CASE STUDY

AD Aerospace Cabin Surveillance Solutions

Air rage incidents aboard commercial airlines present high-risk level to the safety of passengers and crew. AD Aerospace offer a sophisticated video security system for the prevention of air rage crimes, by increasing the information available to pilots and crew.

Ethiopian Airlines is the flag carrier of Ethiopia and has become one of the continent's leading carriers. It commands a lion's share of the pan African network operating the newest and youngest fleet of aircraft. The airline operates a number of different aircraft types but identified the same requirement for all aircraft, to introduce a video surveillance system to monitor and record activity in the passenger cabin in order to deter disruptive passenger behaviour and theft from the galleys.

A system was proposed which consisted of a minimum of four, up to a maximum number of eight FV-0413 Video Surveillance Cameras, an FV-0710 Video Transmission Unit and an FV-0835 cockpit mounted LCD Monitor with associated FV-1050 Control Panel.

FV-0413

Video Camera

FV-0610

Video Transmission Unit

FV-0835

LCD Monitor

FV-1050

Control Panel

AD Aerospace has a recently developed video surveillance camera which was ideal for this type of situation, the FV-0413 model. Its physical form resembles a traditional golf ball shaped CCTV camera and can be easily identified by passengers as such, to help serve as a deterrent. This camera produces excellent quality images down to low light levels; aided by the built in Infra-Red Illuminators.

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The Technical Details

The FV-0710 Video Transmission Unit provides for up to 8 video inputs, which are multiplexed, digitized and compressed. The video is then stored on an easily accessed Compact Flash memory card which can be removed for remote viewing on a laptop, This is a compact unit that can be installed almost anywhere on the aircraft provided there is access to enable removal and replacement of the Compact Flash memory card. In this instance, installation in the electronics bay was proposed.

A live viewing capability was proposed by use of a cockpit mounted FV-0835 6" LCD Monitor with an associated FV-1050 Control Panel which is mounted adjacent to the Monitor.

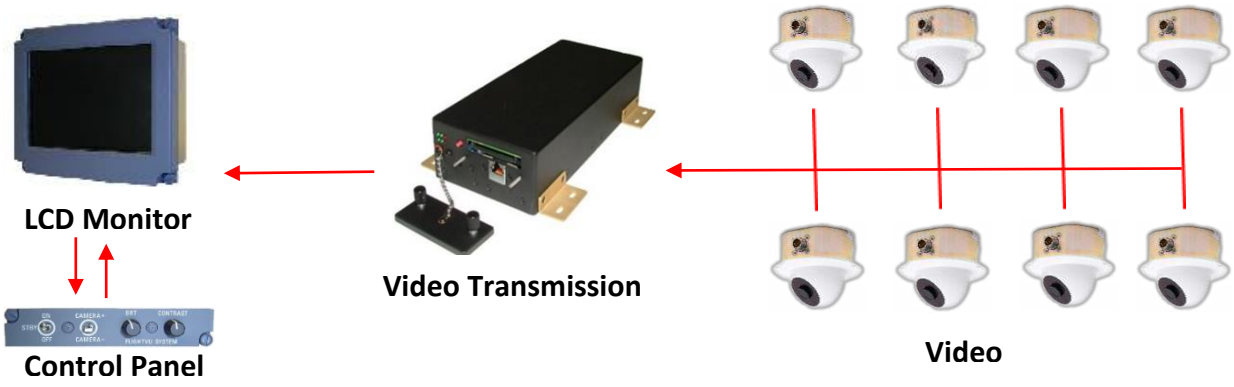

Figure 1: System Schematic

Such passenger cabin video surveillance systems can help deter disruptive passenger behaviour in the passenger cabin which in some instances can lead to physical assaults to Cabin Crew or even passengers. This type of situation can result in missed landing slots which can be expensive for an airline, not to mention the implications of subsequent delayed flights and associated potential costs. In addition, the presence of a clearly visible video surveillance camera is a potential deterrent to anyone considering committing an act of theft from one of the aircraft galleys or from one of the overhead passenger storage bins. In the case of either of these types of behaviour occurring, video evidence would be captured, thereby allowing such evidence to be submitted in the case of legal action, where such evidence is admissible.

A suitably specified video surveillance system not only acts as a deterrent for a whole spectrum of potential passenger related disruptive behaviour, whilst simultaneously providing recorded video evidence should any such action still occur, but it also provides the pilot in command with significantly increased situational awareness without leaving the relative safety of the cockpit, thereby allowing suitably informed operational decisions to be made.

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