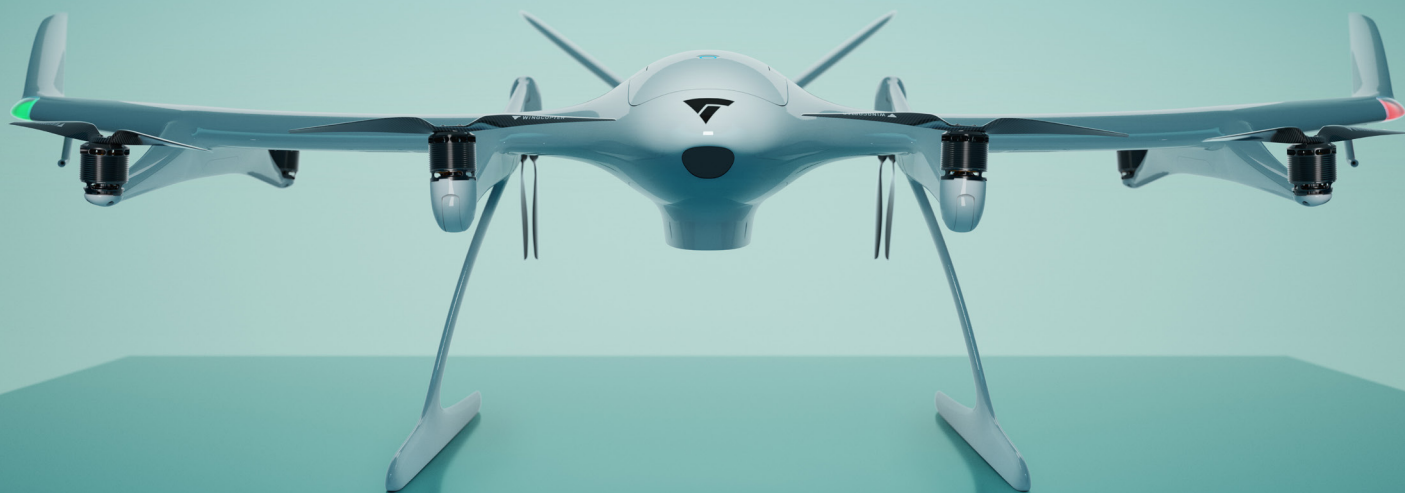


Technical Details

Wingcopter 198 Delivery Variant
Version 04-2021



Hardware

Drone type

electric tilt-rotor vertical take-off and landing (eVTOL)

Dimensions

65 x 198 x 152 cm [H x W x L]

Weight

10 kg empty // incl. Triple Drop delivery System
20 kg with batteries
25 kg max. take-off weight

Payload

5 kg max. weight

Propulsion

8x rotors for redundancy during multicopter flight
4x of which tiltable for redundancy during fixed-wing flight

Drone battery

2x Li-Ion battery // 814Wh each
incl. LED status indicator and carrying handle
incl. smart battery with management and protection system

Avionics

2x flight controllers
6x IMUs
2x barometers
2x dual-antenna GNSS systems
2x rainproof airspeed sensors

Awareness systems

1x set of navigation lights
1x horizontal awareness system // forward and upward-facing
1x vertical awareness system // downward-facing
1x LiDAR ground altimeter // downward-facing
1x elevation and airspace database

Awareness radios

1x ADS-B In
1x FLARM in and out
1x remote ID // compliant to FAR Part 89

Connectivity

1x cellular telemetry // 3G, 4G and 5G
1x satellite telemetry // Iridium

Operation

Multicopter mode	Fixed-wing mode
Flight speed 0 m/s min. speed 5 m/s default cruise speed 14 m/s max. cruise speed	14 m/s min. speed 28 m/s default cruise speed 40 m/s max. cruise speed
Climb speed 3 m/s climb rate 3 m/s descent rate	3 m/s climb rate 3 m/s descent rate
Max. flight time 15 min	90 min
Max. altitude 3000 m AMSL	5000 m AMSL
Auto-landing accuracy 3 m	-

Flight modes

automatic mission, return-to-home, manual go-to function, emergency procedures

Wind resistance

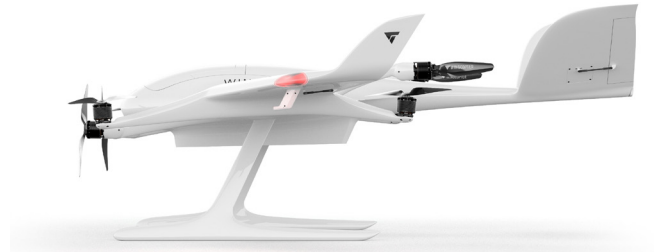
15 m/s average wind
20 m/s gusts

Operating temperature

0 - 45° celsius

Weather limits

suitable for operation in coastal and offshore climate, no operation during heavy rain, icing conditions, hail and thunderstorms



Range Estimation

Payload	5 kg	4 kg	3 kg	2 kg	1 kg	0 kg
Direct one-way flight	75 km	80 km	85 km	90 km	95 km	110 km
	40 min	45 min	50 min	55 min	60 min	70 min
Flight with 1x slow drop or 1x intermediate landing	65 km	70 km	75 km	80 km	85 km	95 km
	35 min	40 min	45 min	50 min	55 min	60 min

Considering ideal conditions (no wind, sea level altitude, 15°C air temperature) and ideal operation (ideal cruise speed, 20% battery reserve, standard payload form factor)

Triple Drop Delivery System

	3 Packages	2 Packages	1 Package
Package dimensions limit [H x W x L]	(3x) 22 x 40 x 19 cm	(2x) 22 x 40 x 25 cm	(1x) 22 x 40 x 65 cm
Volume [liters]	(3x) 17 l	(2x) 22 l	(1x) 57 l
Winch application	front, center & back	front & back	center

Winch limits

3 kg front winch limit
5 kg center winch limit
2 kg back winch limit

Loading

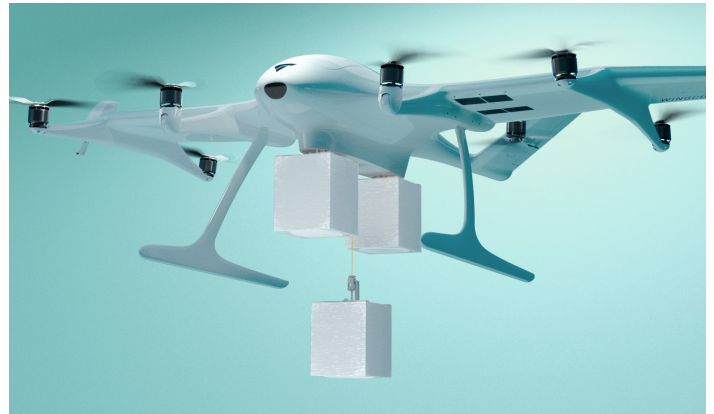
on ground

Delivery

on ground or slow drop

Package mounting

quick connect adapter
package protection using heat shrink foil



Ground Station

Hardware

dedicated control station hardware
build in 32inch 4K display
keyboard & mouse

Software

dedicated secure operating system
Wingcopter Control Station 2.0
access to Wingcopter Cloud

Key features

operator management and logging
fleet and maintenance management
elevation and airspace database
1 to 10 operation

Infrastructure required

internet access over LAN connection
110/230V domestic power connection

Ground Handling

Ground handling vehicle

enables safe and ergonomic moving of the drone
enables equipping of drone in ergonomic loading height
doubles as storage and transport box

Smart battery charger

charges empty drone battery in 90min