

Application

Digital high speed cameras for airborne applications without camera bin

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Subject

Existing film-based high speed cameras need to be replaced with digital high speed cameras as the film material becomes unavailable. Furthermore, the maintenance costs for the film-based cameras are increasing, plus the availability of spare parts gets problematic. New requirements in airborne testing also ask for digital high speed cameras with features not available with film-based cameras.

However, the digital cameras have to meet the relevant MIL-standards, and the integration costs have to be kept to a minimum. Ideally, the new digital camera is compatible to the film-based camera.

Due to the lack of an instrumentation bin, the camera has to be installed underneath the airplanes fuselage and wings just protected by a compact camera housing to monitor the release of various payloads as well as the ejection of flares.

Solution

The digital high speed camera X-EMA is designed and made specifically for this application. The X-EMA is tested and certified according to relevant standards such as MIL-STD-810. A special-designed camera housing allows the installation without the need for a dedicated camera bin, and the camera and the housing are tested and certified according to RCTA-DO-160 as well as MIL-STD-810.

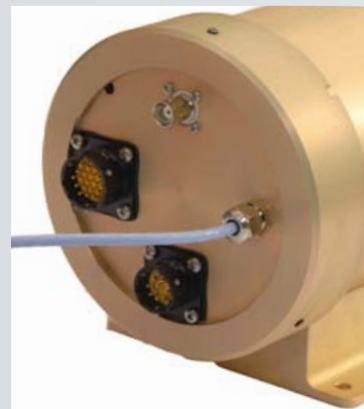
Customer benefits

The X-EMA is very compact and robust. It can be configured to 'simulate' a film-based camera by means of input- and output signals, plus it can be equipped with a wide range of connectors (i.e. AMPHENOL) to keep the integration simple.

- Multi sequence recording, 2-4 sequences with each flight
- Automatic download of image data to centralized control PC
- Dual storage in camera's internal memory and CF card
- eliminating the need for a camera bin



Camera housing with heated front screen



Backplate with customer-specified connectors



X-EMA high speed camera

Your AOS Partner:

Specifications are subject to changes without prior notice – v0810

Scope of supply

- multiple X-EMA high speed camera with automatic download of the image data to the central control PC
- lenses with lens cages
- camera housings with heated front screen (defogging) according DO-160
- control PC to control all connected cameras, as well as to store the recorded image data

Competitive advantage:

By using the unique concept of X-EMA camera and taking advantage of AOS' engineering expertise, the user got the transition from film to digital camera recording in minimum time, cost and - most important for the user - changes on the test aircrafts. AOS provided training for the camera operator and is of course a reliable partner for after sales support, extension on camera operation (e.g. for UAV operation) and last but not least assures long-term availability of spare parts.

Customers:

- Flight test centres
- Aircraft manufacturers
- Integrators of test- and measurement equipment for aircrafts