

Results

Coverage at 120m (400ft) **	320 Ha (790 ac)
Max. coverage ***	45 km ² (17 mi ²)
Minimal ground sampling distance ****	Down to 0.7 cm/px (0.3 inch/px)
Mapping accuracy with PPK (w/o GCPs)	+ Absolute accuracy (RMS): horizontal: down to 1 cm (0.4 in); vertical: down to 2 cm (0.8 in) + Relative accuracy: horizontal: down to 0.003 %
Mapping accuracy w/o PPK (w/o GCPs)	+ Absolute accuracy (RMS): 3 to 5 m (9.8 to 16.4 ft) + Relative accuracy: horizontal 0.15 %

Payloads

Payload flexibility	Yes, with a single USB-C connector
Power supply	by flight batteries (12 W)
Payload protection	Yes, fully integrated into WingtraOne and smooth vertical landing feature
Available cameras	+ Sony RX1RII / 35 mm lens, full-frame sensor, 42 MP, RGB + Sony QX1 20mm (optional 15 mm Voigtländer lens), APS-C sensor, 20 MP, RGB + Micasense Rededge, 5.5 mm, 5 × 1.2 MP, Multi-spectral camera + FLIR Duo Pro R640, 13 mm, 0.32 MP (thermal), 12 MP (visible), Thermal camera"

Telemetry / Remote Control

Frequency range Telemetry	Country Specific: EU 868 - 869 MHz US 902 - 928 MHz AUS 915 - 928 MHz CN 915 - 928 MHz
Transmission power Telemetry	< 27dBm*****
Frequency range Remote Control	All countries 2.404 - 2.479 GHz
Transmission power Remote Control	< 20 dBm
Specified max. range telemetry	40 km (25 mi)
Tested max. range	8 km (5 mi)

* tested and warranted temperature range -10° C to 40° C (14° F to 104° F)

** 2.8 cm/pixel (1.1 in/pixel), WingtraOne QX1 + 15 mm

*** max. reconstructable area, 2500 m (8200 ft) flight altitude, WingtraOne QX1 + 15 mm

**** For WingtraOne RX1RII. For WingtraOne QX1 1.4 cm/px (0.6 in/px) (depending on frontal overlap)

***** Country specific power settings according to local regulations

WingtraOne Technical Specifications



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The all-in-one drone: large coverage, high resolution and accuracy



WingtraOne

Resolution	down to 0.7 cm/px (0.3 in/px) GSD
Accuracy	down to 1 cm (0.4 in) absolute accuracy
Coverage	400 ha at 3 cm/px (988 ac at 1.2 in/px) GSD

WingtraOne drone offers broad coverage, brilliant resolution and high accuracy in one mapping device.

With such unprecedented functionality, WingtraOne can map a quarry the size of 240 American football fields in an hour's flight. The resolution of the final map allows to zoom in and see tiny details such as a coin lying on the ground. And what is best – it is possible to know the exact coordinates of the coin down to an absolute accuracy of 1 cm (0.4 in).

Hardware

Drone type	Tailsitter VTOL (Vertical take-off and landing)
Max. take-off weight	4.5 kg (9.9 lb)
Weight (empty)	3.7 kg (8.1 lb)
Max. payload weight	800 g (1.8 lb)
Wingspan	125 cm (4.1 ft)
Dimensions of WingtraOne	125 × 68 × 12 cm (4.1 × 2.2 × 0.4 ft) (without middlestand)
Dimensions of Pilot Box	57 × 37 × 20 cm, 8.6 kg (1.8 × 1.2 × 1.0 ft, 19 lb)
Battery capacity	99 Wh (a pair of batteries required)
Battery type	Li-ion, Smart battery technology, UN compliant
Radio link	8 km (5 mi), bi-directional antennas for optimal range
Onboard GPS	Double redundancy, using GPS, Glonass and ready for Galileo and Beidou
Dimensions of travel hardcase (optional)	141 × 74 × 26 cm, 16 kg (4.6 × 2.4 × 0.9 ft, 35 lb)

Software & Tablet

Flight planning & mission control software	WingtraPilot
Tablet (supplied)	Android tablet; pre-installed; ready-to-fly. Interfaces to Telemetry module (data link for automated drone control) and manual back-up controller
Updates	free

Operation

Operational cruise speed	16 m/s (35.8 mph)
Climb speed cruise	6.0 m/s (13.4 mph)
Wind resistance	up to 45 km/h (12 m/s, 28 mph) in cruise, up to 30 km/h (8 m/s, 18 mph) for landing
Maximum flight time	55 minutes
Min. space for take-off and landing	2 m × 2 m (6.6 ft × 6.6 ft)
Designed temperature range *	-20° C to 50° C (-4° F to 122° F)
Max. altitude (a.m.s.l.)	3000 m (9800 ft)
Weather	No precipitation, resists light rain
Ground Control Points required	No (with PPK option)
Descent speed cruise	4.0 m/s (8.9 mph)
Climb speed hover	6.0 m/s (13.4 mph)
Descent speed hover	1.0 m/s (2.2 mph)
Auto-Landing accuracy	< 5 m (< 16 ft)