WingtraOne
G E N **//**

Mapping drone for fast and accurate
photogrammetry data every time

wingtra
GEN**//**

2321

DESIGNED AND ASSEMBLED IN SWITZERLAND
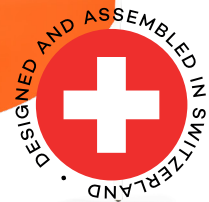
Applications

Mining & aggregates

Surveying & GIS

Construction & infrastructure

Environment & research

Agriculture

wingtra.com

wingtra

WingtraOne GEN II

Map faster

WingtraOne's unique set of features empowers you to minimize your time flying and get more work done, be it another project in the field or analyzing your data at the office.

Data collection speed

WingtraOne RX1R II

Other fixed-wing drone

Multicopter drones

Up to

8x

faster than multicopter drones

Up to

2x

faster than standard fixed-wing drones

Average based on our coverage and labor cost calculator. This number can vary depending on factors such as overlap, camera model and altitude. The model takes into account data collection only. Flight planning, setting up GCPs, data processing, time to relocate between flights are not taken in account in this model.

Efficient fixed-wing flight

Fly at 16 m/s (36 mph) for up to 59 minutes per flight for large coverage.

42 MP camera

WingtraOne can fly higher than drones limited to 20 MP cameras, so you capture more ground and more detail with every picture and a larger area per flight.

No more GCPs, checkpoints only

With an onboard high-precision PPK GNSS receiver you no longer need to lay out ground control points (GCPs). Use as few as three checkpoints to verify your map quality.

Lower image overlaps

High-quality optics means you can reconstruct your map reliably even with lower overlaps. This means more new ground covered per flight line and maximum coverage per flight.

Maximum coverage with one flight

at 1.2 cm/px (0.5 in/px) GSD

| WingtraOne RX1R II	Other fixed-wing drones	Multicopter drones
42 MP camera	20 MP camera	20 MP camera
110 ha (272 ac)	70 ha (173 ac)	8 ha (20 ac)
93 m (305 ft) altitude	57 m (187 ft) altitude	44 m (144 ft) altitude

Map larger

Whether it's a highway, an industrial complex or a mine, you can now take on large projects that were previously impossible to map with a drone. And it takes you just a few hours.

Map anywhere

Thanks to its VTOL design, WingtraOne can take off and land almost anywhere—even in confined spaces or on rough terrain. This enables you to collect data where other drones cannot.
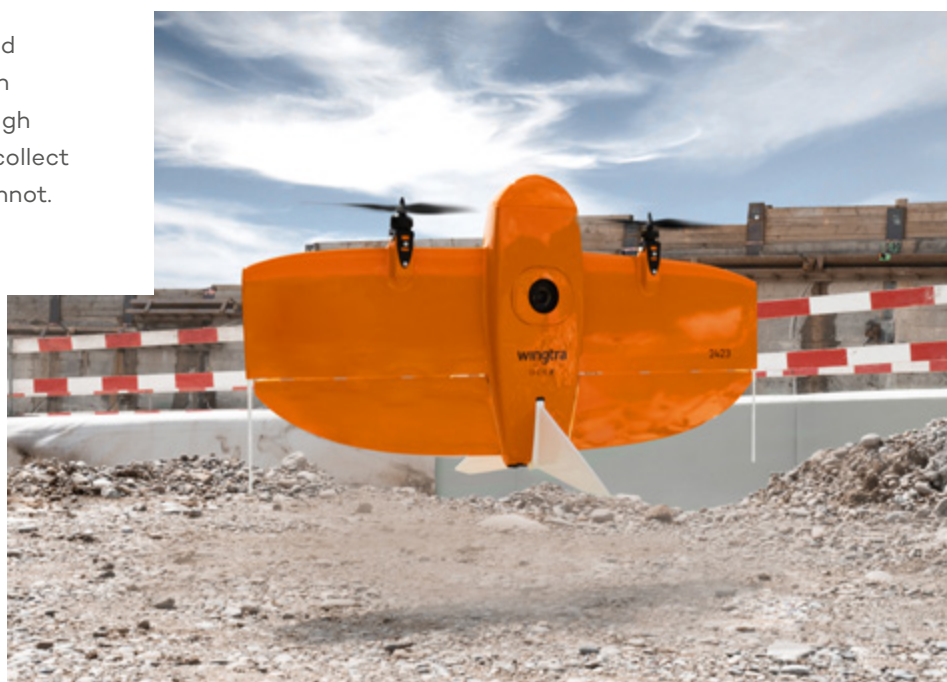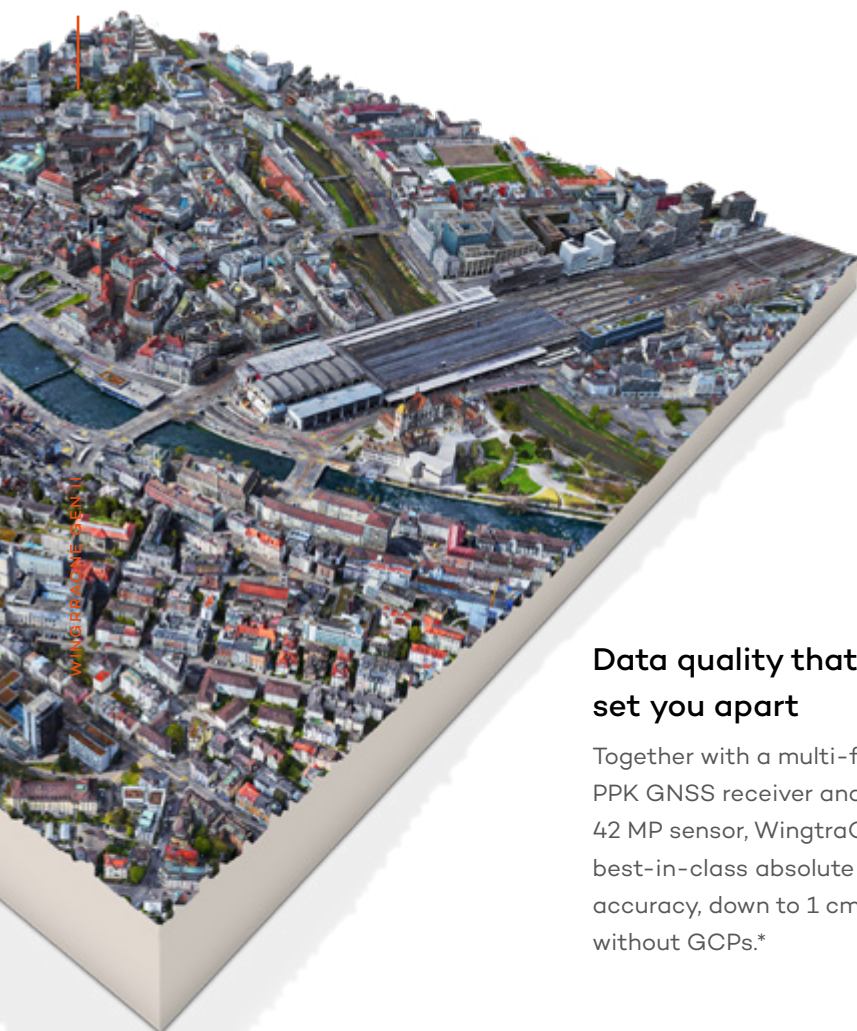
Data quality that will set you apart

Together with a multi-frequency PPK GNSS receiver and a 42 MP sensor, WingtraOne delivers best-in-class absolute horizontal accuracy, down to 1 cm (0.4 in) without GCPs.*

Absolute horizontal accuracy down to

1 cm*

(0.4 in)

GSD down to

0.7 cm/px

(0.3 in/px)

A reliable workhorse

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

WingtraOne is engineered and assembled in Switzerland. It demonstrates sharp results— even in wind— bolstered by predictive self-diagnosis and automated safety checks.

Cut costs

Faster data collection and expanded coverage equals fewer people in the field for less time.

This lowers the man-hour costs associated with data collection.

*Using the Sony RX1R II camera and a PPK module. This level of accuracy is achievable under optimal conditions, on hard surfaces, using a well-established base station or correction data from CORS network. The results can be validated with high-accuracy checkpoints.

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

4

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	16 m/s (35.8 mph)
	Climb / sink cruise	6 / 3 m/s (13.4 / 6.7 mph)
	Climb / sink hover	6 / 2.5 m/s (13.4 / 5.6 mph)
Wind resistance	Max sustained wind	12 m/s (27 mph)
	Max wind gusts	18 m/s (40 mph)
	Max sustained wind on the ground	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

	Sony RX1R II Highest precision and most popular	Sony a6100 Most affordable Wingtra bundle
Sensor	Full-frame sensor 42 MP	APS-C sensor 24 MP
GSD down to	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)[1,2]	2 cm (0.8 in)[1,3]
Absolute vertical accuracy down to	2 cm (0.8 in)[1,2]	4 cm (1.6 in)[1,2]

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)[1,3]
Absolute vertical accuracy down to	4 cm (1.6 in)[1,3]

Multispectral cameras

|	Micasense RedEdge-MX Most affordable multispectral sensor	MicaSense RedEdge-P Multispectral & panchromatic sensors	
Sensor	5 sensors Blue, green, red, red edge, near infrared (NIR)	5 individual sensors Red, Green, Blue, Rededge, Near-infrared,	panchromatic sensor
GSD down to	6.7 cm/px (2.6 in/px)	2.0 cm/px 0.78 in/px	
Absolute horizontal accuracy down to	8 cm (3.1 in)	3 cm (1.18 in)	
Absolute vertical accuracy down to	15 cm (5.9 in)	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
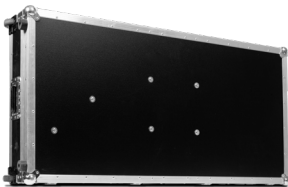
Hardcase

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)

Recommended
photogrammetry software

Agisoft **Bentley**®
esri **propeller**
PIX4D

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

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