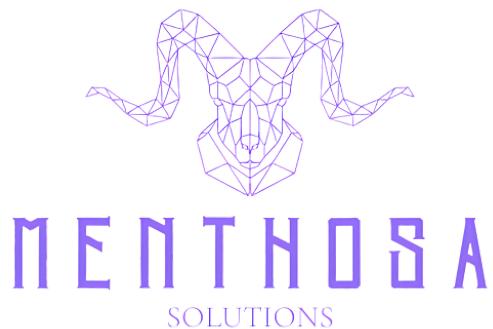
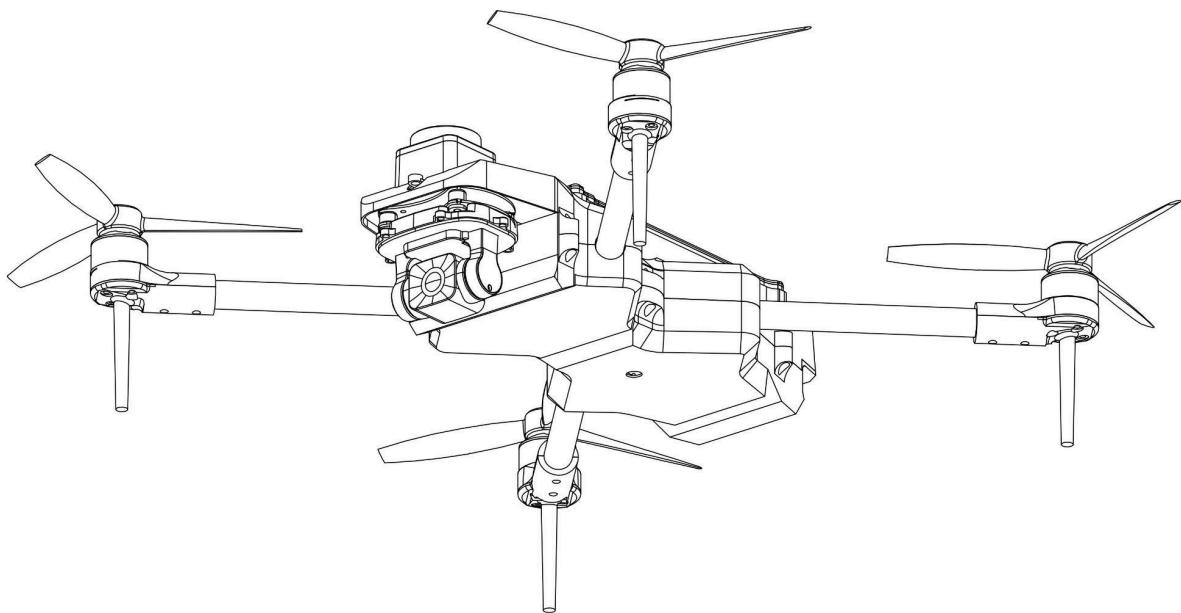


# Suparna Battery Charger Manual

v1.3 Aug 24, 2024



 **Searching for Keywords**

Search for keywords such as “battery” and “install” to find a topic. Press Ctrl+F on Windows or Command+F on Mac to begin a search.

 **Printing this Document**

This document supports high resolution printing.

**Revision Notes**

<b>v1.0</b>	16-May-2024	Initial Version
<b>v1.2</b>	17-June-2024	Added iDronam WiFi Charger
<b>v1.3</b>	24-August-2024	iDronam WiFi Charger Updated

# Using this Manual

## Legend

 Warning

 Important

 Hints and Tips

 Reference

## Read Before the First Flight

Read the following documents before using the **Suparna**:

1. Disclaimer and Safety Guidelines
2. Quick Start Guide
3. User Manual

 It is recommended to watch all tutorial videos on the official Menthosa website and read the disclaimer and safety guidelines before using for the first time. Prepare for your first flight by reviewing the quick start guide and refer to this user manual for more information

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 The operating temperature of this product is 0° to 40° C. It does not meet the standard operating temperature for military grade application (-55° to 125° C), which is required to endure greater environmental variability. Operate the product appropriately and only for applications that meet the operating temperature range requirements of that grade.

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# Battery Chargers

This section tells you about the types of battery chargers of Suparna.

## Battery Chargers

Suparna has 3 types of chargers supplied with the drone. The configuration of each is explained in the following sections.

The Battery type of the drone is Li-ion. It is a 4 cell (4S) battery having a capacity of 4500 mAh. The maximum voltage of the battery is 16.8 Volts with the nominal voltage of 14.8 Volts and minimum voltage is 10.5 Volts.

**!** If the battery voltage is below 10.5V or above 16.8 V. Please do not use it and contact us.

**!** Please do not leave the battery unattended. Always monitor the battery while charging.

### SkyRC S65 Charger

The charger comes with a 2 pin plug which goes into the electricity outlet and the other end goes behind the charger.

1. Place the charger on a level surface and once powered on, connect the adapter to the front of the charger. There are 2 kinds of wires coming out of the adapter -
  - a. The one with the yellow connector is the main connection which goes into the XT60 connector of the charger.
  - b. The 2nd connector which has 5 small wires in it will go into the balance connector of the charger.

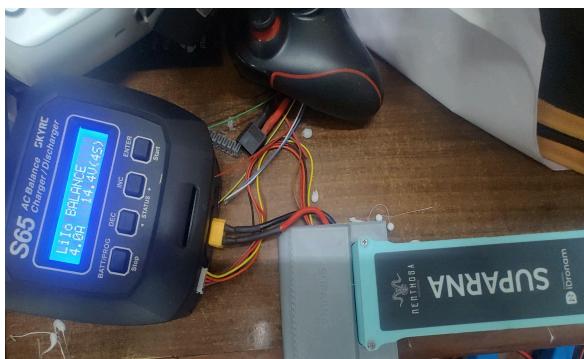
In the end the connection should look like as in the below picture -



2. After powering ON the charger, the screen should display the following information. It says that the battery type is Li-ion which is 4S, the charging mode is Balance and the current is 4.0 Amps. A picture of the charger information -



3. Now, connect the battery to the adapter. The method of inserting the battery into it is the same as in the drone. It should look like this -



- After this long press the Enter/Start button. A beep will be heard and info of cells will be shown. It should be as in the picture -



- If there is no error, press enter to confirm and the Charging will start. This is shown as in the image below -



- After the charging is finished the charger will beep and will show a finished status. Turn off the charger and remove the battery.

## PD60 Charger

This charger is powered by a 65 watt Type-C to Type-C wall adapter. As shown in the image



1. Connect this wall adapter to the power inlet and now connect the other end of Type-C cable to the PD60 charger. Once this is done, connect the battery adapter onto the other end of it. This is the same as mentioned in the SkyRC charger, below is the image showing the same.



2. Once powered ON there are 2 buttons on the charger. The left one is the **Select**

**button**, long press it to switch the type of Battery chemistry, since there is no Li-ion option. Use the **LiPo** option. Short press of the same button switches the **Charge Current** of the charger. Use the **3A** option. The charger should indicate these as shown in the above picture

3. Now once all of the above steps are done insert the battery into the adapter as mentioned in the SkyRC charger section. The Battery charge percentage bars should light up indicating the battery's charge percentage. This is shown in image below -



4. To start charging the battery, press the button present on the right side of the charger, it has a play/pause symbol on it. Once it is pressed if no error occurred the charge symbol will light up on the charger and battery will start charging. This has been shown in image -



5. If there is any error the warning symbol will light up on the charger.

- After the charging is complete, the Check symbol will light up which has green color and the bars of 100% will also light up, indicating charging is done. Please power off the charger and remove the battery.

This has been shown in the image -



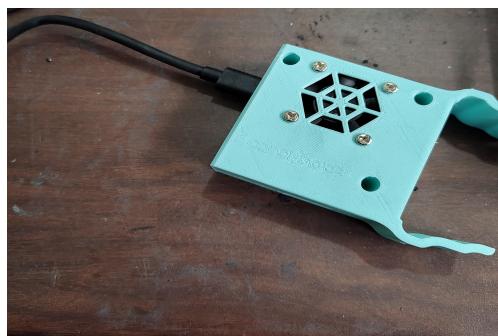
16 May 2024, 13:45

## iDronam WiFi Charger

This charger is powered by a 65 watt Type-C to Type-C wall adapter. As shown in the images -



1. Connect this wall adapter to the power inlet and other end of Type-C to the iDronam WiFi Charger(as shown in below image). Place the charger on a flat surface and away from any heat elements and wet areas.



2. Connect the battery to the charger (in a similar manner when placing battery in the drone). Now power ON the charger. The charger has LED indicators on its side and these will turn ON when the charger is powered ON. The Reference Images are below -



## iDronam Suparna : Battery Charger Manual

3. When the charger is powered ON and initialization is complete it will create its own WiFi with SSID - **Suparna Charger**. The Password for which is - **suparnacharger**.
4. To monitor and control the charger there are 2 ways -
  - a. Via Charger Section of the iDronam Enterprise Software -

The screenshot shows the 'Charger' section of the iDronam software. On the left sidebar, 'Charger' is selected. The main area displays various parameters:

- Charger Disconnected**: A button labeled 'Connect'.
- Percentage**: 0 %
- Voltage**: 0.00 V
- Current**: 0.00 A
- Time**: 00:00
- Capacity**: 0 mAh
- Temperature**: 0 °C
- Cell Voltages**: 0.00-0.00-0.00-0.00
- Charger Input**: 0.00

- b. Via iDronam Charger Android App (*to access the app please email us at - [sales@idronam.com](mailto:sales@idronam.com)*)
5. To connect to the charger press on the 'Connect' button. It will automatically search for wifi and will establish the connection. Once connected the data will be updated on the screen and charger status will be shown accordingly.
6. Once connected, the charging can be started by selecting the 'Start Charging' button. The status will be shown as below -

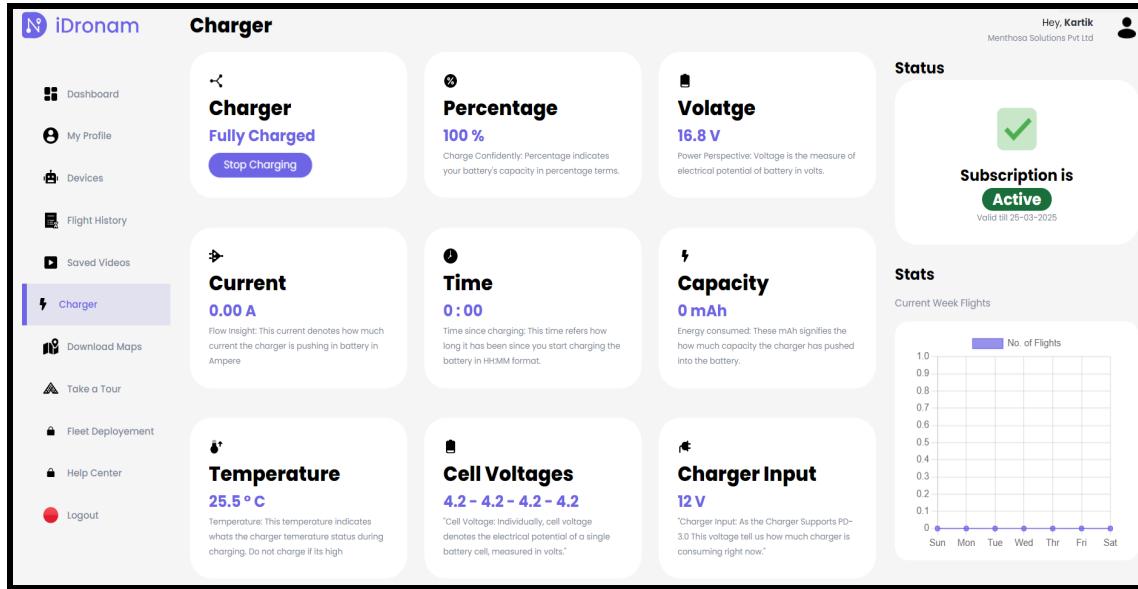
The screenshot shows the 'Charger' section of the iDronam software after connecting to the charger. The main area displays the following data:

- Charger**: Charging, with a 'Stop Charging' button.
- Percentage**: 61 %
- Voltage**: 14.4 V
- Current**: 1.60 A
- Time**: 0:00
- Capacity**: 2.44 mAh
- Temperature**: 28.87 °C
- Cell Voltages**: 3.6 - 3.6 - 3.6 - 3.6
- Charger Input**: 12 V

In the top right corner, there is a 'Status' section showing a green checkmark and the message "Subscription is Active". Below it is a 'Stats' section with a chart titled "Current Week Flights" showing the number of flights per day from Sunday to Saturday.

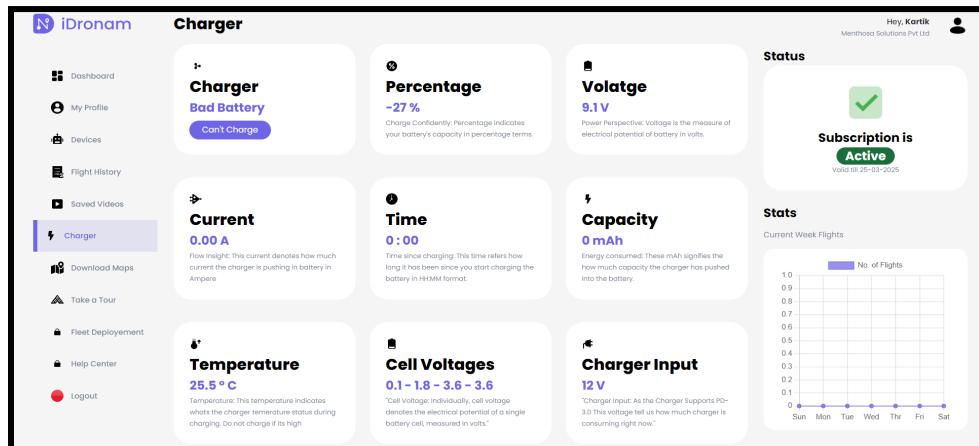
## iDronam Suparna : Battery Charger Manual

- After the charging is completed, the status will be displayed as -



- After charging, Power OFF the charger and then remove the battery.
- The charger has multiple safety features built-in to stop over/under charge of the battery but in case there is some error while charging, the charging should be immediately stopped by clicking 'Stop Charging' button and power OFF the charger.
- When charging, it is not required to be connected to the wifi of the charger. The charging process continues even after wifi disconnection.
- If a damaged battery is connected or a battery is not connected properly the charger will show the Bad battery status. Please check if the battery is properly connected. Even after that the status does not change, do not charge the battery and contact us.

Reference Image -



! Charger LED Indicators -

There are 4 LEDs on the side of the charger. Counting from the left side when the battery end is on the right side. These are -

1. Charger Status LED -
  - a. Whitish Yellow/ White - Battery Connected but not charging/ Idle state.
  - b. Blue - Charging.
  - c. Yellow - Balancing.
  - d. Green - Fully Charged.
  - e. Red - Battery not able to charge due to Over Temperature.
  - f. Purple - Charger initialization state.
  - g. Orange - Bad Battery (Due to Under or Over voltage of battery).
2. Internal Check LED - Always Blue
3. Internal Check LED - Always Blue
4. Battery Detect LED -
  - a. Blue - Battery Connected
  - b. OFF - Not Connected

Below are reference images for Charger LED indicators -



Battery Detect LED is ON



Battery Detect LED is OFF



Charger is in Idle state



Battery is Charging



Battery is Fully Charged

# Contact Us

Feel Free to Contact Us

## Contact Us

### Contact

Visit [www.menthosa.com](http://www.menthosa.com)

For Software Updates and Downloads Visit <https://idronam.com/>

Sales Support : Mail us at [sales@idronam.com](mailto:sales@idronam.com)

! This content is subject to change.

If you have any questions about this document, please contact Menthosa Solutions by sending a message to [director@menthosa.com](mailto:director@menthosa.com) OR [sales@idronam.com](mailto:sales@idronam.com)

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