

Application note No. 68



Application

Turnkey multi-camera system for automotive car to car crash lab

Research Automotive Defense

Subject

AOS Technologies is well known to provide engineering for special turn-key projects. The purpose of this project is to provide users an economical, comfortable setup for the overhead cameras in car-to-car crash tests as well as a fast, secure data download from the cameras after the test. All operation shall be executed from the central control room.

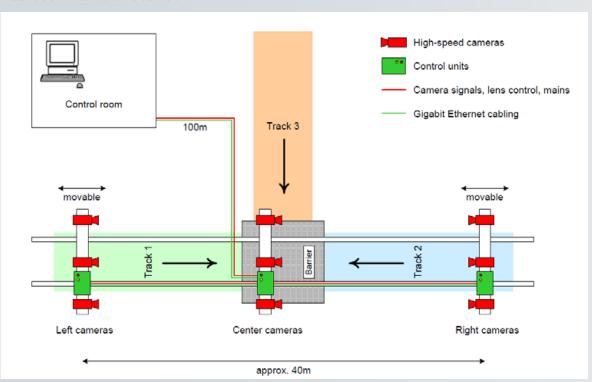
Solution

AOS Technologies is well known to provide engineering for complete turn-key projects to keep integration and installation time to a minimum .

Customer benefits

- Fail safe system with battery backed up image memory in camera assures data safety
- Reduced time and costs per test due to central control of cameras and data acquisition
- System layout with focus on economical operation
- Simplified maintenance by use of standard components
- AOS delivers turn-key system that clearly meets customer targets and expectations

Installation in car to car crash lab



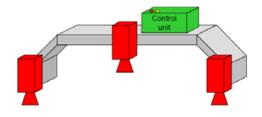


Application note No. 68

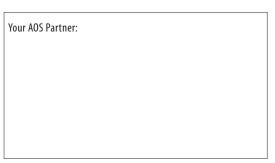




S-VIT LS high speed camera (tested and certified for up to 100G)



Detail of sub-system with three cameras



Specifications are subject to changes without prior notice — v0810



AOS Technologies AG, Täfernstrasse 20, CH-5405 Baden-Dättwil Tel. +41 (0)56 483 34 88, Fax + 41 (0)56 483 34 89 info@aostechnologies.com www.aostechnologies.com

- Gigabit Ethernet switch with 6 ports
- Power converter from 230VAC to 12VDC
- Wiring for frame synchronisation
- Wiring for lens control
- Logic and line driver for 'Armed' and 'Trigger' signals
- Relais for 'remote-switch-on', 'Set-to-Record' and 'Trigger' signals
- Each camera is equipped with a remote controlled lens
- Wiring of lenses, camera signals, Gigabit Ethernet connections and power supplies is managed by the control unit

Competitive advantage:

There are three sub-systems, each containing three cameras equipped with a remote controlled lens and a control unit to provide power and all required synchronization signals to the cameras. The cameras are switched on from the control room via the "Remote-Switch-On" signal. For adjusting zoom, focus and aperture, the motorized lenses bear an AOS adapted electronic to drive the motors over a distance of up to 100m. Of course all settings may be observed by the user on the screen in the control room. To ensure that all high speed cameras are ready, every unit is feeding back "Armed" and "Triggered". To start recording, 2 signals "Set-To-Record" and "Trigger" are available. The image data is transferred by Gigabit Ethernet. All cameras run in frame synchronisation mode...

Customers:

- car manufacturers
- test centers for automotive safety