Predator B Description

Dimensions:

Wingspan: 66ft (20.1168m)
Length: 36ft (10.9728m)

Weights:

Weight: 10,000lb (4,536kg)
Internal Payload: (b) (7)(E)
External Payload: 3,000lb (1,361kg)

Engine:

(b) (7)(E) Turboprop

Performance:

Altitude: 50,000ft (15,240m)
Endurance: (b) (7)(E)
Airspeed: Over 220kt (407km/hr)

Aircraft Systems, Communications & Payloads:

The CBP aircraft is a long endurance, high altitude unmanned aerial vehicle designed to support long duration surveillance missions. The flight control is via a (b) (7)(E) computing system and (b) (7)(E) Navigation is performed by a (b) (7)(E) Navigation System that utilizes (b) (7)(E) Inertial Measurement Units (IMU) and Global Positioning System (GPS) receivers.

The aircraft is a mid-wing monoplane with a slender fuselage, high aspect ratio wing, an upright V-tail and a ventral fin. Airframe construction is a (b) (7)(E) composite structure using primarily (b) (7)(E) graphite skin and (b) (7)(E) sandwich panels. The structure is covered with (b) (7)(E) paint. The aircraft has retractable tricycle landing gear and is powered by a rear-mounted, (b) (7)(E) turboprop engine with a 3-blade pusher propeller. The aircraft is equipped with navigation and anti-collision strobe lights. Two nose mounted television cameras, one color and one infrared, provide the pilot and sensor operator a forwarding looking view used for takeoff and landings as well weather and obstacle avoidance.
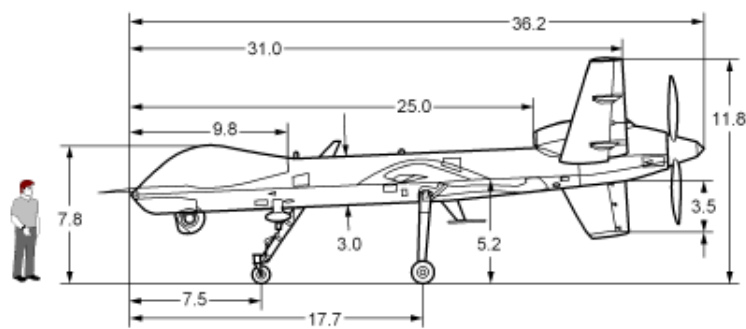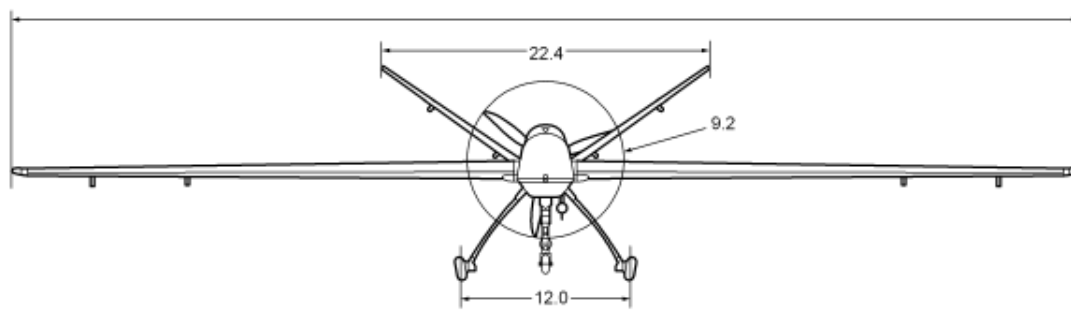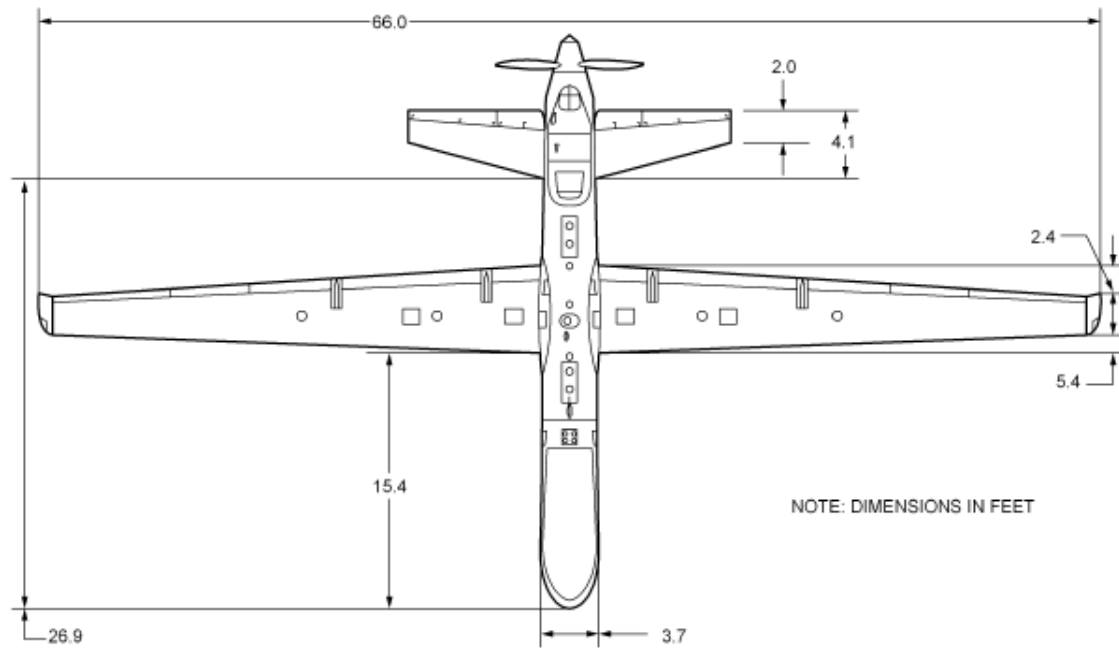
Aircraft control and sensor commands are up-linked to the aircraft via a line-of-sight (LOS) radio frequency system or Beyond Line-Of-Sight (BLOS) via a **(b) (7)(E)** satellite system datalink. Aircraft telemetry information and sensor data are linked to the GCS from the aircraft via the datalink (LOS or BLOS). In addition, the CBP baseline UAS aircraft includes the **(b) (7)(E)** provides a **(b) (7)(E)** BLOS datalink as a backup downlink in the event the LOS or BLOS datalinks are not available **(b) (7)(E)** also provides limited control of the aircraft **(b) (7)(E)** radio and **(b) (7)(E)** transponder to maintain voice communications through the aircraft radio in the event the LOS or BLOS datalinks are not available. In CBP maritime UAS aircraft the **(b) (7)(E)** datalink is **(b) (7)(E)** **(b) (7)(E)** provides two voice channels for simultaneous and independent **(b) (7)(E)** voice communications and a backup command and control datalink (growth).

The aircraft is capable of performing real-time missions (manual, ground-based pilot control) **(b) (7)(E)** Real-time missions are flown under the control of a pilot in a Ground Control Station (GCS) **(b) (7)(E)** **(b) (7)(E)** **(b) (7)(E)** The aircraft can also be "handed off" to other strategically placed ground or sea based GCS's. In the event the LOS or BLOS dataliks are not available, **(b) (7)(E)**
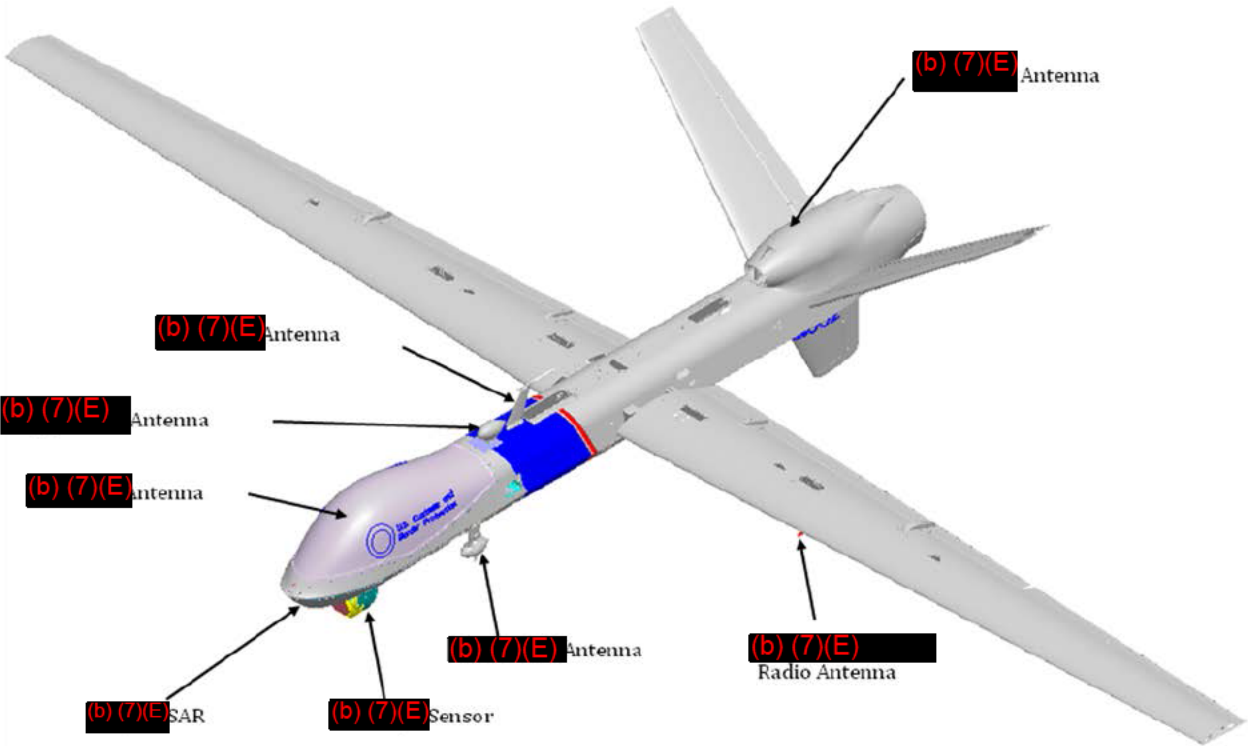
The aircraft supports **(b) (7)(E)** Synthetic Aperture Radar (SAR) or Maritime SeaVue Radar with **(b) (7)(E)** Electro-Optical/Infrared/Low Light Television (EO/IR/LLTV) sensor with **(b) (7)(E)** VHF/UHF radio(s), and a **(b) (7)(E)**

UAS Datalink and Payloads Configuration Matrix

CBP Baseline UAS Configuration	CBP Maritime UAS Configuration
(b) (7)(E) LOS Datalink	**(b) (7)(E)** LOS Datalink
(b) (7)(E) Satellite Datalink	**(b) (7)(E)** Satellite Datalink
(b) (7)(E) Datalink	**(b) (7)(E)** Datalink
(b) (7)(E) Transponder	**(b) (7)(E)** Transponder with Mode **(b) (7)(E)**
(b) (7)(E) Radio	**(b) (7)(E)** Radios
(b) (7)(E)	**(b) (7)(E)**
(b) (7)(E)	**(b) (7)(E)**
(b) (7)(E) EO/IR/LLTV Sensor	Maritime **(b) (7)(E)** EO/IR/LLTV Sensor
(b) (7)(E) Synthetic Aperture Radar	SeaVue Maritime Radar
	(b) (7)(E)

66.0

2.0

4.1

2.4

5.4

15.4

NOTE: DIMENSIONS IN FEET

26.9

3.7

22.4

9.2

12.0

36.2

31.0

25.0

11.6

9.8

7.8

3.0

5.2

3.5

7.5

17.7

CBP Baseline UAS Configuration

(b) (7)(E) Antenna

(b) (7)(E) Antenna

(b) (7)(E) Antenna

(b) (7)(E) Antenna

(b) (7)(E) Antenna

(b) (7)(E) Radio Antenna

(b) (7)(E) SAR

(b) (7)(E) Sensor

CBP Maritime UAS Configuration

(b) (7)(E) Antenna

(b) (7)(E) Antenna

(b) (7)(E) Maritime Radar

(b) (7)(E)

(b) (7)(E)

(b) (7)(E) Antenna

(b) (7)(E) Antenna

(b) (7)(E)

(b) (7)(E)

(b) (7)(E) Antenna

(b) (7)(E)

(b) (7)(E) Antenna

(b) (7)(E)

(b) (7)(E)

(b) (7)(E) Antenna

(b) (7)(E) SEAVUE Radar

(b) (7)(E) Antenna

(b) (7)(E) Antenna