Orbiter™

Field-Level Mini UAV System

Aeronautics

The Orbiter system

Aeronautics Defense Systems, makers of the record-breaking Aerostar Tactical UAV, with over 20,000 operational flight hours to its credit, now bring you the Orbiter mini UAV for close Surveillance and Reconnaissance missions.

The Orbiter mini UAV provides field commanders with near-instant “over the hill” reconnaissance capability, and is easily controlled in either Waypoints Navigation or Camera Guidance (UAV slaved to camera) modes. The Orbiter System can be transported, assembled, launched and operated by just two persons after minimal training. The entire Orbiter System fits into one backpack and no additional personnel need to be fielded.

Military Applications:

- Close-range Surveillance and Reconnaissance
- Special operations
- Low intensity conflicts
- Urban operations
- Convoy support
- Force protection
- Battle Damage Assessment

Homeland Security Applications:

- Counter terror operations
- Law enforcement
- Guarding strategic facilities

Features:

- Man-pack/vehicle transportable
- Assembled in 10 minutes
- Launched by a catapult, bungee or hand
- Very low noise signature
- Easily controlled from handheld Personal GCS
- Automatic parachute + airbag recovery
- Day and night operational capability
- 15 km range
- 1.5 hour flight endurance
- Rapid turn-around

Operationally Proven:

- The Orbiter is already being operated successfully and independently by customers in different parts of the world.
- The Orbiter has proved its capabilities under difficult weather conditions, by day and by night.

Rapid Deployment

Assembled in less than 10 minutes, the Orbiter is launched by a catapult ensuring easy and safe takeoff. The Orbiter navigates to its programmed reconnaissance flight area. The onboard avionics can be programmed during flight as well as before flight.

Superior Airframe

Orbiter's airframe is of tail-less 'Flying Wing' design and composite construction. These give Orbiter excellent aerodynamic characteristics and payload lift ability, as well as resilience to landing shock.

Personal Ground Control Station

Orbiter's Handheld Personal GCS is a compact unit that can be worn over a protective vest or mounted on a tripod. The Personal Ground Control Station unites a user-friendly software interface with advanced Real-Time Control hardware.Even an inexperienced operator, with minimal training, can successfully control all phases of an Orbiter mission and gather high-quality intelligence in real time. All of the acquired data (video & telemetry) is recorded by a built in DVR for up to 12 flight hours.

Automatic Parachute Recovery

At the end of its mission, Orbiter enters Return Home mode, either on operator command or automatically. Orbiter then returns to its preprogrammed recovery point and deploys its parachute. Orbiter's 'Flying Wing' design is tough and resilient to landing shock. A reusable airbag inflates to protect the payload. After a quick battery change, Orbiter is ready within minutes for its next mission.

Fielded System Components (Standard Configuration)

Primary Set

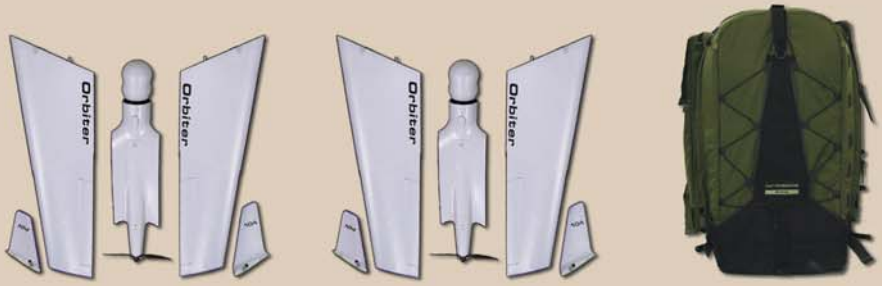
The entire fielded Orbiter system disassembles and fits into one backpack:

- **1 x Orbiter**
- **Personal GCS**
- **Launcher**
- **Data link**

Backup Set

A second backpack, for prolonged operational readiness:

- **2 x Orbiter**
- **Spare Batteries**
- **Spare Payloads**

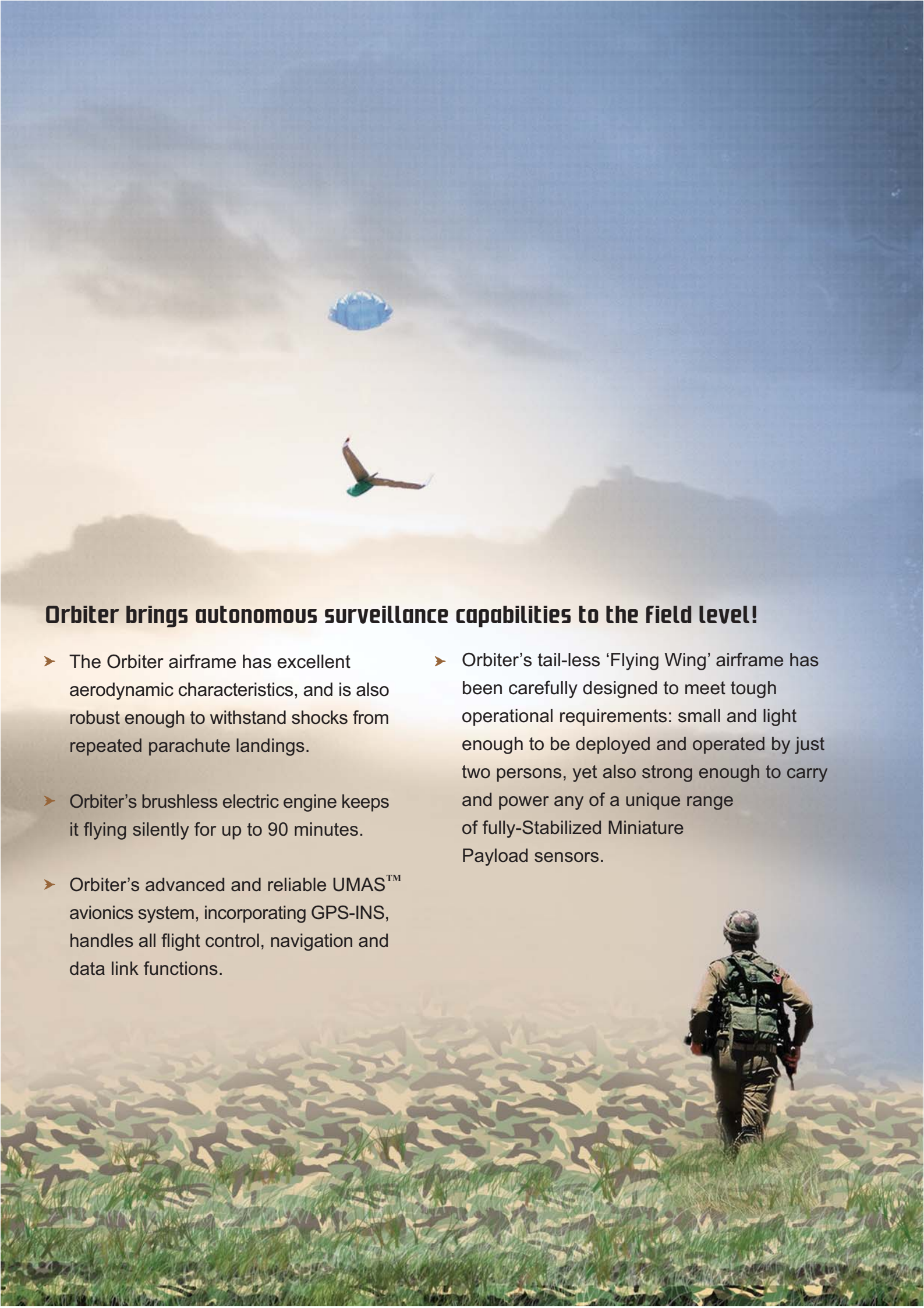


Payload: Day Operations

- The D-STAMP fully stabilized payload gives sharp color video picture for day time operations.
- The payload features x10 optical zoom and full coverage in both azimuth and elevation.

Payload: Night Operations

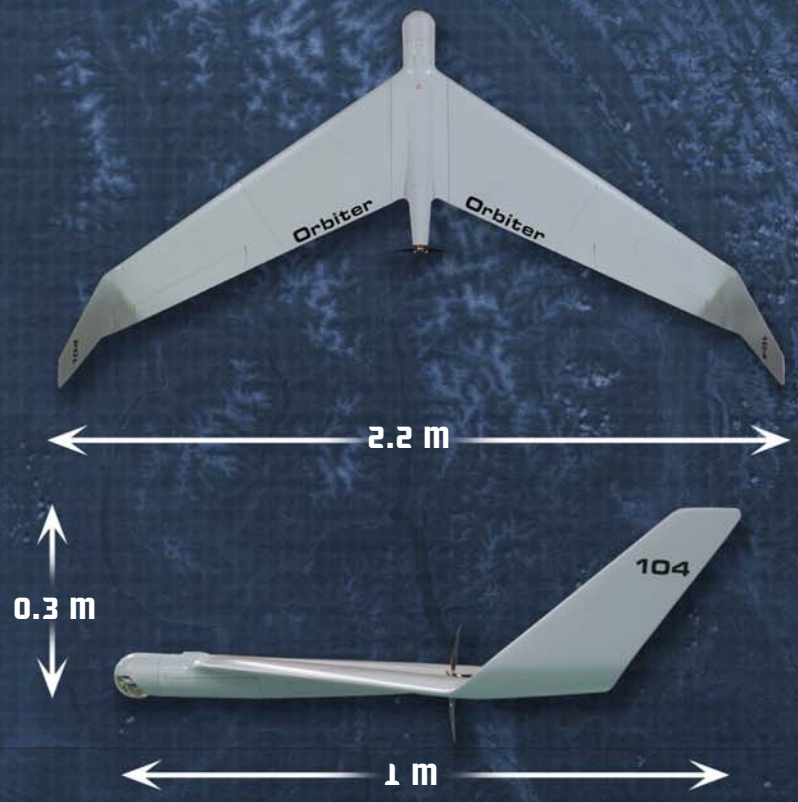
- The U-STAMP fully stabilized payload gives sharp thermal imaging video picture for night-time operations.
- The payload features digital zoom and full coverage in both azimuth and elevation.



Orbiter brings autonomous surveillance capabilities to the field level!

- The Orbiter airframe has excellent aerodynamic characteristics, and is also robust enough to withstand shocks from repeated parachute landings.
- Orbiter's brushless electric engine keeps it flying silently for up to 90 minutes.
- Orbiter's advanced and reliable UMAS™ avionics system, incorporating GPS-INS, handles all flight control, navigation and data link functions.
- Orbiter's tail-less 'Flying Wing' airframe has been carefully designed to meet tough operational requirements: small and light enough to be deployed and operated by just two persons, yet also strong enough to carry and power any of a unique range of fully-Stabilized Miniature Payload sensors.

The Orbiter™ – Technical Specifications



Wingspan	2.2 m / 7.2 ft
Length	1 m / 3.2 ft
Day payload weight	0.65 kg / 1.4 lb
Night payload weight	0.95 kg / 2.1 lb
Max payload weight	1.5 kg / 3.3 lb
LOS Data Link Range	15 km
Operational Speed	25 – 65 kt
Max speed	75 kt
Max altitude (ASL)	>15,000 ft
Endurance	>1.5 hours

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