

# SMALL UNMANNED AIRCRAFT SYSTEMS

# RAVEN

# UAS

## Unmanned Aircraft Systems



The RQ-11B (Raven) is the Army's Program of Record for providing the lowest elements of the tactical force with dedicated aerial reconnaissance and surveillance. Raven's are currently operating in both Operation Iraqi Freedom and Operation Enduring Freedom. Raven fieldings have been underway since June 2006 to both active and reserve component Brigade Combat Teams and Armored Cavalry Regiments. In 2008, the Army's Basis of Issue Plans extended the Raven presence into Military Police, Engineer, and Field Artillery units. The Raven system is a critical element of the Intelligence, Surveillance, and Reconnaissance Surge effort. The Raven provides company level and below commanders an organic, on-demand, asset to develop situational awareness, enhance force protection, and secure routes, points, and areas. The Raven conducts surveillance during routine combat operations, much in the manner of an observation post or a screening element. As another asset of an integrated reconnaissance and surveillance plan, the Raven will respond to queuing from other sensor systems or provide queues to those sensors and reaction forces. A second ground control station provided with the system can serve as a remote video terminal for commanders. The Raven system is self-contained and rucksack portable. The Raven's data link was upgraded to a digital link in 2009, providing added security and reliability.

Wing Span	Air Vehicle Weight	Range	Airspeed	Operational Altitude	Max Altitude	Endurance	Payload	GCS/RVT	System Design	Data Link	Flight Modes
4.6 ft	4.4 lbs	10+ km (LOS)	Cruise-30 mph Dash-60 mph	300 ft AGL	10,500 ft MSL	90 min	Electro Optical front & side-look (2592x1944 pixels) Infrared Side Look (320x240 pixels) Infrared w/Laser Illuminator - 25 ft Spot at 500 ft AGL	Handheld (GCS & RVT are interchangeable) Combined Weight- 9 lbs (13.9 lbs w/mission planning/RSTA Laptop)	Modular, Kevlar composite, direct-drive electric motor, Li-Ion rechargeable batteries	Digital Data Link (DDL) using IP based protocol with 95 selectable channels-of which 16 may be used in an ops area-locked to specific air vehicle	Autonomous or Manual





**Reconnaissance, Surveillance, and Target Acquisition (RSTA) kit:** Facilitates mission planning, monitoring of mission progress, and observing, recording, and processing of video and still images derived from the Small Unmanned Aircraft Vehicle. The RSTA kit is fielded to units on the same basis as the Raven. The RSTA kit is employed by the SUAS operator as an optional element of their normal mission.

**Visualization And Mission Planning Integrated Rehearsal Environment (VAMPIRE):** an embedded simulation capability 100% hosted on the RSTA Kit allowing operators to train and rehearse operator and mission-level tasks. Closely integrated and correlated with FalconView™ flight planning software, VAMPIRE simulates operator tasks such as route and mission planning as well as in-flight tasks such as target tracking and reaction to emergency situations. VAMPIRE provides Soldiers with an enhanced ability to train on Raven systems anywhere, anytime.

**The system provides day/night reconnaissance and surveillance capabilities to maneuver battalions, significantly enhancing force protection.**



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