



产品规格承认书

Product Specification Approval

产品名称 (Product Name) :		蓝牙模块 Bluetooth Module	
产品型号 (Product Number) :		DL-B40-G2	
客 户 名 (Customer Name) :			
客户料号 (Customer P/N) :			
送样日期 Sample Delivery Date	版次 Version	文件编号 Document No.	
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编制(Prepared by)	核准(Approved)	审核(Audit)	
Jianghuiming	Yang feigui	Thomas	
客户确认栏 Customer Confirmation Column			
确认意见 Confirm opinion:			
客户签章 Customer signature:			
日期 Date:			
注意 (Notice) :			
1.收到样机确认 OK 后请及时回签，7 天内没有回签及问题反馈，我司默认客户测试合格；规格书中的图片为通用机型图片，可能与送样样机有差异，此份规格书达锂电子保留最终解释权.After receiving the prototype to confirm OK, please sign back in a timely manner, within 7 days without signing back and problem feedback, our default customer test qualified; specifications in the picture for the general model picture, may be different from the delivery of the prototype, this specification by the Dongguan Daly Electronics Co. 2.客户批量前，请在规格书中签字回传，并说明详细功能说明，我司才安排批量.Before the customer batches, please sign the specification and return it, and explain the detailed function description, and our company will arrange the batch.			



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1. 简介 Introduction

本产品是专为BMS系统设计的智能蓝牙模块，是连接电池数据与智能世界的无线桥梁。它将复杂的电池信息转化为直观的网络数据，让您随时随地掌握系统状态。为确保您能充分发挥本产品的卓越性能，请务必在安装使用前仔细阅读并遵守本手册中的操作规范。正确安装与操作是安全与效能的基石，请妥善保管手册以备查阅。

This product is an intelligent Bluetooth module specifically designed for BMS systems, serving as a wireless bridge connecting battery data to the smart world. It transforms complex battery information into intuitive network data, allowing you to monitor the system status anytime, anywhere. To ensure you can fully utilize the excellent performance of this product, please carefully read and follow the operating instructions in this manual before installation and use. Correct installation and operation are the foundation of safety and efficiency; please keep this manual properly for future reference.

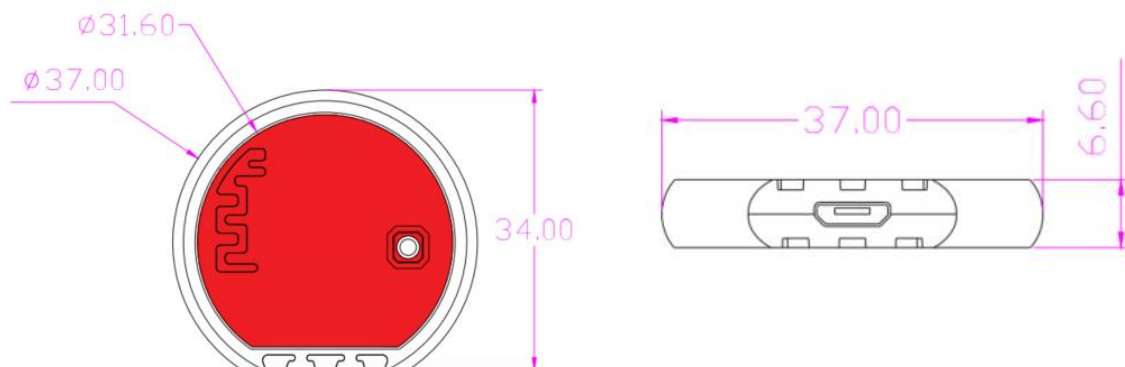
2. 产品说明 Product description

2.1. 产品说明 Product description

项目Item	描述Description
产品类型 Product Type	BLE 5.1 主从一体蓝牙串口透传模块 BLE 5.1 Master-Slave Integrated Bluetooth Serial Port Transparent Transmission Module
核心功能 Core functions	实现 UART 与 BLE 之间的双向透明数据传输，无需处理底层蓝牙协议 It enables bidirectional transparent data transmission between UART and BLE without the need to handle underlying Bluetooth protocols
按键 Button	短按激活BMS/长按8S重置BMS Short press to activate BMS / Long press for 8 seconds to reset BMS
天线形式 Antenna type	板载天线，可选配外接 IPEX 接口版本 Onboard antenna, with optional external IPEX connector version available
对外接口 External Interface	Micro USB
尺寸 size	L*W*H=34mm*37mm*6.6mm
工作温度 Operating temperature	-40℃~85℃
储存环境 Storage environment	-40℃~85℃
相对湿度 relative humidity	相对湿度:5%~95%RH （无冷凝） Relative humidity: 5% - 95% RH (non-condensing)
供电范围 Power supply range	1.8 V ~ 4.2 V (默认 3.3 V) 1.8 V ~ 4.2 V (default 3.3 V)
功耗 Power consumption	休眠电流 ≤ 10 μA; 连接电流 ≤ 500 μA Sleep mode current ≤ 10 μA; connection current ≤ 500 μA
静电防护 Electrostatic protection	接触放电: ±4KV; 空气放电: ±6KV Contact discharge: ±4KV; Air discharge: ±6KV
工作模式 Working mode	透传模式: 默认运行模式，自动转发串口与蓝牙数据; AT 命令模式: 通过串口或无线发送 AT 指令配置参数 Transparent transmission mode: The default operating mode, which automatically forwards serial port and Bluetooth data; AT command mode: Configure parameters by sending AT commands via serial port or wireless connection.
固件升级 Firmware upgrade	支持 OTA (空中下载) 固件升级，可通过手机 APP 完成 Supports OTA (Over-the-Air) firmware upgrades, which can be completed via a mobile app.
通信协议 Communication protocol	BLE GATT 串口透传服务 (SPP over BLE)，支持标准 Nordic UART Service 或自定义服务 (可选) BLE GATT serial port transparent transmission service (SPP over BLE), supporting standard Nordic UART Service or custom services (optional).



2.2. 尺寸图 Dimension drawing



2.3. 接口说明 Interface description

引脚PIN	定义definition	说明description	接口规格interfacespec
PIN1/黑 Black	GND	地 GND	 GH1.25 6Pin
PIN2/绿 Green	3.3V	直流3.3V输入 DC 3.3V INPUT	
PIN3/空 Empty	空 null	无 none	
PIN4/黄 Yellow	KEY	选配 Optional features	
PIN5/白 White	TX	通讯发送端 Communication sending end	
PIN6/红 Red	RX	通讯接收端 Communication receiving end	

3. 性能指标 Performance indicators

项目project	参数Parameter
主控芯片 main control chip	32位ARMCortex-M3，主频48MHz 32-bit ARM Cortex-M3, 48MHz clock speed
蓝牙协议 Bluetooth protocol	Bluetooth Low Energy (BLE) 5.1
工作频段 Operating frequency band	2.4GHzISM频段（2402~2480MHz） 2.4GHz ISM band (2402 - 2480 MHz)
通信距离 Communication distance	空旷视距下40~100米（取决于发射功率与环境），切勿密闭于箱体内部 The effective range is 40-100 meters in open spaces (depending on transmission power and environment). Do not enclose it in a sealed container
发射功率 Transmitting power	-23dBm~+10dBm（18级可调） -23dBm to +10dBm (18 levels adjustable)
接收灵敏度 Receiving sensitivity	-95 dBm
可靠性设计 Reliability design	内置看门狗（WDT），保障长期稳定运行 Built-in watchdog timer (WDT) ensures long-term stable operation



4. 接线使用说明及APP下载 Wiring instructions and APP downloads

扫码查看说明书及下载 APP，或使用电脑浏览器登录：<https://www.dalyelec.com/service.html>

Scan the QR code to view the instruction manual and download the app, or log in using your computer's web browser:

<https://www.dalyelec.com/service.html>



安装在电池包里，WiFi按键功能无法使用。如遇问题，可以使用蓝牙升级固件

Installed in the battery pack. The Wi-Fi button is non-functional. If issues occur, please update the firmware via Bluetooth.

5. 特别说明 Special Note

我司产品进行严格的出厂检验测试，但是因为客户使用的环境不同（特别是在高温、超低温、太阳下等），难免会出现故障，所以客户在选择和使用时，需要在友好的环境下使用。为保障内置天线的最佳信号收发质量，请勿将产品安装于金属密闭箱体、柜内或其它会对无线信号产生严重屏蔽的空间中，否则将可能导致通信距离缩短或连接中断。

Our products undergo rigorous factory testing; however, due to varying customer environments (especially under high temperatures, extreme temperatures, and direct sunlight), malfunctions are inevitable. Therefore, customers should use the product in a suitable environment. To ensure optimal signal transmission and reception quality from the built-in antenna, do not install the product in enclosed metal enclosures, cabinets, or other spaces that severely shield the wireless signal, as this may result in reduced communication distance or connection interruption.

地址：东莞市松山湖区工业南路 14 号天安云谷 7 号楼 21 层 电话：0769-82822953
Address: 21 / F, building 7, Tian'an Yungu, No. 14, Gongye South Road, Songshanhu District, Dongguan TEL: 0769-82822953

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Address: 21 / F, building 7, Tian'an Yungu, No. 14, Gongye South Road, Songshanhu District, Dongguan TEL: 0769-82822953