

51.8V 20Ah UAV Lithium Battery Lightweight Drone Battery UAV

Key Specifications

Capacity	20Ah	Voltage	51.8V
Model	UAV-JP220M	Operating Temp	0°C ~ +55°C

Product Overview

For commercial and industrial UAV operators, payload capacity and flight endurance are a constant balancing act. Every extra gram of battery weight reduces the payload available for high-end cameras, LiDAR sensors, or delivery cargo. LiTrue engineered the UAV-JP220M lightweight lithium-ion battery specifically to solve this challenge, offering an optimal balance between energy density, stable power output, and a highly compact footprint.



Unrivaled Energy-to-Weight Ratio

Featuring advanced NMC (Nickel Manganese Cobalt) lithium chemistry in a highly efficient 1P14S configuration, the UAV-JP220M provides a nominal capacity of 20 Ah and 1.036 kWh of total energy. Weighing in at only 6.8 kg, this compact power system maximizes flight endurance without burdening your aircraft, making it the premier choice for professional aerial photography, precise mapping, and infrastructure inspection drones.

Key Performance Highlights

- **Lightweight & Compact Design:** Precisely engineered dimensions (172×110×245 mm) enable easy integration into various commercial UAV platforms while maintaining optimal center-of-gravity and weight balance.
- **Reliable High-Rate Discharge:** Delivers a steady maximum continuous discharge current of 50A, with a peak discharge capability of 100A (10s @ 25°C), ensuring stable thrust during wind resistance and sudden maneuvers.
- **Fast Charging Capability:** Reduce ground downtime and improve fleet operational efficiency. The battery supports 40A continuous charging and 60A peak charging, getting your drones back in the air faster.
- **Smart BMS with CAN Integration:** The built-in Intelligent Management System provides precise overcharge, over-discharge, and over-current protection, communicating seamlessly with your flight controller via CAN bus.
- **All-Weather Reliability:** Built with an IP65 protection level, the battery performs consistently across a wide temperature range (-40°C to +60°C discharging), ensuring mission success in both harsh outdoor environments and controlled indoor operations.

Technical Specifications (Model UAV-JP220M)

Review the detailed engineering specifications below. Engineered for global compliance, this battery meets stringent design standards including GB/T 38058-2019, and is fully certified with RoHS, UL 2054, and UN38.3.

Model Number	UAV-JP220M
Configuration	1P14S
Chemical Materials	NMC
Nominal capacity (Ah)	20
Nominal energy (kWh)	1.036
Nominal voltage (V)	51.8
Operating voltage range (V)	42 ~ 60.9
Maximum continuous charging current (A)	40
Peak charging current (A)	60 @ 30s / 25°C
Maximum continuous discharge current (A)	50

Peak discharge current (A)	100 @ 30s / 25°C
Cycle life (times)	1000 @ 1C/1C
Protection function	With overcharge, over discharge and over current protection alarm
Communication function	CAN
Dimensions (mm)	172 × 110 × 245
Product weight (Kg)	6.8
Protection level	IP65
Charging temperature (°C)	0°C ~ +55
Discharge temperature (°C)	-40 ~ +60
Storage temperature (°C)	-20 ~ +25
Working altitude (m)	≤ 5000
Storage humidity (RH%)	5 ~ 95
Design Standards	GB/T 38058-2019, GB 31241-2022, GB/T 38930-2020
Certification Standards	RoHS, UL 2054, UN38.3

Ideal Commercial Applications

Due to its compact size and stable power delivery, the UAV-JP220M is highly recommended for:

- High-resolution Aerial Photography and Cinematography
- LiDAR Mapping and Topographical Surveying Drones
- Power Line and Solar Farm Inspection UAVs
- Light-payload Medical and Logistics Delivery Drones

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