

HAES Scanner

Mission

The HAES Scanner is a short endurance system. The HAES mission is



unmanned aircraft Scanner's primary reconnaissance and surveillance in support of the operational commander.

Surveillance imagery from video cameras



IRS (Image Receiving System)



GDT (Ground Data Terminal)

and forward looking cameras are distributed in real-time.

Features

The HAES Scanner is a system, not just an aircraft. A fully operational system consists of one aircraft (with sensors), a Ground Data Terminal, an Image Receiving System, a HAES Scanner Satellite Link, along with operations and maintenance crews for deployed 24-hour operations.

The basic crew for the HAES Scanner is a pilot and a payload operator. HAES Scanner follows a conventional launch sequence from a semi-prepared surface under direct line-of-sight control. The take-off distance is typically 50 m (165 ft) and landing 100 m (330 ft).

The mission is controlled through real-time video signals received in the Ground Data Terminal. Command users are able to task the payload operator in real-time for images or video on demand.

The surveillance and reconnaissance payload capacity is 10 kg (22 lb), and the vehicle carries electro-optical and infrared cameras. The aircraft can be equipped with sensors as the mission requires. The cameras produce full-motion video.

The system is composed of three major components, which can be deployed for operations in the field. The HAES Scanner aircraft can be disassembled and loaded into a container for travel.

Background

The HAES Scanner system was designed in response to the needs of police and military to provide long-duration intelligence, surveillance and reconnaissance information.

It has many other uses: promotion, real estate sales, technical documentation of historic buildings, digs registration, comparison of geological changes, agriculture, detection of illegal buildings and junkyards, searching for missing persons or fugitives, measurement of concentrations of noxious gases, traffic monitoring, residential area monitoring, and security patrol.

General Characteristics of HAES Scanner V1.2**Primary Function:** Reconnaissance, airborne surveillance and target acquisition**Contractor:** HAES Group (**H**acker Model Production and **E**volving **S**ystems Consulting)**Power plant:** Rotary engine w/ propeller; 1 x 11 hp**Wingspan:** 3 m (10 ft)**Length:** 2.15 m (7 ft)**Height:** 0.85 m (2.7 ft)**Maximum takeoff weight:** 25 kg (55 lb)**Payload:** 10 kg (22 lb)**Speed:** Cruise speed around 80 km/h (49 mph), maximum up to 150 km/h (92 mph)**Range:** 6.5 km (3.8 mi), limited by datalink range**Ceiling:** 1,000 m (3,300 ft)**Endurance:** 2 hr**Crew (remote):** Two (pilot, payload operator)**GSE (ground segment):** Two suitcases, containing pilot and payload operator consoles (GDT = Ground Data Terminal, IRS = Image Receiving System)**Initial operational capability:** March 2005**Unit Cost:** TBD (includes one aircraft, ground segment consoles, and HAES Scanner Satellite Link)**Inventory:** Demonstrator, 1; Active force, 1; Reserve, 1**Point of Contact****Hacker Model Production a.s.**, Zahradní 465, 270 54 Řevničov, Czech RepublicTel./Fax +420-313-562-258 or e-mail info@hacker-model.com**evolving systems consulting s.r.o.**, Nám. Dr. Holého 1052/11, 180 00 Praha 8, Czech RepublicTel. +420-604-347-014 or e-mail info@evolvsys.cz

March 2010