

## **Aircraft System**

- Description of aircraft system.



Figure 1: APV-3 UAV

The APV-3 is a complete portable, medium-range UAV that can operate autonomously and serve as a platform for imaging and chemical sensors, and communications relay components. The aircraft and its systems are modular in design for simple maintenance and replacement of damaged components. The airframe is constructed of carbon fiber, fiberglass, and epoxy.

The APV-3 has a wingspan of 12 feet, a takeoff weight of 80 pounds and a cruise speed of 55 mph. The aircraft operates autonomously using an autopilot system that has a telemetry range of up to 20 miles. The engine operates using gasoline.