

CAP50

**American Made
Professional Drone Platform**



The Carlson Aerial Platform (CAP) 50 is an American made UAS platform offering up to 6lbs payload capacity for advanced users in the surveying, construction, engineering, mining, quarry, land development, and related industries.

KEY FEATURES

- Payload capacity up to 6lbs
- RTK for accuracy
- Tested to 50mph winds with max payload
- Omnidirectional collision avoidance
- 22 minute flight time with 5lbs payload
- Compactible design for easy transport
- Full telemetry flightlog

Payload Configurations

Options include LiDAR, photogrammetry and bathymetry configurations

Propulsion

465KV motors combined with 18.5" carbon fiber propellers and the 22.8V 6S 25,000mAh battery for superior aerial performance.

Position Stability and Accuracy

(GNSS) receiver compatible with Real Time Kinetics (RTK) GNSS systems. The CAP50 utilizes a LiDAR range finder for altitude accuracy and vertical stability while flying. To ensure the drone has redundancy in the critical sensors needed for flight, CAP50 integrates 2 magnetometers, 2 accelerometers, 2 gyro, and 2 barometers. A battery current and voltage sensor is used to track battery level.

Object Avoidance

The CAP50 has 360 degree collision avoidance. The collision avoidance system is LiDAR range finder based, and will work in day or nighttime conditions.



BREAK NEW GROUND

Carlson CAP50 UAS Platform - Specifications

Maximum Sustainable Payload	5.5 lb.
Max Flight Time	18-33 minutes depending on payload
Max Wind Rating	50MPH+ - Tested
Collision Avoidance	Omni-Directional collision avoidance
RTK Availability?	Yes
PPK Availability?	Yes
Diagonal Wheelbase	42" without propellers 21" without propellers folded
Height	15" without landing gear 28" with landing gear
Width	20" folded 29" unfolded
Weight	12 lb.
Max Takeoff weight	25 lb.
Max Speed	50 MPH
Max Operating Temperature	122° F
Min Operating Temperature	-4° F
Frame Material	Carbon Fiber
Battery Requirement	1 x 6S, 25000mAh, 22.8V LiHV
Battery Weight	5.7 lb.
Propeller Size	18.5" x 6.3 folding carbon fiber propellers pair, balanced
Payload Connections	24V power, HDMI, serial, PWM, SBUS ports
Orientation LED Light Colors	Red, white, blue
Flight Controller	CubePilot Blue
Flight Controller Firmware	H7 Open Sourced (ArduPilot)
Frame Type	Quad Copter
Made in USA	Yes

