



# LEOCH In-House BMS

## Core Technology for Global Battery Solutions

**CONFIDENTIAL**

Stock Code: 00842.HK

# **LEOCH Core Technology Platform**

**In-House BMS — Designed in Singapore for Global Applications**

# LEOCH In-House BMS — Technology Ownership & Global Flexibility

## Core BMS Functions

- Real-time voltage, temperature, current & SOC monitoring
- Safe charge / discharge control
- Fault detection and multi-layer battery protection
- Cell balancing for consistent performance and life

## Customer Value

- Higher safety and system reliability
- Longer battery service life
- Faster integration and application customization
- Reliable operation for critical power applications

## Technology Differentiators

- LEOCH-owned BMS design & firmware platform
- Software and system design capability in Singapore
- Real-time diagnostics, alerts and cell balancing
- Integrated with LEOCH battery system architecture

## Built for Global Applications

- Developed from proven backup-power applications
- Flexible platform for diverse market requirements
- Extensible toward UPS backup, ESS and critical power
- Full design control supports continuous product evolution

# LEOCH BMS Platform — In-House Firmware & Integrated Hardware Design

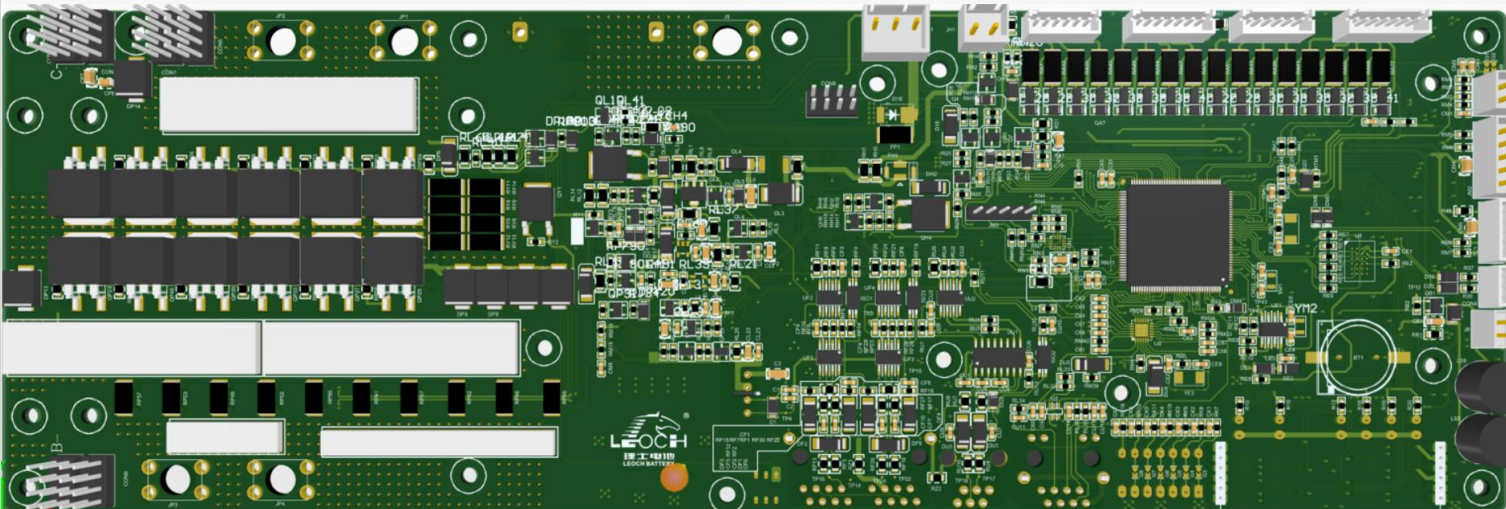
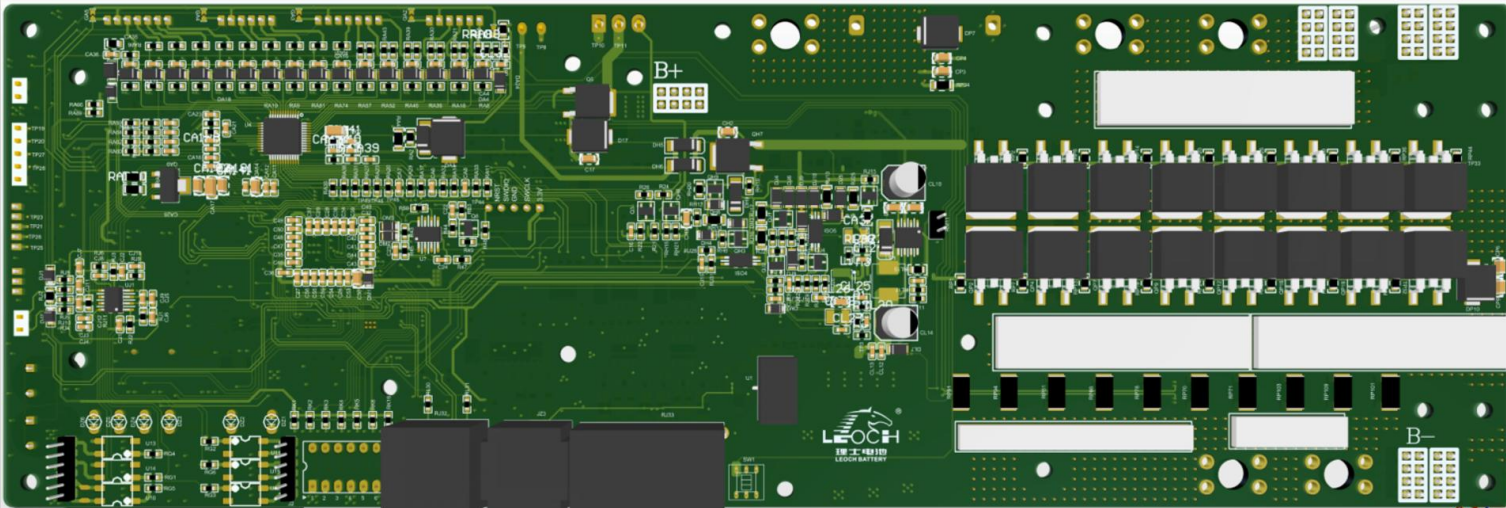


BMS for Telecom Base Stations or Residential Energy Storage



| PRODUCT PARAMETERS           |                                                                                                                                                                                                                                                                                                                                                                                                                             |      |      |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|
| Cell Configuration           | Supports 15-16 series LiFePO4 cells.                                                                                                                                                                                                                                                                                                                                                                                        |      |      |
| Continuous Discharge Current | 50A                                                                                                                                                                                                                                                                                                                                                                                                                         | 100A | 150A |
| Protections                  | <ul style="list-style-type: none"><li>• Short Circuit Protection</li><li>• Reverse Polarity Protection</li><li>• Charge Current Limiting</li><li>• Overvoltage Protection</li><li>• Undervoltage Protection</li><li>• Overtemperature Protection</li></ul>                                                                                                                                                                  |      |      |
| Performance                  | <ul style="list-style-type: none"><li>• Voltage Sampling Accuracy: <math>\leq 10\text{mV}</math></li><li>• Current Sampling Accuracy: <math>\leq 2\%</math> of Full Scale (FS)</li><li>• Temperature Sampling Accuracy: <math>\leq 2^{\circ}\text{C}</math></li><li>• SOC Accuracy: <math>\leq 5\%</math>; SOH Accuracy: <math>\leq 5\%</math>;</li><li>• Self-Consumption Current: <math>\leq 45\text{mA}</math></li></ul> |      |      |
| PCBA Dimensions              | 300*100*50MM                                                                                                                                                                                                                                                                                                                                                                                                                |      |      |
| Optional Accessories         | <ul style="list-style-type: none"><li>• LCD Display Panel</li><li>• Touch Screen</li><li>• GPS Module</li><li>• Interface Board</li><li>• Bluetooth Module</li><li>• Current Limiting Board</li></ul>                                                                                                                                                                                                                       |      |      |
| Solution Architecture        | MP2797DFP + STM32H573                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |

| FUNCTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Communication: CAN, RS232, Dual RS485, Ethernet;</li><li>• Display: LCD display panel;</li><li>• Temperature Sensing: Integrated temperature sensors;</li><li>• Indicator Board: LED indicator board;</li><li>• Heating Film: Built-in heating membrane;</li><li>• Buzzer: Integrated alarm buzzer;</li><li>• Breaker: Breaker tripper;</li><li>• Sleep &amp; Wake: Sleep mode and wake-up function;</li><li>• Pre-Charge Circuit: Supports pre-charge;</li><li>• Active Balancing: Supports charge balancing;</li></ul> | <ul style="list-style-type: none"><li>• Low Voltage Switch: Weak current switch;</li><li>• Anti-Theft: Theft protection function;</li><li>• Gyroscope: Built-in gyroscope;</li><li>• Reset: System reset function;</li><li>• Alarm: Multi-condition alarm function;</li><li>• Parallel Operation: Supports parallel connection of battery packs;</li><li>• Data Storage: Up to 10,000 records;</li><li>• Dry Contact Outputs: 4 dry contact channels;</li><li>• Capacitive Load: Supports capacitive loads;</li></ul> |



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LEOCH-controlled design platform • Singapore software capability • Global application flexibility