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MLB Bat 4 Price List July 2011



Bat 4 UAV

Introduction

The MLB Bat 4 is a small, unmanned aerial vehicle (UAV) that has mission capabilities typically found only in larger UAVs and is capable of carrying a wide range of research payloads up to 30 lbs weight. The Bat 4 is a complete UAV system that can operate autonomously, deliver high quality video imagery, and can be transported in a small van. The aircraft operates autonomously, has a 8-hour duration (with 30 lbs payload), and telemetry range of up to 10 miles (can be extended with optional long-range data link equipment).

The Bat 4 uses conventional landing gear and a runway for take-off and landing. The runway can be any smooth surface 300 feet long and 50 feet wide, it need not be paved. Take-off and landing are usually performed by a ground based operator using a standard radio control hand set, but fully autonomous launch and recovery is available as an option at extra cost. A twin cylinder 6.6 cubic inch (110 cc) gasoline engine powers the aircraft and it includes an on-board generator system capable of delivering 750 Watts of power to the payload. Typical altitude for operation is 500 to 10,000 feet above the local terrain,

with a cruising speed of 40 kts and a maximum speed of 65 kts. The Bat 4 can easily operate in limited visibility conditions without danger to persons on the ground or possibility of detection. An optional lighting system allows nighttime operation of the Bat 4. Our aircraft have flown under 200 foot cloud ceilings and in gusty winds exceeding 35 mph.

A pusher engine configuration is used to permit unobstructed installation of sensors in the nose and the Bat 4 has uses gimbal turret camera system that is automatically aimed at locations specified by the operator. The TASE family of gimbal systems (manufactured by Cloud Cap Technologies) is used in the Super-Bat and is available with E/O, IR, and SWIR camera configurations. The aircraft and its systems are modular in design for simple maintenance and replacement of damaged components. The airframe is constructed of Kevlar, carbon fiber, and aluminum. The Bat 4 has a 156 inch wingspan and a ready-to-fly weight of 65 pounds without payload.

Cloud Cap Technologies Piccolo autopilot and ground station are used for the flight control of the Bat 4. A laptop PC with a moving map display shows the aircraft's location, speed, and height in real time and allows the operator to fly the UAV using simple mission commands. System monitoring windows are used to keep track of the Bat's critical systems and a live video capture window with optional video stabilization and object tracking capabilities. The flight path is specified as a series of mission legs, each with its own altitude, speed, and waypoint. The operator can change the mission plan by "dragging and dropping" waypoints over the map display and then uploading the new flight plan to the aircraft.



Specifications:

Name: MLB Bat 4

Uses: Short range surveillance

Country: USA

Powerplant: 110cc 2-stroke engine

Fuel: Gasoline 40:1 oil mixed in.

Dimensions: 13 x 8 x 3 feet assembled, 3.5 x 1.25 x 1.5 packed.

Weight: 100 lbs with fuel, 30 lb payload, and TASE Gimbal sensor.

Performance:

Speed 35 to 65 kts

Duration 8 hours maximum (12 hours with optional fuel tanks)

Ceiling 10,000 feet

Range 6-10 mile radius (telemetry limited), 320 miles fuel limited.

Sensor: TASE or TASE Duo gimbal systems with E/O, IR and SWIR cameras.

Payload: 30.0 lb max installed in removable payload bays (2 sizes available)

Data Link: 2.4 GHz video downlink, 900 Mhz spread spectrum 2-way modem

Launch: Take-off from runway using wheels.

Guidance: Autonomous flight operation. Mission plan created with Cloud Cap Piccolo ground station. Manual RC control for launch and landing.

Recovery: Land on runway 100 x 15 meter area.

Operational: Winds up to 25 kts, operable in moderate precipitation.

MLB Bat 4 UAV Frequency Information:

Video:

1 Watt EIRP, Antenna is a zero db, fixed frequency (user configurable before flight): 2.410, 2.430, 2.450, 2.470, 2.413, 2.433, 2.453, 2.473GHZ

Manufacturer: Black Widow AV, Broomfield, CO

<http://www.blackwidowav.com/bwav2401000components.html>

Telemetry:

1 Watt EIRP Antenna is 0db, spread spectrum 902 to 928 MHZ, 400 KHZ increments

Manufacturer: Microhard, Calgary, Canada

FCC ID#NS902P5

Bat 4 Pricing

Item	Price Each
Bat 4 UAV complete system with TASE gimbal turret and Piccolo autopilot	\$135,000
Bat 4 UAV with TASE gimbal turret	\$100,000
Bat 4 UAV Ground station	\$30,000
Optional TASE Duo gimbal (price increment to baseline system)	\$20,000

Basic Flight Training /Flight Services

Item	Price Each
On-Site training for 2 teams (3 person per team, within USA)	\$3,000 per day+travel
On-Site support (within USA)	\$4,000 per day+travel
On-Site support (outside USA)	TBD

Bat 4 Spares Parts Price List

Item	Cost	Comment
Wing (left)	5,000	Field Replaceable
Wing (right)	5,000	Field Replaceable
Wing (center)	5,000	Field Replaceable
Fuselage (with fuel tank and motor mount)	6,500	
Tail	4,000	Field Replaceable
Boom (each)	250	Field Replaceable
Landing gear (rear)	1000	Field Replaceable
Landing gear (front)	1500	
Payload pod	1500	Field Replaceable
Engine (with generator)	5000	Field Replaceable (500 h)
TASE Gimbal	20,000	Field Replaceable
Aiframe w/o autopilot or gimbal	45,000	
Tracking Antenna	3,500	Field Replaceable
MLB Labor rate for repair	75/hour	Labor Only

Terms:

A non-refundable deposit (50% of total hardware order) is required before construction begins. Delivery will be approximately 90 days after receipt of initial payment. Please contact MLB for a more specific delivery date estimate. California customers may be subject to additional sales tax. All foreign sales are subject to export license restrictions and possible extra shipping, tax, export fees. All products are sold without warranty and the purchaser assumes all liability for any items purchased from MLB. The end user is responsible for compliance with all FAA and FCC regulations that may apply to the operation of this equipment. UAV activity within the United States is heavily regulated by the FAA and the end user is responsible for clearing all flight operations with the proper authorities. These prices are subject to change without notice.