WingtraOne GEN II

Mapping drone for fast and accurate photogrammetry data every time

Applications

- Mining & aggregates
- Surveying & GIS
- Construction & infrastructure
- Environment & research
- Agriculture

wingtra

WingtraOne GEN II

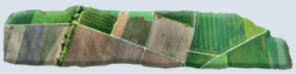
- Cut mapping time
- Reduce field labor costs
- Finish field work early
- Save time in post-processing

Maximum coverage with one flight*
at 1.9 cm/px (0.75 in/px) GSD

WingtraOne RGB61
61 MP camera
310 ha (766 ac)
120 m (400 ft)

Other fixed-wing drones
20 MP camera
170 ha (420 ac)
93 m (305 ft)

Multicopter drones
20 MP camera
29 ha (71 ac)
69 m (226 ft)



Do a lot of work in a short time

With the WingtraOne drone, you reduce the number of surveyors in the field and conduct frequent site surveys faster than with other tools, even for large open-pit mines and quarries. Projects that were previously impossible to map with a drone takes you now just a few hours.

Up to
11x
faster than multicopter drones

Up to
2x
faster than standard fixed-wing drones

* Numbers refer to most widely used competitor drone and camera models. This number can vary depending on factors such as overlap, altitude and drone and camera model. The model takes into account data collection only. Flight planning, setting up GCPs, data processing, time to relocate between flights are not taken into account in this model.

Get high accuracy data everytime

The WingtraOne drone with its 61 MP payload consistently delivers data with advanced resolution and

Absolute horizontal accuracy down to

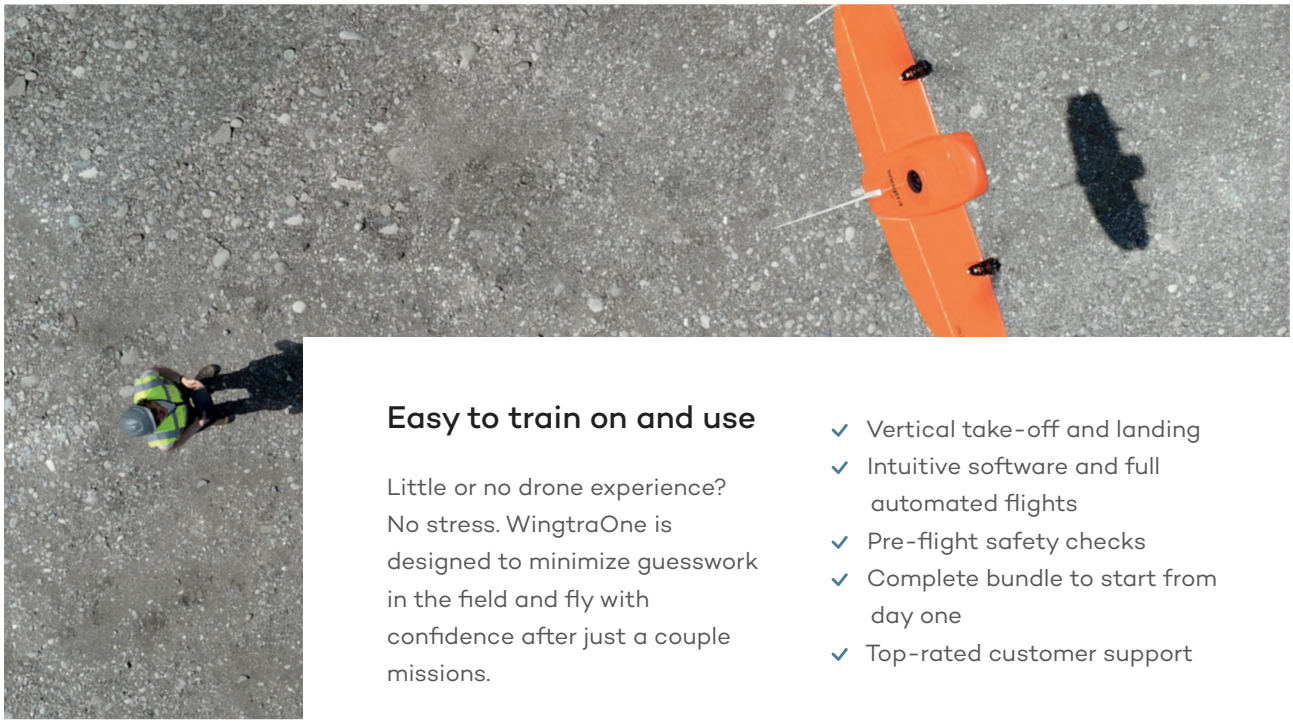
1 cm**

(0.4 in)

GSD down to

0.7 cm/px

(0.3 in/px)



Easy to train on and use

Little or no drone experience? No stress. WingtraOne is designed to minimize guesswork in the field and fly with confidence after just a couple missions.

- Vertical take-off and landing
- Intuitive software and full automated flights
- Pre-flight safety checks
- Complete bundle to start from day one
- Top-rated customer support

A reliable workhorse

No matter the conditions, WingtraOne operates safely and delivers high-quality data, consistently.

Engineered and assembled in Switzerland

Each drone is subjected to more than 300 rigorous tests to ensure the highest quality standard

Industry-leading reliability

More than 100,000 flights and 6 years of continuous testing and enhancements ensure maximum up-time for your operations.

Predictive self-diagnosis

WingtraOne self-diagnoses any component malfunctions using advanced machine learning algorithms based on thousands of flights.

Automated safety checks

Before every flight, the WingtraOne automatically checks its own sensors and actuators to make sure you can fly safely.

Sharp results, even in wind

WingtraOne can safely fly and capture data in sustained winds up to 12 m/s (27 mph) and gusts up to 18 m/s (40 mph).

Trusted by hundreds of organizations

SEMARNAT · NOAA · University of Oxford · NASA · American Electric Power · PCL Construction · CEMEX · Balfour Beatty · RioTinto

Extended Services

Spare drone

A redundant wing that serves as a backup for business continuity or as a replacement drone.**

Total Maintenance Plan

All-in-one maintenance solutions for your drone fleet.**

Training and consulting

Learn how to handle the drone, fly safely and post-process your data.

Extended warranty

A longer warranty for greater peace of mind.

Accidental Damage Protection

Extra protection in case of physical breakage or failure that is not due to a manufacturing defect.**

**Conditions apply, find more information on wingtra.com/extended-services

World-class support

Integrating new technologies into existing workflows may seem a challenge at first, but Wingtra's top-rated customer support is here to help you every step of the way.

Rated 4.75 out of 5 stars

A team of trained surveyors and drone experts

Training onsite or in online video conferences

Local presence in over 60 countries via distributor network

WingtraOne GEN II Technical Specifications

Hardware

Drone type	Tailsitter vertical take-off and landing (VTOL)
Maximum take-off weight	4.5 kg (9.9 lb)
Weight (empty)	3.7 kg (8.1 lb)
Maximum 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 middle stand)
Dimensions of Pilot Box	57 × 37 × 20 cm, 8.6 kg (1.8 × 1.2 × 1.0 ft, 19 lb)
Battery capacity	Two 99 Wh batteries (required as a pair)
Battery type	Li-ion, smart battery technology, UN3481 compliant
Radio link	Bi-directional 10 km (6 mi) in direct line of sight, obstacles reduce the range
Onboard GPS	Redundant, using GPS (L1, L2), GLONASS (L1, L2), Galileo (L1) and BeiDou (L1) Frequencies range: 1227.6 MHz / 1242.9375-1251.6875 MHz / 1561,098 MHz / 1575,42 MHz / 1598.0625-1609.3125 MHz / 1602,00 MHz
Dimensions of travel hardcase (optional)	137 x 67 x 23 cm (54 x 26 x 9 in)
Weight of travel hardcase including the drone	18.6 kg (41 lb)

Operation

Flight speed	Operational cruise speed Climb / sink cruise Climb / sink hover	16 m/s (35.8 mph) 6 / 3 m/s (13.4 / 6.7 mph) 6 / 2.5 m/s (13.4 / 5.6 mph)
Wind resistance	Max sustained wind Max wind gusts Max sustained wind on the ground	12 m/s (27 mph) 18 m/s (40 mph) 8/ms (19 mph)
Maximum flight time	Up to 59 min See next page or knowledge.wingtra.com/flight-time for what flight time to expect in different flying conditions	
Temperature	-10 to +40 °C (+14 to +104 °F)	
Maximum take-off altitude above sea level	2500 m (8200 ft); with high-altitude propellers it is possible to take off from up to 4800 m (15,700 ft) and fly up to 5000 m (16,400 ft) AMSL	
Weather	IP54, not recommended to fly in fog, rain and snow	
Ground control points required	No (with PPK option); using 3 checkpoints to verify the accuracy is recommended	
Auto-landing accuracy	< 2 m (< 7 ft)	

A camera for every job

WingtraOne makes no compromises on aerial image quality. Whether you need data for orthophotos, 3D models or multispectral mapping, it carries the best camera for every application.
As you exchange cameras in the field, various types of data can be acquired with the same drone.

RGB cameras nadir	 **RGB61** High accuracy and most efficient	 **Sony RX1R II** High accuracy	 **Sony a6100** Most affordable
Sensor	Full-frame sensor 61 MP	Full-frame sensor 42 MP	APS-C sensor 24 MP
GSD down to	0.7 cm/px (0.28 in/px)	0.7 cm/px (0.28 in/px)	1.2 cm/pxx (0.47 in/px)
Absolute horizontal accuracy down to	1 cm (0.4 in)	1 cm (0.4 in)	2 cm (0.8 in)
Absolute vertical accuracy down to	3 cm (1.2 in)	3 cm (1.2 in)	4 cm (1.6 in)

RGB cameras oblique	 **Oblique Sony a6100** 3D mapping camera
Sensor	APS-C sensor 24 MP
GSD down to	1.6 cm/px (0.63 in/px)
Absolute horizontal accuracy down to	2 cm (0.8 in)
Absolute vertical accuracy down to	4 cm (1.6 in)

Multispectral cameras	 **MicaSense RedEdge-P** Multispectral & panchromatic sensors	
Sensor	5 individual sensors Red, Green, Blue, Rededge, Near-infrared,	panchromatic sensor
GSD down to	2.0 cm/px 0.78 in/px	
Absolute horizontal accuracy down to	3 cm (1.18 in)	
Absolute vertical accuracy down to	5cm (1.97 in)	

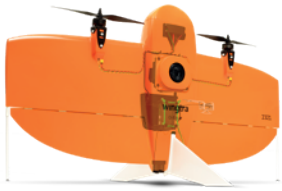
What's included in the bundle?

1x WingtraOne GEN II drone
1x carrying sleeve
1x carrying case for accessories (pilot box)
1x tablet including WingtraPilot flight planning software
1x telemetry module (2.4 Ghz)
2x pairs of batteries
1x charging station
1x anemometer
1x SD card adapter
1x micro SD card reader
1x pair of side stands
1x middle stand
1x Torx screw driver T10
1x Torx T10 key

Additional products

Hardcase

For easy and safe WingtraOne drone bundle transportation



PPK licenses

A built-in multi-frequency (L1-L2 included) PPK GNSS receiver, which ensures best-in-class image geotag correction after the flight with accuracy down to 1 cm (0.4 in)

Agisoft Bentley esri propeller PIX4D Trimble

Recommended photogrammetry software

For a complete drone solution from data collection to post-processing

Wingtra AG
Giesshübelstrasse 40
8045 Zürich, Switzerland
hello@wingtra.com
wingtra.com