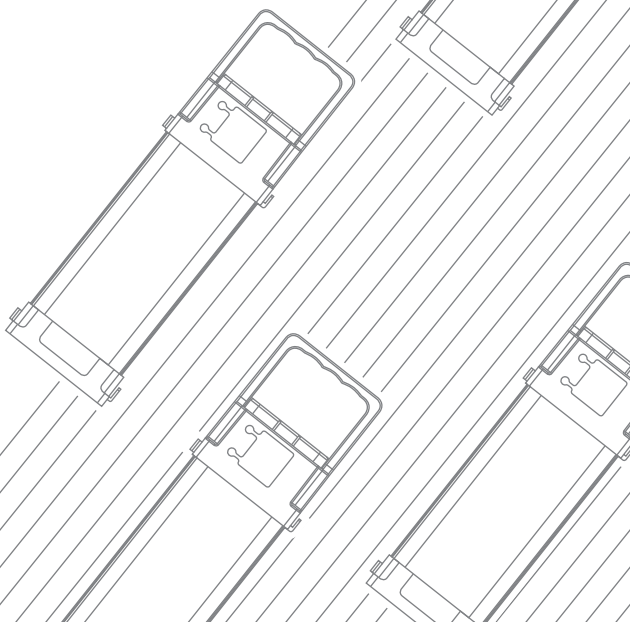




TATTU Battery User Manual

V2.0 2017.1



Thank you for choosing Tattu product,
please always follow the instructions before use.

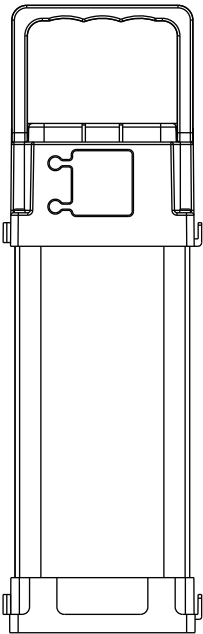
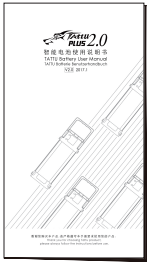
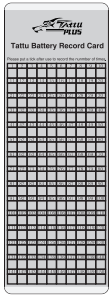

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Thank you for choosing TATTU Plus 2.0 as your UAV battery!
Please read all instructions carefully before using your Tattu Plus 2.0 LiPo battery.

Keep this manual for future reference.

Please ensure your TATTU plus 2.0 is in good operating condition before use. Inspect your battery for signs of physical damage. If there is any physical damage or any parts are missing do NOT use the battery! Contact info@genstattu.com for assistance.

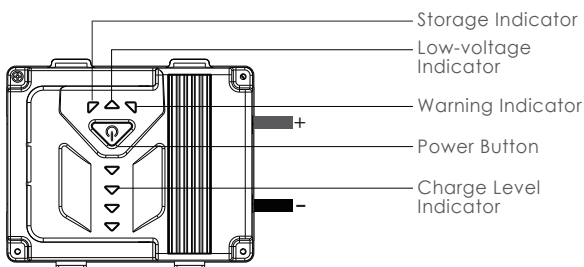
Packing list	
6S1P battery pack	User Manual
	
	Battery Charge Log
	
Balancing Wire	
	

Product Specifications

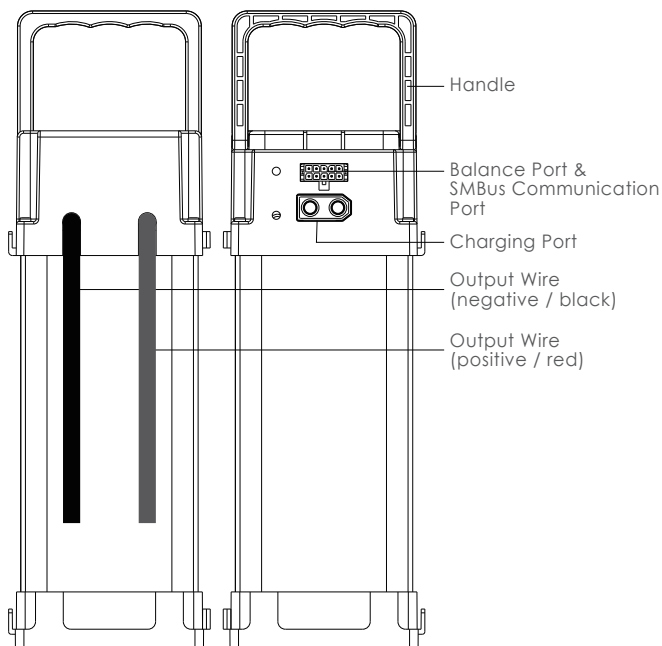
Battery Type	Rechargeable lithium polymer battery pack
Model	TATTU PLUS 2.0 18000mAh 15C 22.2V Smart Battery
Capacity	18000mAh
Watt-hour Rating	399.6Wh
Cell Configuration	6S1P
Voltage	22.2V
Charging Temperature	10-40°C (50°F -104°F)
Discharging Temperature	5-40°C (41°F -104°F)
Net Weight(±20g)	2270g
Dimensions (Length*Width*Height)	205.5*94.2*79.5mm
Maximum Pack Voltage	25.2V
Forced Landing Alarm Voltage	21.5V (3.58 per cell)
Discharge Alarm Voltage	22.2V (3.7 per cell)

Product Operations Guide

1. Overview

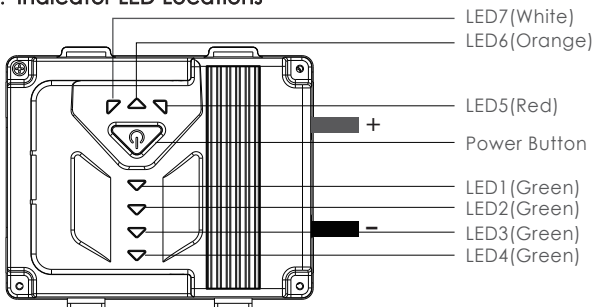


Top View



Side View

2. Indicator LED Locations



- ① The four green LEDs 1, 2, 3 and 4 will show you the charge level and service life of the battery.
- ② LED5, LED6 and LED7 are warning indicators.

LED7 (White)	LED6 (Orange)	LED5 (Red)	LED Indication
		ON	If the red LED is ON, a full charge discharge cycle at 2A is required. The red LED should then turn off. Do NOT use the battery if the red LED remains ON. Please do NOT use the battery.
	ON		If the orange LED is ON, the battery charge is too low, please charge the battery.
ON			If the white LED is ON, storage mode is active.

If the remaining storage level is too high, it is not suitable for the battery to store for a long time. The battery management system will enter into the storage mode and activate self-discharging. The Storage mode will be OFF when the battery self-discharges to a reasonable storage level or is detected any charging or discharging.

③ Operations Guide LEDs 1-4

Intelligent Battery Status	Key Operation	Remarks
Battery(OFF)	Short press the button for 1 second	Displays the battery charge status
Battery(OFF)	Long press the button for over 5 seconds	Displays the remaining service life of the battery
Battery(OFF)	Short press the button for 1 second, then long press for 3 seconds	Power ON
Battery(ON)	Short press the button for 1 second, then long press for 3 seconds	Power OFF

3. Operation Guide

① View Power Level

- When the battery is OFF, short press the button once to check the remaining charge level, the LEDs will shut off after 3 seconds.
- When charging the battery, the LEDs will keep flashing and showing the remaining charge level of the battery.

Charge Level Indicator				
Charge %	LED1	LED2	LED3	LED4
0%~12%	FLASHING	OFF	OFF	OFF
13%~24%	ON	OFF	OFF	OFF
25%~37%	ON	FLASHING	OFF	OFF
38%~49%	ON	ON	OFF	OFF
50%~62%	ON	ON	FLASHING	OFF
63%~74%	ON	ON	ON	OFF
75%~87%	ON	ON	ON	FLASHING
88%~100%	ON	ON	ON	ON

② Checking the Service Life of the Pack

- Service life will show you the remaining cycle life of the battery. When the battery is OFF, long press the button for 5 seconds. The indicator LEDs will show you the remaining service life of the battery. LEDs will shut off after 3 seconds. If the service life of the battery is lower than 12%, discontinue use and replace the pack.

Battery Service Life Indicator				
Service life %	LED1	LED2	LED3	LED4
100%~88%	ON	ON	ON	ON
87%~75%	ON	ON	ON	FLASHING
74%~63%	ON	ON	ON	OFF
62%~50%	ON	ON	FLASHING	OFF
49%~38%	ON	ON	OFF	OFF
37%~25%	ON	FLASHING	OFF	OFF
24%~13%	ON	OFF	OFF	OFF
12%~0%	FLASHING	OFF	OFF	OFF

③ Warning Indicator LED

Warning Indicator LEDs			
LED Indication	LED7 (White)	LED6 (Orange)	LED5 (Red)
Do NOT use the battery if the red LED remains ON	OFF	OFF	ON
The battery charge is too low, please charge the battery	OFF	ON	OFF
Storage Mode is active	ON	OFF	OFF

④ Charging

- Short press the button for 1 second, then long press for 3 seconds to activate the charging port.
- When charging, the LEDs will flash, showing the charging status.
- When all LEDs turn OFF during charging, your battery is fully charged. Disconnect the battery from the charger.

Charge Level Indicator				
Charge %	LED1	LED2	LED3	LED4
0%~25%	FLASHING	OFF	OFF	OFF
26%~50%	FLASHING	FLASHING	OFF	OFF
51%~75%	FLASHING	FLASHING	FLASHING	OFF
76%~99%	FLASHING	FLASHING	FLASHING	FLASHING
100%	OFF	OFF	OFF	OFF

When the battery is fully charged, the LED1 to LED4 will be all ON and will go OFF after 10 mins.

- ⑤ **Overheat Protection:** When charging, if the temperature exceeds 70°C (158°F), the charging protection circuit will activate and charging will stop. To resume charging allow the battery to cool down. Once cool please restart the battery by powering it off and on.
- ⑥ **Low Temperature Protection:** If the temperature of the battery is below 10°C (50°F), the charging protection circuit will activate and charging will stop. To restore this function, please restart the battery.
- ⑦ **Over Voltage Protection:** When the charging current is < 20A, if any single cell voltage is over 4.225V, charging will stop. To restore this function, please restart the battery.
- ⑧ **Over Voltage Protection:** When the charging current is < 40A, if any single cell voltage is over 4.25V, charging will stop. To restore this function, please restart the battery.
- ⑨ **Over Current Protection:** When charging, if the charging current is over 40A, the charging will be cut off. To restore this function, please restart the battery.
- ⑩ **Intelligent Storage:** Storage Mode will be auto-activated.
 - **Normal Temperature Range Storage:** If the charge level is higher than the best storage level and the temperature is less than 60°C (140°F), the battery will start self-discharging to a reasonable storage level after a defined time. Self-discharge will stop at a predetermined voltage.

- Above Normal Temperature Storage 60-70°C (158°F – 176°F): If the charge level is higher than the best storage level and the temperature is between 60°C and 70°C, the battery will start self-discharging to a reasonable storage level within 2 days. Self-discharge will stop at a predetermined voltage.
- Hot Conditions Storage 70-80°C (158°F – 176°F): If the charge level is higher than the best storage level and the temperature is higher than 70°C (158°F) the battery will start self-discharging to a reasonable storage level within 2 days. Self-discharge will stop at a predetermined voltage.

Attention

- ※ Please read the following instructions carefully before using this battery.
- ※ Lithium polymer batteries contain electrolytes that can catch fire easily. If used improperly, these batteries can lead to serious injuries and or property damage. TATTU manufacturers, distributors and dealers will not be held responsible for any accidents caused by the improper use of these batteries.
- ※ The buyer assumes all risks associated with using TATTU products after purchase. If you do not agree to these terms, do NOT use this battery and please return it to us immediately.

1. Use

- ① Always check the physical condition and charge level of the battery before use.
- ② Do NOT use this battery if there is any physical damage including swelling or liquid leakage.
- ③ Always keep battery away from any metal or carbon fiber products as this can cause a short circuit. Do NOT puncture battery.
- ④ Do not connect the battery leads to each other or reverse polarity of the connection to your model.
- ⑤ If you are using the battery at temperatures below 5°C (41°F) fully charge the battery and warm it to 20°C (68°F) before use. A high current discharge in cold weather conditions (below 5°C) is not recommended.

2. Charging

- ① You MUST use a charger specifically designed to balance charge LiPo batteries. Do NOT use a charger designed for ANY other chemistry battery under any circumstances.

- ② Do not leave LiPo batteries unattended while charging.
- ③ Ideal charging temperature conditions are between 10°C and 40°C (104°F).
- ④ Use good charging practices. Use a heat resistant surface, keep flammable materials out of the area and use a fireproof LiPo charging bag.

3. Storage

- ① Do not store LiPo batteries near liquids or in high moisture areas.
- ② Do not store LiPo batteries near heaters, fireplace, stoves or ovens.
- ③ Keep batteries out of reach of children.
- ④ Store LiPo batteries at approximately 25°C (77 °F).
- ⑤ Allow ample storage space for LiPo batteries. Do not stack batteries close together as this increases the risk of short circuit between batteries.
- ⑥ If you do not plan to use the battery for a long time be sure to use proper storage procedure. Store LiPo batteries at approximately 50% charge level or 3.8V per cell, and cycle charge the battery after 3 months of storage. If the battery is fully charged, please cycle charge the battery after 4 months of storage to maintain its stability and longevity.

After-sale Warranty

This product is underwritten by: Allianz China General Insurance Company Ltd.

1. Scope of Application

This specification applies to Gens Ace and TATTU lithium polymer battery after-sales service.

2. Battery Usage, Storage

Please refer to the safety usage and battery storage instructions.

3. Basic Warranty Policy

- ① The warranty period for this battery is 6 months from the time of purchase. A valid purchase certificate (invoice, sales receipt or order information) is required.
- ② Batteries purchased within 1 month: If there is a problem with the electrical performance of this battery, a replacement will be sent to you at no charge. This warranty does not cover physical damage or modifications to the battery. Electrical testing may be required.

- ③ Battery used within 6 months: if there is an issue with electrical performance not caused by physical damage or modification and after being tested, we will repair it without charge. If we are unable to repair the battery we will replace it with a new one and share half of the shipping fee.

4. Battery Service Life: If a battery exceeds 150 cycles and the remaining capacity is \leq 80%, it is regarded as end of life.

- ① We do provide life-long use guidance, maintenance consulting and technical support.
- ② Our aftersales service personnel will reply to you within 7 working days.

5. Battery Quality Issues for New Batteries

- ① Defective appearance or damaged during shipment of new battery.
- ② Battery leakage, puffing or voltage difference between cells.

6. Disclaimer (Non-quality Issues)

- ① Beyond warranty period (6 months)
- ② Assembling and the use of technical conditions that do not meet the requirements of the battery specifications.
- ③ Physical damage due to fall, impact, flooding or corrosion etc.
- ④ Improper usage, high temperature, fire, over-charge, over-discharge, shorting the battery leads together and overload.
- ⑤ Other: exemption conditions that are protected by applicable laws and regulations.

7. Other Disputes

If the customer raises objection against the test result of the manufacturer which claims a nonquality issue and required a testing from Third Party Inspection Institution, the cost of the test won't be reimbursed. Testing results and responsibility are to be negotiated by both sides.

- ※ For other terms and conditions which are not mentioned here, please refer to the purchase and sale contracts, product approval or lithium battery safety instructions.

8. ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION, DESIGN OR OTHERWISE.

SHENZHEN GREPOW BATTERY CO. LTD RESERVES THE RIGHT
TO FINAL INTERPRETATION.

Company Name: Grepow Inc

Address: 6681 Sierra Ln, Suite F Dublin, CA 94568

Website: www.genstattu.com

Tel: +1-925-364-7166

Fax: +1-925-364-7177

Email: info@genstattu.com

**The content of this manual is subject
to change without notice.**

If you have any questions about the manual,
please contact info@gensace.com

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