Airborne Systems®

FireFly®

Guided Precision Aerial Delivery System

FireFly® is a reusable Guided Precision Aerial Delivery System that can fly itself to a designated point on the ground after being dropped from altitudes up to 24,500 ft (7467 m) Above Mean Sea Level (AMSL). Capable of carrying a Gross Rigged Weight (GRW) of up to 2,400 lb (1,089 kg), the FireFly® can glide up to 25 kilometers after being dropped and has repeatedly demonstrated the ability to land 80% of all drops within 150 m of the designated Impact Point (IP).

This horizontal and vertical separation between the delivery aircraft and the unit receiving supplies increases safety for the air crew and improves security for the receiving unit. The ability to autonomously deliver supplies reduces a deployed unit's logistical footprint and decreases the number of convoys required to sustain the force.

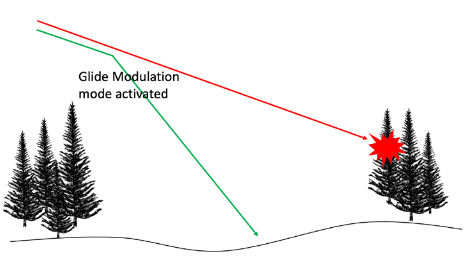
Flight Algorithm

The FireFly® Guidance, Navigation, and Control software analyzes its environment in real time, adjusting the flight algorithm several times each second. FireFly's® ability to continually adjust the flight plan results in greater accuracy and higher reliability.

Rapid Descent Mode

FireFly® uses a unique feature, named the rapid descent mode, that can reduce the the glide of the canopy from 3.25:1 to 1.5:1. Thanks to this mode, the three main concerns related to the use of GPADS are mitigated:

- The size of the safety footprint is reduced in most cases
- The landing is performed in an almost vertical flight, with urban drop zones in mind (square, compounds, stadiums)
- The survivability of payloads is increased as they are less likely to tumble upon landing



Landing on a tight DZ with Glide Modulation

Ease of Use

To program the FireFly®, the user only needs to enter the location of the impact point and the payload GRW. There is no need to enter wind data into the system. Just as a jumper under canopy continuously reads the winds and makes the required corrections, the FireFly® makes continual corrections until the final flare to land.

Mission Planning

The Airborne Systems jTrax Mission Planner is also capable of running simulated missions using the included terrain mapping software. Simulating missions before an actual airdrop allows the aircrew to ensure surrounding terrain will have no effect on the mission.

Control Unit

The Remote Control Unit allows a user to remotely program the system and to monitor the status of systems while onboard the aircraft prior to drop. After the FireFly® is dropped, the Remote Control Unit can be used to monitor the location and heading while in flight. If desired, an operator may override the Airborne Guidance Unit and fly the system manually.

Family of Systems

The FireFly® is part of a family of GPADS platforms developed and manufactured by Airborne Systems. The MicroFly II®, FireFly®, and DragonFly® systems are capable of delivering gross rigged weights from 200 lb (90.7 kg) to 10,000 lb (4,535 kg). Airborne Systems has also developed the MegaFly® and the GigaFly® which will increase the GRW range up to 42,000 lb (19,050 kg).

All operate with a common algorithm, user interface, and mission planner. The packing methodology for all systems is identical, so little additional training is required to qualify riggers on different systems.

Selected by U.S. DoD

The FireFly® was selected as the system of choice for the U.S. Army Joint Precision Airdrop System 2,200 lb (JPADS 2K) Program of Record.

To date, thousands of FireFly® systems have been sold to the U.S. and International customers.

Specifications	FireFly®	
Gross Rigged Weight		
Minimum	650 lb	294.8 kg
Maximum	2,400 lb	1,089 kg
Physical characteristics		
System Weight	162 lb	73.5 kg
Span	56 ft	17.1 m
Surface Area	1,025 sq ft	95.2 m^2
Chord	18 ft	5.5 m
Cell Count	19	
Altitudes		
Maximum Release (AMSL)	24,500 ft	7,468 m
Minimum Release (AGL)	5,000 ft	1,524 m
Max Glide		
L/D, No Wind	3.25 : 1	

Roadway Landing

All Airborne Systems Precision Guided Systems have a default setting to perform an into-the-wind landing. This reduces the groundspeed of the system and improves payload survivability.

In situations where the user requires the system to land on a straight section of roadway, a ridgeline, or the long axis of a drop zone, the system can be programmed to land on a designated azimuth.

AIRBORNE SYSTEMS NORTH AMERICA

sales@airborne-sys.com
airborne-sys.com

NEW JERSEY
5800 North Magnolia Avenue
Pennsauken, NJ 08109, USA
Tel: +1.856.663.1275
Fax: +1.856.663.3028

CALIFORNIA
3100 W. Segerstrom Avenue
Santa Ana, CA 92704, USA
Tel: +1.714.662.1400
Fax: +1.714.662.1586

TRAINING FACILITY
4760 North Lear Drive
Eloy, AZ 85131, USA
Tel: +1.856.571.4717