GREEN CUBES
THE POWER TO PERFORM

Lithium
S A F E F L E X

Lithium SAFEFlex's Integrated IoT

Battery performance data straight to your laptop, tablet, or phone

Overview

Green Cubes Technology's new embedded Internet of Things (IoT) feature for our SAFEFlex batteries and cloud application provide real time performance information to any Wi Fi connected device. A cellular or GSM service option is available for those locations without Wi Fi. The product suite delivers the fleet's performance data each month for a small fee. This feature is an option on any of the batteries in the Lithium SAFEFlex line.

Features

Ease of Use

- Indicates when opportunity charging is being utilized
- Anticipate when battery service will be needed
- Receive notifications when batteries need charging
- Understand usage patterns for capacity planning

Energy Savings

- Select the optimal time to charge your batteries (i e charge at lower cost, off peak hours)
- Monitor state of charge while charging to determine when to disconnect from the charger and send SMS to operator to notify of charge status

Versatile Application

- Application operates on any Wi Fi enabled device
- Personalize your fleet by customizing each piece of equipment with a name, color, description, and category
- Add multiple users to let the team track fleet performance
- Customizable dashboard presents data that is most important to you
- Fleet-wide view tracks every piece of equipment at every airport

Real Time Measurements

- State Of Charge (SOC)
- Current Temperature
- Charge detect
- Cell voltage
- Pack voltage
- Key on/off
- Errors and warnings
- Remaining available capacity
- Maximum available capacity
- BMS Reset counter
- Balancing information
- Firmware and configuration
- DFI information
- History

Benefits

- Increases up time by optimizing charging regimes, reducing charge time, and indicating when opportunity charging can be utilized
- Increases fleet utilization by notifying operators when charging is complete
- Lowers electrical consumption and energy costs

Set-up Requirements

Physical Requirements

- Device will be wall mounted with supplied mount
- Standard 120 wall receptacle
- Device will come configured. It will require end user to mount, plug in and turn on to initiate communication.

Network Requirements

- Provide access for GreenCubes base station to the internet by one of the following methods:
  - Providing an RJ-45 Ethernet to your network at base station location
    - Access to a DHCP Server
    - Access to a DNS Server
    - Access to a NTP Server
  - Providing SIM card with active data plan to install into base station
  - Provide SIM card with active data plan to MoFi Device if being installed in conjunction with GCTC Chargers
- Verify firewall will allow the following outbound communication for ports 443, 9002, 9003, and 9004.
  - 173.192.0.0/16
  - 64.233.0.0/16
  - 74.125.0.0/16
- Plan for inbound communication for updates not yet finalized.
- Site survey will need to be done to determine final number of base stations needed.

ABOUT GREEN CUBES TECHNOLOGY

Green Cubes Technology harnesses over 30 years of industry experience to ensure we design, develop and deliver solutions for the most challenging energy needs. We offer battery technology innovation, application design and performance management to drive productivity, scalability and sustainability.

For more information, email **info@greencubes.com**
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