Airborne video cameras

Entertainment camera system (ECS)



Securaplane's entertainment camera system (ECS) gives every aircraft passenger the best seat in the house—quality color video images that are often better than the view from any window seat. The Securaplane ECS was specifically designed, from component level to integrated system, for aviation. One to six color cameras installed in various locations on the aircraft provide many different wide-angle, zoom and panoramic views depending on the number and type of cameras installed. The system can be customized to meet the individual needs of each customer.

Key features

- Landscape camera
 - Provides a spectacular view of the landscape directly below the plane Equipped with a 10:1 zoom lens
- Panoramic camera
 - Positioned to look primarily forward and slightly down through a fixed, wide-angle lens to show an extraordinary view ahead of the aircraft
 - Both cameras typically mounted inside the aircraft's fuselage looking through the same window installed into the body of the aircraft
- Entertainment camera interface unit (ECIU)
 - Main interface between the ECS and the aircraft
 - Provide single-ended or balanced NTSC images to the aircraft's In-Flight Entertainment (IFE) system for viewing by the passengers and crew
 - Provides a multiplexed output that cycles through the various camera views every fifteen seconds depending on flight mode or command signals from the IFE system
 - Controlled via an ARINC 485 interface from the IFE system

Installations

Available for factory installation on

- Boeing 747
- Boeing 767
- Boeing 777







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Specifications

Video display	Up to 6 cameras, NTSC/RS-170A		
Video image	Differential composite video		
Resolution	768 horizontal pixels by 494 vertical pixels		
Minimum sensitivity	0.5 lux, scene of illumination, full video output		
Electronic shutter dynamic	Greater than 100,000 to 1		
range			
Lens, landscape camera	Auto-focus 7.5-mm to 75-mm focal length standard, other sizes available		
Color correction	Auto white balance		
Power	28 VDC standard, 3.75 amps maximum current for a 3-camera system with interface unit (115V, 400 Hz optional)		

	Entertainment camera interface unit (ECIU)	Landscape camera	Panoramic camera
Part number	702500-500	702520-500 (747 only) 702520-510 (767 and 777)	702540-500 (747 only) 702540-510 (767 and 777)
Weight	8.25 lb (3.74 kg) 3MCU form factor	4.25 lb (1.93 kg)	1.45 lb (0.66 kg)
MTBF (calculated)	38,109 hours	26,579 hours	26,579 hours

Additional ECS features and benefits

- > Electronic iris and shutter control
- No moving parts except the motorized zoom lens on the landscape camera
- Operates in light conditions ranging from bright sun or snow to full-moon night-flight conditions
- > Anti-flare control compensates for bright "hot spots"
- > Heated sapphire lens used on the externally mounted cameras prevents fogging and icing to ensure clear views in a wide range of atmospheric conditions
- Common camera housings, connectors and output characteristics are used in multiple mounts/applications to simplify the system and reduce production costs
- > Viewing angle of each camera can be adjusted to satisfy a variety of applications



ECS panoramic camera view

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