochrome. 1,280 x 1,024 pixels up to 500 fps
Pixel size	12 µm
Frame rate	500 fps at full resolution, up to 32,000 fps at reduced resolution
Shutter time	4µsec – 1/fps, global shutter
Dynamic range	30-bit color or 10-bit monochrome
Gain control	User selectable for best image quality according to illumination and required sequence length: 10-bit: high image contrast / high sensitivity / shorter sequence 8-bit: normal image contrast / lo / mid / hi sensitivity / medium sequence 5-bit: low image contrast / lo / mid / hi sensitivity / longer sequence
Input / output	14-pin connector, heavy-duty type, lockable
Inputs	28V DC (24 – 36V DC), set-to-rec, trigger, synch in, remote on
Outputs	Synch out, strobe out, armed, triggered
In/output status line	Status line, in- or output, TTL, user configurable
Time stamping	IRIG-B122, amplitude modulated
Data interface	Gigabit Ethernet with click-type cable lock for data cable security
Image memory	1.3 GB / 2.6 GB / 5.2 GB / 10.4 GB DRAM providing sequence lengths of 2, 4, 8 or 16 sec. at full resolution, 500 fps and 8-bit dynamic level. Sequence length can be extended by reducing resolution and/or frame rate.
Temperature range	According MIL-STD-810
EMI	According MIL-STD-461
Housing	Rugged design featuring machined and anodized aluminum housing
Shock resistance	Shockproof up to 100 G / 15 msec / 3 axes
Size / weight	71 x 71 x 137 mm / 980 g
Lens mount	C-mount. Adjustable back focus setting
Lens adapters	(Nikon, others) available on request
Camera mounts	Standard 3/8" thread with 1/4" insert Additional M6 threads for secure mounting in Hi-G applications
Approvals / Certification	In compliance with relevant tests according MIL-STD-810 and MIL-STD-461.

Specifications are subject to changes without prior notice – v0708

Your local AOS partner:

Extensions

CF slot allows use of extensions such as Compact Flash Memory cards.

Project engineering

- Design of turnkey systems
- Design of fully customized cameras
- Customized data interfaces (i.e. wireless or fibre-optic)

Accessories

- Special protective housings (i.e. underwater, explosion-proof)
- Trigger devices (incl. radio-controlled devices)
- Fiber-optic data interfaces
- Optical systems, lenses

Services

- Customizing (camera equipment and software)
- Warranty extensions
- Maintenance contracts
- Financing, leasing



X-EMA with closed CF slot

AOS Technologies AG
Taefenstrasse 20
CH-5405 Baden-Daettwil
Switzerland
Phone +41 56 483 34 88
Fax +41 56 483 34 89
www.aostechnologies.com
Info@aostechnologies.com



Imaging for smart decisions