



# Fact Sheet

## U.S. Air Force Fact Sheet MQ-1 PREDATOR

### **Mission**

The MQ-1 Predator is a medium-altitude, long-endurance, remotely piloted aircraft. The MQ-1's primary mission is interdiction and conducting armed reconnaissance against critical, perishable targets. When the MQ-1 is not actively pursuing its primary mission, it acts as the Joint Forces Air Component Commander-owned theater asset for reconnaissance, surveillance and target acquisition in support of the Joint Forces commander.



### **Features**

The MQ-1 Predator is a system, not just an aircraft. A fully operational system consists of four aircraft (with sensors), a ground control station, a Predator Primary Satellite Link, and approximately 55 personnel for deployed 24-hour operations.

The basic crew for the Predator is one pilot and two sensor operators. They fly the aircraft from inside the ground control station via a line-of-sight data link or a satellite data link for beyond line-of-sight flight. The aircraft is equipped with a color nose camera (generally used by the pilot for flight control), a day variable-aperture TV camera, a variable-aperture infrared camera (for low light/night), and a synthetic aperture radar for looking through smoke, clouds or haze. The cameras produce full motion video while the SAR produces still frame radar images.

The MQ-1 Predator carries the Multi-spectral Targeting System with inherent AGM-114 Hellfire missile targeting capability and integrates electro-optical, infrared, laser designator and laser illuminator into a single sensor package. The aircraft can employ two laser-guided Hellfire anti-tank missiles with the MTS ball.

The system is composed of four major components which can be deployed for worldwide operations. The Predator aircraft can be disassembled and loaded into a "coffin." The ground control system is transportable in a C-130 (or larger) transport aircraft. The Predator can operate on a 5,000 by 75 feet (1,524 meters by 23 meters), hard surface runway with clear line-of-sight. The ground data terminal antenna provides line-of-sight communications for takeoff and landing. The PPSL provides over-the-horizon communications for the aircraft.

An alternate method of employment, Remote Split Operations, employs a smaller version of the GCS called the Launch and Recovery GCS. The LRGCS conducts takeoff and landing operations at the forward deployed location while the CONUS based GCS conducts the mission via extended communications links.

The aircraft includes an ARC-210 radio, an APX-100 IFF/SIF with Mode 4, an upgraded turbo-charged engine and glycol-weeping "wet wings" for ice mitigation. The latest upgrade includes fuel injection, longer wings, dual alternators and other improvements.

## **Background**

The "M" is the Department of Defense designation for multi-role and "Q" means unmanned aircraft system. The "1" refers to the aircraft being the first of a series of purpose-built remotely piloted aircraft systems.

The Predator system was designed in response to a Department of Defense requirement to provide persistent intelligence, surveillance and reconnaissance information to the warfighter.

In April 1996, the secretary of defense selected the U.S. Air Force as the operating service for the RQ-1 Predator system. A change in designation from "RQ-1" to "MQ-1" occurred in 2002 with the addition of the armed reconnaissance role.

Operational squadrons are the 11th, 15th and 17th Reconnaissance Squadrons, Creech Air Force Base, Nev. and the 196 Reconnaissance Squadron, March Air Reserve Base, Calif.

## **General Characteristics**

Primary Function: Armed reconnaissance, airborne surveillance and target acquisition

Contractor: General Atomics Aeronautical Systems Incorporated

Power Plant: Rotax 914 four cylinder engine producing 101 horsepower

Length: 27 feet (8.22 meters)

Height: 6.9 feet (2.1 meters)

Weight: 1,130 pounds ( 512 kilograms) empty, maximum takeoff weight 2,250 pounds (1,020 kilograms)

Wingspan: 48.7 feet (14.8 meters)

Speed: Cruise speed around 84 mph (70 knots), up to 135 mph

Range: up to 400 nautical miles (454 miles)

Ceiling: up to 25,000 feet (7,620 meters)

Fuel Capacity: 665 pounds (100 gallons)

Payload: 450 pounds (204 kilograms)

Armament: two laser-guided AGM-114 Hellfire anti-tank missiles

System Cost: \$40 million (fiscal 1997 dollars)

Initial operational capability: March 2005

Inventory: Active force, 57; ANG, 0; Reserve, 0

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## **Point of Contact**

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