EPSILON

VTOL 12/1

Long-Endurance VTOL ISR UAS

A Comprehensive Solution Provider

SACAA SAFETY ACCEPTED
System Safety Acceptance
SSA/22/011

Up to 2 hours endurance

35 km data link*

VTOL from a 5 m clearing

Assembled in <5 minutes



The VTOL 12/1 is a 12 kg MTOW tilt-motor VTOL aircraft that pairs the endurance of a fixed wing with the freedom of a multirotor. Its forward-swept anhedral wing gives strong gust resistance in hover and doubles as reinforced landing skids. Payload-agnostic, it flies two hours of surveillance, mapping or payload-deployment missions from a small clearing.

AT A GLANCE

MTOW	**12 kg**
Max payload	**2 kg**
Endurance	**Up to 2 hours**
Cruise speed	**18 m/s (65 km/h)**
Wingspan	**2.63 m**
Configuration	**Tilt-motor VTOL**
Data link	**Up to 35 km***
Payloads	**Payload-agnostic**

KEY CAPABILITIES

Long endurance
Up to 2 hours of efficient forward flight.

Gust-resistant hover
Anhedral wing steadies the critical VTOL phases.

Payload-agnostic
SIYI MT11, NextVision gimbals, LiDAR and more.

Rapid deployment
Five parts, one wheeled crate, airborne in minutes.

Autonomous missions
Waypoint planning with automatic return-to-launch.

FLY LONGER. LAND ANYWHERE. SEE MORE.

BORDER SURVEILLANCE · **INFRASTRUCTURE PROTECTION** · **MAPPING & LIDAR** · **SEARCH & RESCUE** · **AGRICULTURAL MONITORING** · **PAYLOAD DEPLOYMENT**

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*Line-of-sight data-link range. Performance varies with payload and conditions. SSA details on page 2.

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Platform Specifications & Integration

AIRFRAME & MASS

Wingspan	**2.63 m**
Length / height	**1.9 m / 0.43 m**
Wing area	**0.674 m²**
Empty weight	**8.0 kg**
Batteries	**4.0 kg, 2 × 22 Ah 6S Li-ion**
Energy	**977 Wh**
Max payload	**2 kg**
MTOW	**12 kg**
Structure	**Carbon composite**

PERFORMANCE & ENVELOPE

Endurance	**Up to 2 hours**
Hover endurance	**3 min**
Cruise speed	**18 m/s (65 km/h)**
Max speed	**26 m/s (94 km/h)**
Min forward speed	**16 m/s (58 km/h)**
Ceiling	**10,000 ft ASL**
Climb / descent	**2 m/s**
Max crosswind	**8 m/s incl. gusts**
Operating temp.	**5 – 35 °C**

AVIONICS & CONTROL

Autopilot	**CubePilot Cube Orange+**
GNSS	**Here3+**
Air data	**Airspeed sensor**
Altimetry	**Laser rangefinder**
Data link (standard)	**Up to 35 km***
Ground station	**Handheld, live HD video**
Mission planning	**Autonomous waypoints**
Propulsion	**4 electric, 2 tilting**
Take-off area	**5 m clearing**



PAYLOAD-AGNOSTIC

Central under-wing mount keeps payload CG on the aircraft CG. Proven and supported payloads include:

SIYI MT11 · **NextVision** · **SIYI gimbals** · **LiDAR mapping** · **Thermal imaging** · **Aerial dispersal**

50+ flight hours of LiDAR survey operations.

SAFETY & DEPLOYMENT

Link loss — auto return-to-launch after 2 s.

Low battery — auto return-to-launch.

GPS loss — dead reckoning holds control.

Termination — manual disarm from the GCS.

Field-ready — 5 parts, assembled in under 5 min; wheeled crate under 30 kg fits a double-cab bakkie.

SACAA System Safety Acceptance SSA/22/011

Issued by the South African Civil Aviation Authority on 2 December 2022 under SACATS 101.02.2 for this airframe (originally designated "Cob", Bronberg Dynamics), within the accepted configuration and limitations.

*Line-of-sight data-link range. Performance varies with payload, configuration and conditions. Not for flight in precipitation. Specifications are indicative and subject to change without notice. Operation subject to SACAA RPAS regulations.

CONTACT

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