

Cranfield Aerospace (CAe) has established a reputation for market leading innovation in **Unmanned Air Systems (UAS)**, continuing to make major contributions in the area of UAS research, concept development, UAS systems provision, flight services, trials and support.

Working on a wide range of projects for clients including UK MOD and Boeing Phantom Works, CAe's experience allows it to work closely with its customers, from initial requirements capture through concept generation, down selection and design to manufacture, test and support.

CAe delivers high levels of innovation in providing world-leading and highly effective UAS, satisfying the most demanding of requirements. Combined with its civil and MOD approvals, CAe can provide complete turnkey and wholly independent UAS solutions such as **CASSIUS** which offer improved operational capability and reduced through life cost.

CAe's UAS capabilities include:

- Advance concept engineering
- System design, build and test
- Flight Control System (FCS) design
- Deskilled Ground Control Station (GCS)
- Rapid prototyping
- Independent and unbiased UAS assessment
- Support to UAS certification
- Flight Test Services
- Flight Trials Management and Support

Contacts:

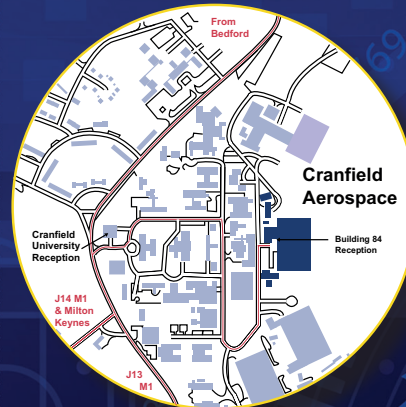
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CA SSIUS

Unmanned Air System

**An automated system for
Intelligence, Surveillance and
Reconnaissance...**



Where innovation takes off...

Cranfield Aerospace Special Services Integrated Unmanned Air System

CASSIUS is an Unmanned Air System (UAS), providing operators with:

- A highly automated airborne surveillance capability
- Man portable ground station
- Real-time imagery from the UAS to the user
- Dual cameras for both electro optical (EO) and infrared (IR) imagery
- A fully automated flight system requiring minimum user interaction, with maximised operator focus on the surveillance image.

A UK designed and produced, ITAR free UAS able to be employed across a number of domains including military, security, emergency services and environmental agencies. It is a highly capable and cost effective UAS for Intelligence, Surveillance and Reconnaissance (ISR) applications, utilising over 25 years experience of innovative manned and unmanned airborne systems.



EO/IR Sensor

- Day / night time surveillance – border patrol and protection, forest fire detection, search and rescue
- 2 axis gyro stabilised gimbal
- EO camera - 10x optical zoom
- IR camera – up to 8x digital zoom
- SD/HD configurable
- Onboard storage & real-time transmission
- COFDM transmitter
- UHF, L-band or S-band variants
- AES 128/256 encryption available
- Reconfigurable for alternative payloads

System Specification

- Wingspan 2.5m
- Dry weight 8kg
- Reliable and robust 4 stroke IC engine
- Max speed 78kts
- Cruise speed 49kts
- Service ceiling greater than 5000ft amsl
- Flight endurance > 2hrs
- Catapult launch/skid recovery
- Touch screen tablet interface
- GCS portable powered
- Intuitive mission planning and re-planning
- Inbuilt failsafe and recovery mode