USE CASE · SV-2.4 VTOL

VTOL drone for agriculture and crop mapping

Farms are large, and conditions change week by week. Walking fields to find stress, gaps or drainage problems takes days. A fixed-wing VTOL flies a whole holding in one sortie and returns images sharp enough to see rows and field edges.

IN SHORT

- A fixed-wing VTOL maps farm land in one flight: it needs no runway and flies efficiently on its wing for up to 112 minutes.
- The Star INXS SV-2.4 carries a Sony ILX-LR1 61 MP full-frame camera for imagery under 1 cm per pixel, so rows, gaps and field boundaries show clearly.
- Flights are automatic, with waypoint missions and RTK GNSS, and the aircraft packs into one hard-shell case for the road.
- For spraying or for a very small plot, a different aircraft may suit better; the SV-2.4 is a survey aircraft, not a sprayer.



KEY FIGURES · SV-2.4 VTOL

FIGURE	VALUE
Configuration	4+1 VTOL: four lift rotors and one nose-mounted cruise propeller
Wingspan	2,430 mm
Fuselage length	1,450 mm
Fuselage height	180 mm
Wing area	72.5 dm²
MTOW	11.5–13.5 kg, by configuration
Test take-off weight	6.5–7.3 kg
Endurance	82–112 min (tested at 500 m, 600 g payload)
Range	95–127 km (tested at 500 m, 600 g payload)
Cruise speed	17–22 m/s (19 m/s tested)
Stall speed	10 m/s

A TYPICAL SEASON

1. **Plan the holding** once and save the mission.
2. **Fly early in the day** when light is even, repeating the same mission through the season.
3. **Process the images** into an orthomosaic and compare dates.
4. **Walk the problem areas** the maps show, instead of walking every field.

COMMON QUESTIONS

Can the SV-2.4 map a whole farm in one flight?
It flies up to 112 minutes and 127 km, so large holdings can be covered in one sortie. The area depends on height, overlap and wind.

What image detail can it produce?
Under 1 cm per pixel with the Sony ILX-LR1 61 MP camera.

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