The RazorFly™ 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). The RazorFly™ is capable of carrying a Gross Rigged Weight (GRW) of up to 4,500 lb (2,041 kg), the RazorFly™ 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 RazorFly™ Guidance, Navigation, and Control software analyzes its environment in real time, adjusting the flight algorithm several times each second. The RazorFly™ 's ability to continually adjust the flight plan results in greater accuracy and higher reliability.

Ease of Use

To program the RazorFly™, 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 RazorFly™ 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.

RazorFly™ carrying a Polaris MRZR4 vehicle.

Remote Control Unit

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 RazorFly™ 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 RazorFly™ is part of a family of GPADS platforms developed and manufactured by Airborne Systems. The MicroFly®, 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 is also developing 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.

Specifications	RazorFly™	
Gross Rigged Weight		
Minimum	2,500 lb	1,134 kg
Maximum	4,500 lb	2,041 kg
Physical characteristics		
Surface Area	1,740 sq ft	162 m²
System Weight	250 lb	113 kg
Cell Count	23	
Altitudes		
Maximum Release (AMSL)	24,500 ft	7,468 m
Minimum Release (AGL)	5,000 ft	1,524 m
Max Glide		
Glide Ratio	3.5 to 3.75: 1	
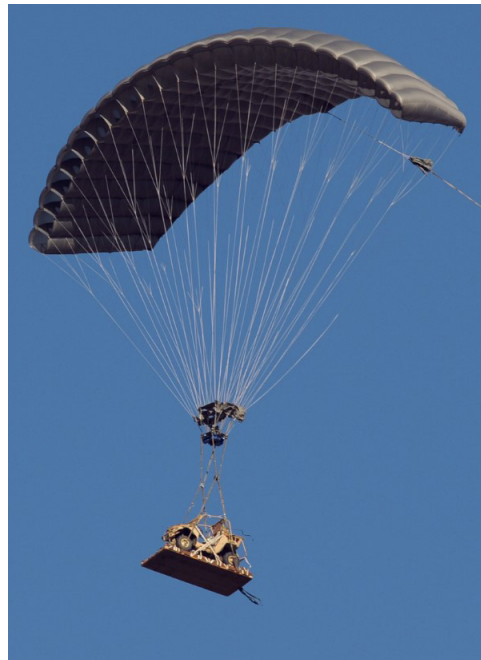
Roadway Landing Algorithm

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.

RazorFly™ carrying a Polaris MRZR4 vehicle.