BATTLE BORN®

Unstoppable Power Solutions

Product Manual and Installation Guide

HUB | Gateway Device for Smart Power Systems

Model: HUB





Document Number: PMI_HUB-1.0



Product Name and Model

Battle Born HUB (Firmware 1.0 and Higher)

Certifications

Manufacturer Contact Information - Dragonfly Energy

775.622.3448 | info@dragonflyenergy.com | Dragonflyenergy.com

Customer Support - Battle Born

855.292.2831 | info@battlebornbatteries.com | Battlebornbatteries.com

Information About Your System

As soon as you open your product, record the following information and be sure to keep your proof of purchase.

Serial Number: _	
Purchased From	:
Purchase Date:	

Welcome to the Battle Born Family!

Thank you for choosing Battle Born® power solutions. We appreciate your trust in our technology and remain committed to delivering advanced, reliable products that support a wide range of energy storage and system-integration needs.

This manual provides essential information for the installation, operation, and general use of the Battle Born HUB. The HUB serves as the central communication gateway within a Battle Born Smart Power System and is designed to operate in conjunction with the Battle Born Mobile App.

For instructions related to mobile app setup, system configuration, monitoring, and software features, please refer to the Battle Born Mobile App V2.0 User Guide available in the Battle Born Customer Center (battlebornbatteries.com/customer-center).

If you have questions or need support, our technical team is here to help.

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For additional information and the latest technical literature, please refer to our website: battlebornbatteries.com

Product Overview

Expands the Capabilities of Your Battle Born Smart Lithium Power System

The Battle Born Hub commissions all smart battery packs into a single system for both full system and single battery interpretation, monitoring, and diagnostics (patent pending). Please note, the Hub is only compatible with Battle Born Smart LiFePO4 Deep Cycle Battery models, which are equipped with Dragonfly IntelLigence® smart communication technology. Look for the Final icon on your battery to confirm compatibility.



Features

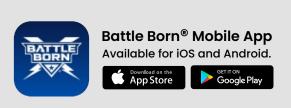
- Connects All Smart Batteries in System
- Receives Wireless Signal from Smart Batteries
- Increases Accessibility to Advanced Communication Features
- **Enables Full Power System Monitoring**

Dragonfly IntelLigence® Smart Communication Technology

Dragonfly IntelLigence® is the proprietary communication technology inside Battle Born Smart LiFePO4 Batteries and Smart Power System Accessories.

- Robust Wireless Mesh Network & Bluetooth® Connectivity
- Quick Setup & Easy Configuration via the Battle Born® Mobile App
- Compatible with RV-C
- Hub Enables Remote Monitoring of Entire Smart Power System
- Alerts, Error Detection & Warning Notifications







HUB Technical Specifications

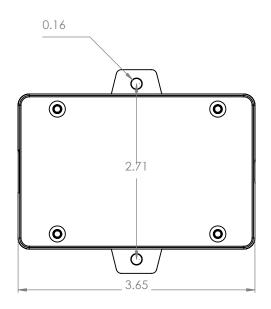
Device Specifications

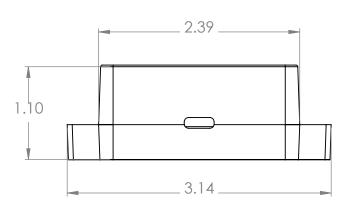
Dimensions	3.65" x 3.14" x 1.1" (w/ Mounting Points)
Weight	2.6 oz
Case	Polycarbonate / ABS Blend
Port	RJ45, USB-C
Power Draw (USB-C Port)	150mA
Power Draw (DC-DC Converter at 13.8V)	65mA
Power Draw (DC-DC Converter at 27.6V)	37mA
Bluetooth Range	~15m/50ft
Wireless Mesh Network Range (To Smart Battery)	Recommended - Within 3 ft
Data Transmission Frequency	5 sec
Communication Protocols	Bluetooth RV-C
Listings	CE

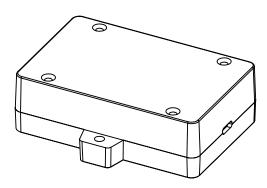
What is in the Box?

Included with Your Purchase:

- (1) HUB
 - Model: HUB
- (1) Finishing Hardware Kit
 - (2) '18-8 Stainless Steel' 5/16-18 x 1" bolts
 - (2) '18-8 Stainless Steel' 5/16-18 x 1 1/4" bolts
 - (4) Washers
 - (2) Nylok nuts







Dragonfly IntelLigence: Smart Battery Technology

Overview of Dragonfly IntelLigence Technology



Dragonfly IntelLigence® is the proprietary communication system that enables seamless integration and advanced features in Battle Born® Smart LiFePO4 Batteries and accessories.

Communication Range

Bluetooth | Hub → Within 3 ft. → User Mobile Device

The Battle Born Mobile App, when paired with the Battle Born Hub, offers seamless communication with your Battle Born Smart Batteries via Bluetooth. The app provides real-time monitoring of your battery system's performance, including charge levels, temperature, and health. For best performance, place the HUB as close as possible to the battery bank, preferably

Wireless Mesh Network | Batteries → Within 3 ft. → Hub

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System Update Frequency

The Battle Born Smart Batteries provide data updates from the Battery Management System (BMS) every 5 seconds, delivering near-instantaneous insights into key performance metrics like state of charge (SOC), battery health (SOH), temperature, and voltage. This high-frequency data refresh rate ensures you have real-time visibility into your battery's status. Additionally, any issues reported by the BMS, such as over-temperature or overload conditions, are immediately relayed to the app, allowing for proactive monitoring and quick response to potential problems. This rapid data flow empowers you to keep your energy system running efficiently and reliably.

Power Draw

The Bluetooth Dongle integrated into your Battle Born Smart Batteries has a nominal power draw of approximately 10mA, ensuring minimal impact on your battery's overall performance. This low-energy consumption enables the Bluetooth connection to remain active for extended periods without significantly draining your battery, facilitating seamless real-time monitoring and communication. It's important to note that while there may be slight power draw increases during specific operations, such as initial configuration or firmware updates (peaking around 30mA and 50mA, respectively), these events are typically brief and have negligible impact on battery life. The power draw remains relatively consistent regardless of whether the battery is configured as a standalone unit or part of a larger system, with a maximum observed increase of approximately 0.5mA. Make sure to account for this constant power draw when planning your battery storage to ensure optimal performance and longevity.

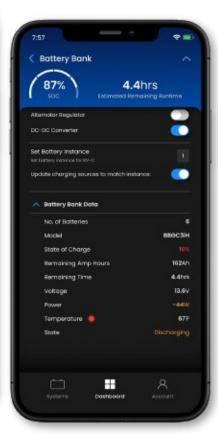
System Configuration and Monitoring

For instructions on using the Battle Born Mobile App, including how to configure a system, commission components, view real-time data, update firmware, and monitor system performance, please refer to the Battle Born Mobile App V2.0 User Guide available at the Battle Born Customer Center:

https://battlebornbatteries.com/customer-center/







Best Practices: What to Avoid

- Do NOT walk away from your smart batteries or components with the mobile device performing or configuring the updates while they are in progress.
- Do NOT attempt to configure the same system across multiple accounts or use the same components in multiple configurations.

Troubleshooting

Issues Connecting to Components

- Ensure you are physically close to the components.
- Verify that the components are powered on and Bluetooth is enabled.
- Restart your bluetooth connection.
- Restart your mobile device.

Issues Monitoring After Configuration

- Allow at least 2 minutes for the HUB to fully connect to the batteries after configuration.
- Ensure the HUB is within a reasonable distance of the batteries and free from interference.
- If the issue persists, try the following steps in order:
 - Power cycle the HUB.
 - Close and reopen the app.
 - View the system in monitoring mode and wait 30 seconds for a potential firmware update. If available, proceed with the update.
- If the issue STILL persists, delete the system and reconfigure it.
- If the problem continues, contact support for further assistance.

Issues During Configuration

- Ensure you are within a reasonable distance of all components.
- Close and reopen the app.

Issues Signing In:

Contact support for assistance with account recovery.

Warranty, Returns & Shipping

Limited Warranty

Please find Limited Warranty information online at www.battlebornbatteries.com/limited-warranty/ or via phone at (855) 292-2831.

Return Policy

You have 30 calendar days to return an item from the invoice date. To be eligible for a return, your item must be in the same condition that you received it in. You must have the receipt or proof of purchase. If an item is new, unused, and in the original packaging, we are happy to accept a return up to 30 days from the original invoice date with no restocking fee. The item must be returned with its original packaging. Original packaging must be in the same condition as it was received, otherwise you may be responsible for a restocking fee. If the item has been installed, used, or no longer has the original packaging, we will assess a restocking fee that will be shared when the return merchandise authorization (RMA) is issued. Items 60 days past the original invoice will be reviewed at Battle Born's discretion.

Returns will not be accepted without an RMA number, which can be obtained by filling out the return form at https://battlebornbatteries.com/returns/.

To avoid being charged restocking fees, review the full return/refund policy at www.battlebornbatteries.com/terms-conditions/#returns.

Refund Policy

You have 30 calendar days to return an item from the invoice date. Once we receive your item, we will inspect it and notify you that we have received your returned item. We will immediately notify you of the status of your refund after inspecting the item. If your return is approved, we will initiate a refund to your credit card (or original method of payment). You will receive the credit within a certain amount of days, depending on your card issuer's policies. No refund is guaranteed after the initial 30 days has passed or if the item has been used.

Shipping

You will be responsible for paying for your own shipping costs for returning your item. If you are returning prior to 30 days from the original ship date, you may be eligible for a free return. In order to be eligible for free shipping, you MUST have the original packing in which the order was shipped, including boxes, foam, wrapping, and pallets if necessary. Not all items will be eligible for free return shipping. Shipping costs are nonrefundable. If you receive a refund, the cost of return shipping may be deducted from your refund.

If you have any questions, please contact us by calling 855-292-2831 or email us at info@battlebornbatteries.com.

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