VOLIRO

Voliro T
Technical specification



Aircraft

Drone type / Configuration	Multirotor / omnidirectional tri-copter
Weight (batteries excluded)	3.7 Kg / 8.16 lbs
Max. takeoff weight	6.0 Kg / 13.23 lbs
Max. payload weight	1.0 kg / 2.20 lbs
Dimensions (L×W×H)	118×109×34 cm / 46.5×42.9×13.4 in (fully assembled) 78×78×34 cm / 30.7×30.7×13.4 in (w/o rotors, bumpers, payload) The drone can be transported through a 50 cm (20 in) manhole by
Camera System	4K 12 MP inspector camera (horizontal FoV 80°) 2K 12 MP pilot camera (horizontal FoV 140°) Frame rate: 30/60fps Best GSD: 0.16 mm/px Video Formats: H.265 (.MP4) File storage: microSD card, 256 GB
Downlink	Live video stream inspector camera: HD 30 fps Live video stream pilot camera: HD 30 fps Live payload data stream
Power LEDs	Max. 17,000 lumen (adjustable through RC) Intelligent thermal throttling
Sensing System	Depth camera (VGA) 6× LiDAR distance sensor 6× vision-based velocity sensor RTK GPS (multi-band, BeiDou, Galileo, GLONASS, GPS /QZSS) Redundant IMU, barometer, and magnetometer

Flight capabilities, operation, environmental limitations

Flight time	10 - 14 min (mission and payload dependent)
Flight modes	Manual (attitude is fully stabilized) Altitude Position Interaction assistant
Emergency flight modes	Intelligent auto-descent / position-hold on signal lost
Navigation assistance	Outdoor GPS based: position, velocity, attitude Indoor GPS denied: height, velocity, attitude
Interaction accuracy	±2 cm / ±0.8 in (normal environment conditions, trained pilot)
Max. horizontal speed	3 m/s / 6.7 mph (in Position flight mode) 15 m/s / 33.6 mph (in Altitude and Manual flight mode)
Max. ascent / descent speed	3 m/s / 6.7 mph (in Position flight mode) 10+ m/s / 22.4+ mph (in Manual mode)
Pitch angle	±90° Voliro T can be oriented to a surface of any orientation

Assembly time	< 5 min
Power LEDs	Max. 17,000 lumen (adjustable through RC) Intelligent thermal throttling
Max. transmission distance	300+ m / 984+ ft for all data links (direct VLOS) 2+ km / 1.2+ mi for safety-critical remote controller link
Wind resistance	12 m/s / 26.8 mph (in free flight) 8 m/s / 17.9 mph (in Interaction flight mode) Recommendation for precise interaction: Max. 6 m/s / 13.4 mph
Temperature	-10 - 40 °C / 14 - 104 °F No continuous direct sunlight if temperature is above 30 °C / 86 °F If the temperature is below 5 °C / 41 °F flight time can be reduced
Precipitation	Dry-weather operation only: No rain, no snowfall
Fog	No operation in fog
Service ceiling	5000 m ASL / 16404 ft ASL

Battery and charger

Battery type	LiPo (hardcase, UN3481)
Battery configuration	6S batteries in parallel (per battery)
Energy	99 WH (per battery)
Capacity	4350 mAh (per battery)
Weight	0.67 kg / 1.48 lb (per battery)
Charging cutoff voltage	26.1 V
Minimun voltage	21.6 V (no-load)
Recommended storage voltage	22.2 - 22.8 V
Battery operational temperature	10 - 30 °C / 50 - 86 °F
Charging time	< 90 min
Smart battery	Self-heating, self-discharge, and battery health monitoring
Material safety data sheet (MSDS) *Available on request	IATA TABLE 2.3.A compliant for air travel — batteries must be carried in hand luggage.
Charger type	Up to 3 battery pairs with 110 – 240 V AC worldwide input and supports charging up to 40 °C / 104 °F.
Charger input voltage AC	110V / 240V AC, 50 / 60 Hz
Peak output power	500 W
Battery change	Hot-swappable
DC charging output	Dual USB-C outputs — 30 W per port

RTK GPS base

GPS antenna	Integrated active antenna
Tripod	Rollei compact traveler star S1, 38.5 - 125 cm / 15.2 - 49.2 in
Battery	3000 mAh
Charger	Input 110 - 240 V AC, Output 12.8 V DC

Remote controller and tablet

Pilot tablet	Samsung Tab S9 5G 26.31 cm / 10.4 in, 2000 × 1200 (WUXGA+), TFT 2.3 GHz, 1.7 GHz, octa-core
Tablet charger	Through remote controller
Tablet battery	7040 mAh
Inspector tablet	Identical to pilot tablet
Remote controller mode	Mode 2 (throttle and yaw on the left stick)
RC gimbal	Hall sensor M7 gimbal (pinching and thumbs compatible)
Remote controller battery	3600 mAh
Remote controller charger	Input 110 - 240 V AC, output 12.8 V DC

Data link

Video and data link	5.841 to 5.849 GHz ISM CE mode (EIRP < 25 mW) or FCC mode (EIRP < 1000 mW)
RC link	2.4GHz ISM, EIRP < 25 mW
RTK telemetry link	2.4GHz ISM, EIRP < 10 mW
Remote ID broadcasting link	Bluetooth

Transport case

Drone case	80×55×35 cm / 31.5×21.7×13.8 in 20 kg / 44 lbs Content: Drone, RC, inspector tablet, RTK base IATA compliant for checked-in luggage
Payload case	60×35×20 cm / 23.6×13.8×7.9 in 8-12 kg / 17.6-26.5 lbs (depending on content) Content: Payload, up to 6 batteries IATA compliant for carry-on luggage
Charger and accessories case	60×35×20 cm / 23.6×13.8×7.9 in 8 kg / 17.6 lbs Contains: charger, spare parts, accessories IATA compliant for carry-on and checked-in luggage.
All cases	All cases are rugged, waterproof, crushproof and dustproof Peli Cases. The Voliro T batteries are airline approved according to IATA TABLE 2.3.A. The batteries have to be carried in the carry-on baggage.



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Version 6.0
March 2026
All specifications are subject to change without notice.