

Aerial Surveillance Systems, Inc.

2010 SkyEye 350ER Maritime Patrol Aircraft (MAP)



Detect, Process, Evaluate, Resolve, Act, Exploit! - In Real-time!

DETAILED SPECIFICATION SHEET AND INSTALLED EQUIPMENT

Gross Weight: 16,500 Pounds
Max. Cruise: 315 Knots
NBAA Range: 1,598 Nautical Miles
Service. Ceiling: 35,000 Feet

Engine Specs:

Engine Model: PT6A-60A

Prop(s):

Prop Model: Hartzell 4 blade

Avionics/Radios:

Collins Pro Line 21 - Two (2) AFD-3010 and one (1) AFD-3010E adaptive flight displays.
Com 1: Collins VHF-4000 (8.33 Spacing)
Com 2: Collins VHF-4000 (8.33 Spacing)
Nav 1: Collins NAV-4000
Nav 2: Collins NAV-4500
FMS: Dual Collins FMS-3000, 2nd GPS
Autopilot: Collins FGC-3000
Radar: TWR-850
ADF: Collins NAV-4000
DME: Single Collins DME-4000
ADC: Dual Collins ADC-3000
ELT: ELT C406-2
AHRS: Dual Collins AHC-3000
Transponder: Dual TDR-94D (without Flt ID)
ESIS: L3 GH-3100
Radio Altimeter: Single Collins ALT-4000
TCAS: Collins TCAS 4000 (II)
CVR: L3 Communications FA-2100-1020-00 w/120 minutes
RVSM: Compliant
IFIS: IFIS w/E-Charts & XM Graphical Weather, SAT WX: Cabin Paging - Five Speakers
EGPWS: ACSS TAWS+,GPS 4000A; MDC-3110 Maintenance Diagnostic Computer.

Exterior:

To Customer' Choice,


Interior:

To Customer's Choice

Factory New Warranty Status:

Warranty: Structure (Fuselage, Empennage, Wing and Control Surfaces) – 5 years, Non HBC & HBC manufactured parts - 5 years (1,200 hours), whichever occurs first. Collins avionics - 5 years, Pratt and Whitney engines - 5 years or 2,500 hours (whichever occurs first, balance of remaining engine hours at time of delivery), Exterior paint and interior finish items - 2 years (400 hours), whichever occurs first.

C4-ISR Special Missions Equipment Installed:

- 1) a Highly Modified Special Missions Cargo Pod fitted with a FLIR Systems, Inc Star SAFIRE™ III hard mounted and attached to the underside of the aircraft. In addition to the standard EO/IR FLIR turret, the special missions pod also enables the aircraft to mount other sub-systems such as missile warning and defensive systems, Signals Intelligence (SIGINT) systems, Synthetic Aperture Radar (SAR) with GMTI capabilities, and many other customer desired options or to be used for excess cargo or external baggage.
- 2) The FLIR Systems Star SAFIRE III Airborne Electro Optical/Infrared (EO/IR) Thermal Imaging System which is a High Definition NATO+ exportable imaging system with no Laser Designator. The Stabilized Turret FLIR Unit (TFU) has a 640x512 Infrared Focal Plane Array that is Optically Microscanned to produce a 1280 x 720 true High Definition image which is coupled to 5 field-of-view (FOV) 120x telescope for maximum range performance. The system also has a 5 FOV, high Definition color daylight camera with 120x zoom as well as a lowlight HD camera with matched fields-of-view to the thermal imager for Image Blending. Other options include a Laser Rangefinder (LR), Laser Pointer (LP), Laser Illuminator, multimode video auto tracker and an internal Inertial Measurement Unit (IMU) with Navigation Processor and embedded GPS for precise geo-pointing, geo-location. All of the features listed above make it the most powerful, only full HD multi-sensor imager in its class.
- 3) a FLIR Systems EO/IR System Control Unit and Central Electronics Unit mounted inside the aircraft with a User Interface and General Atomics CLAW compatibility.
- 4) A Telephonics RDR-1700B Maritime Surveillance Radar. The RDR-1700B is a 1 kW X-Band, search radar delivering excellent performance and the ability to search, detect, and track multiple targets during over water surveillance. RDR-1700B enables critical maritime missions including: • Airborne Maritime Patrol, • Search and Rescue • Maritime Interdiction • EEZ (Economic Exclusion Zone) Patrol • Contraband/Illegal Immigration Control • Fisheries Protection • Integrated AIS.
- 5) a specially designed and built Mission Control Operator's Console (MCOC) mounted inside the cabin which contains:
 - a) dual installed Rosen Aviation 20 inch High Resolution Monitor Displays
 - b) a Rosen Aviation Cabin Display Management System to control all video displays in the cabin and cockpit utilizing 3 each Computerized Passenger Control Units (PCU's)
 - c) a General Atomics CLAW Aircraft Workstation which is a 19 inch, rack mounted, Quad Core, high performance ruggedized aircraft qualified computer (PC) which supports full systems operability and a 1600x1200 video resolution for the monitor outputs and up to 6 hours of mission recording and capture support on the hard drive.
 - d) General Atomics CLAW software including a moving map and full geo-location and time-stamp information and full sensor system control and cueing. The CLAW software also enables full mission planning and post mission review and critique
 - e) a mounted keyboard control and trackball to control all aircraft and sensor functions
 - f) Broadcast Microwave System's (BMS) aircraft data link antenna control
 - g) a Special Missions Cobham NAT Digital Audio Panel (DACs) controller

- h) FLIR Systems, Inc Hand Controller for manual control of the turret system and laser designator
 - i) Cobham/Wulfsburg Flexcom 5000 Controller
 - j) Sky Connect Forte Iridium Control Unit.
 - k) AIS Automatic Tracking System
- 6) a Cobham/Wulfsburg RT-5000 Flexcomm radio which provides total communications capability and which is a complete multi-band solution for flying in the rigorous and dynamic para-public environment. This top-of-the line Wulfsberg tactical radio system transforms the aircraft into a command and control center in the sky. It is the only system that enables users to talk on all law enforcement, military, medical, marine, SAR and public service frequencies from 29.7 MHz to 960 MHz with P-25 compliant digital communications and supports full encryption up through and including Level 1.
- 7) a FORTÉ system from EMS Sky Connect, which is a highly effective satellite phone system that delivers full in-flight capability and global coverage through the Iridium network with an integrated cabin intercom system for communications between the cockpit and cabin. A USB connection point provides email and data access available on the aircraft with two-way text messaging and tracking option and includes a MMU-II cockpit and cabin dialer.
- 8) an EMS eNfusion® HSD-400 Satcom receiver with two each, two (2) channel card subsystems (4 total channels) which are used for data and voice communication. Each card can support two (2) simultaneous Inmarsat Swift 64 channels, or a single (1) SwiftBroadband (BGAN) channel. The SD-400 interfaces with the eNfusion® AMT-3800 intermediate-gain antenna used to receive and transmit voice and data from the aircraft via the Inmarsat satellite network and to provide high-speed voice and data links to Inmarsat's world-wide satellite network. The HSD-400 accesses SwiftBroadband services over Inmarsat's I-4 satellite network and the unit can fall-back on Swift 64 services over the I-3 satellite network, for ultimate reliability over SwiftBroadband's Standard IP (up to 432kbps, nominally 300-150kbps) or Streaming IP (QoS service).

This system is installed and interfaced with the SCOTTY airborne communication suite which supports various applications. With the SCOTTY system the aircraft can transmit high resolution live video, make voice calls, hold in-flight full duplex video conferences, send and receive moving map data, access the Internet, send faxes, still pictures, and transfer recorded video files in "real-time" all over a link which is compatible to any military-standard encryption devices. SCOTTY provides reliable beyond line-of-sight video surveillance and communications to/from anywhere in the world. Whether for reconnaissance, or for live operations where rapid decisions and ground support are required, SCOTTY's Aero Mission's Gear provides a permanent 'live' link using audio, video, and/or data to maximize the communication with the ground. The system offers up to 4 channels of 64 kbps each over Inmarsat, giving the user multiple role capabilities such as simultaneous voice, data and video transmissions from air to ground or vice versa.

- 9) a Broadcast Microwave Services (BMS) Bidirectional C-Band Microwave Line-of-Sight (LOS) Datalink System including the C-band transceiver, aircraft mounted Omni antenna and corresponding BMS Ground Receiver Station with Directional Tracking antenna, and 2 each man-portable Broadcast Microwave Services' (BMS) digital microwave receivers. The system is a standards-based design, ensuring interoperability and integration with all security and defense systems in order to collect critical information from the aircraft in real-time, all from safe distances of up to 100 miles. The FLIR EO/IR turret cameras can record information behind enemy lines and from long distances and transmit the video and location coordinates back to command centers

and tactical ground troops. Ground personnel can quickly analyze and respond to suspicious, volatile, or perilous situations. Access to this critical information fosters well-informed decisions, providing a major tactical advantage to ground troops while minimizing casualties. The BMS system is also ROVER 3 compatible and the ground station datalink can "assume control" of the aircraft sensors from the ground thereby allowing personnel on the ground to view targets of opportunity instantly in real-time.

- 10) an antenna interconnect and power supply for provisioning for up to 3 each Harris PRC-117 military radio systems with interface to the aircraft Special Mission Audio system with 2 each installed "batwing" Satcom antennas and one Line of Sight (LOS) UHF antenna.
- 11) a Cobham Digital Audio Control System (DACS) Special Missions Audio System which is a communications management system with the ability to distribute and control all audio in the aircraft, to/from all transceivers, receivers and aural alert sources and also provides an integrated, multichannel cabin and cockpit intercom system with 2 cockpit and 4 cabin control locations and programmable user definition which allows the audio system to be configured to suit customer specific communication schemes and any type communications equipment from any supplier in the world.
- 12) two (2) each 10.4 inch cabin and one (1) each 8.6 inch Rosen cockpit displays and PCU's to provide system video to the cockpit and two cabin observer stations so that these locations are able to view the mission control and sensor information in real-time and "see" what the mission control operator is seeing from the MCO console.

Other Optional Maritime Surveillance Radars are available as are Side-Looking-Airborne Radar (SLAR), Buoy and Smoke Ejection Canister ejection systems and Life Raft drop systems.

