

CASE STUDY

# AD Aerospace Retro-Fit Cockpit Door Surveillance Solution

## AD Aerospace's Retro-Fit Cockpit Door Surveillance System (CDSS).

Jet Aviation is a globally recognized leader in the business aviation industry, providing a wide range of engineering support services to VIP and private aircraft operators around the world. One of those customers is the Malaysian Government which operates an Airbus ACJ319, for which a requirement was identified to install a Cockpit Door Surveillance System (CDSS) in order to improve security around the cockpit door and allow pilots to identify anyone requesting access to the cockpit.

As an existing supplier of aerospace video surveillance equipment to Jet Aviation, AD Aerospace was approached for a solution, and the retro-fit CDSS system was proposed. This system can be supplied with either FAA STC or EASA Minor Modification approval to certify the installation on any member of the Airbus A320 family of aircraft.

The AD Aerospace retro fit CDSS system includes three FV-0410 Monochrome Video Surveillance cameras, an FV-0580 Video Switching Unit, two FV-0835 six-inch LCD Monitors and two FV-1050 Control Panels.



**FV-0410**

Video Camera



**FV-0580**

Video Transmission Unit



**FV-0835**

LCD Monitor



**FV-1050**

Control Panel



## System Installation

The system installation locates each LCD Monitor and Control Panel outboard of the pilots, below the cockpit side window, in an area which is normally just a storage bin on standard configuration aircraft. This location provides easy visibility of the Monitor and easy access to the Control Panel and was intentionally designed this way to offer an improvement over competitor's systems which locate both the Monitor and Control Panel on the back wall of the cockpit, which is less accessible and less easily visible without the pilots having to twist around in their seats.

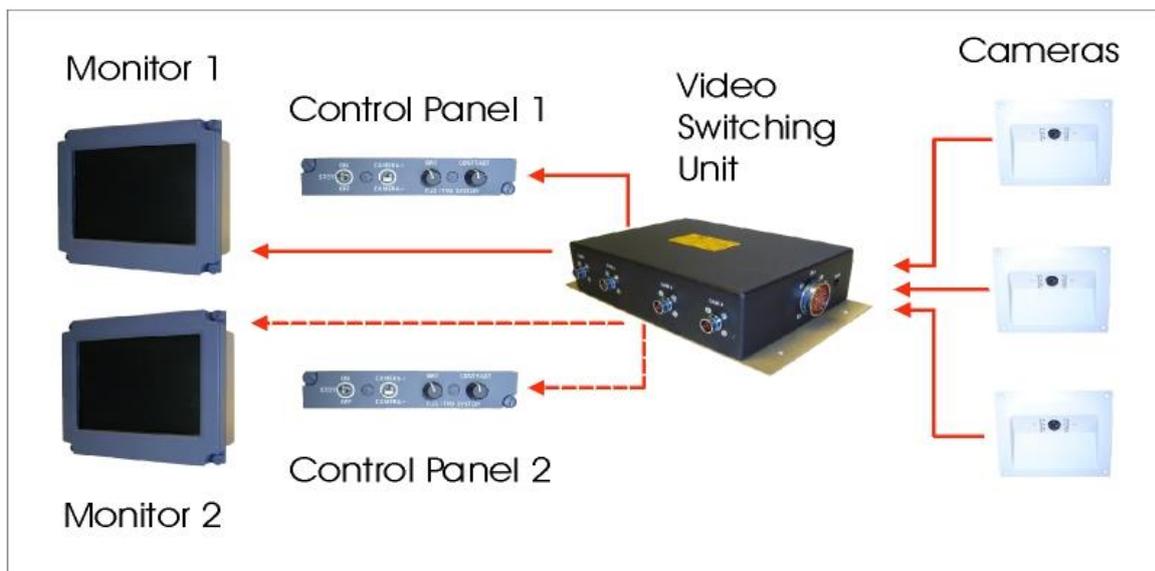


Figure 1: System Schematic

The three cameras are all located in the passenger cabin ceiling panels, one immediately in front of the cockpit door, once above the forward passenger door and one above the forward service door. This combination of camera locations provides full visibility of the forward passenger cabin area from in front of the passenger door, right across to the service door, including the galley area. This means that when the pilot is checking the system to identify who is requesting access to the cockpit, it is also possible to see that there is nobody else hiding behind the toilet bulkhead or in the galley, and that the person outside the galley door is not under threat or duress.

The only remaining system unit is the Video Switching Unit, which is secreted behind a passenger cabin ceiling panel in front of the forward service door. The whole system is easily installed over a 2-3 day working period, consuming on average 100-125 manhours. Once fully functional, the pilots have full visibility of the area outside of the cockpit door, are able to clearly identify anyone requesting permission to access the cockpit, and are able to be made fully aware of all activity within a 2-3 metre radius from the door.

