

### Description:

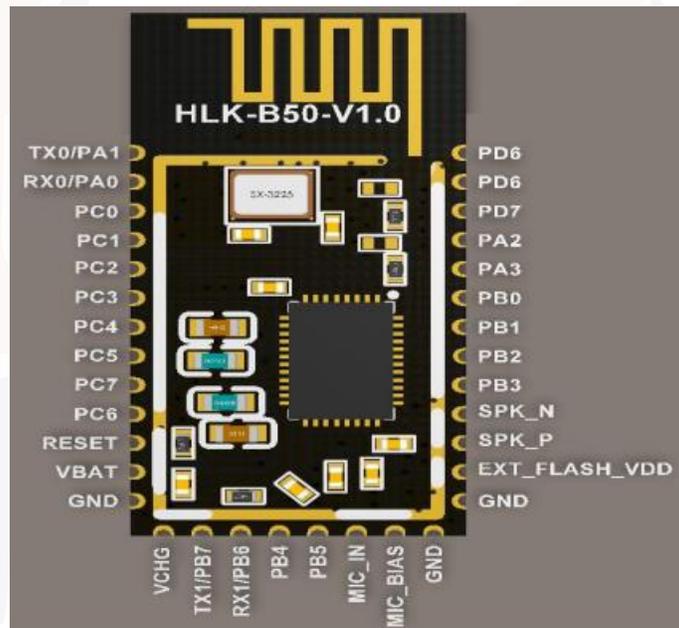
HLK-B50 is a BLE5.0 dual-mode Bluetooth-serial port pass-through module developed and produced by Hi-Link Electronics, which can support both Bluetooth SPP and GATT pass-through, and various devices with serial ports can use Bluetooth wirelessly to send and receive data simply and quickly through this module.

### Features:

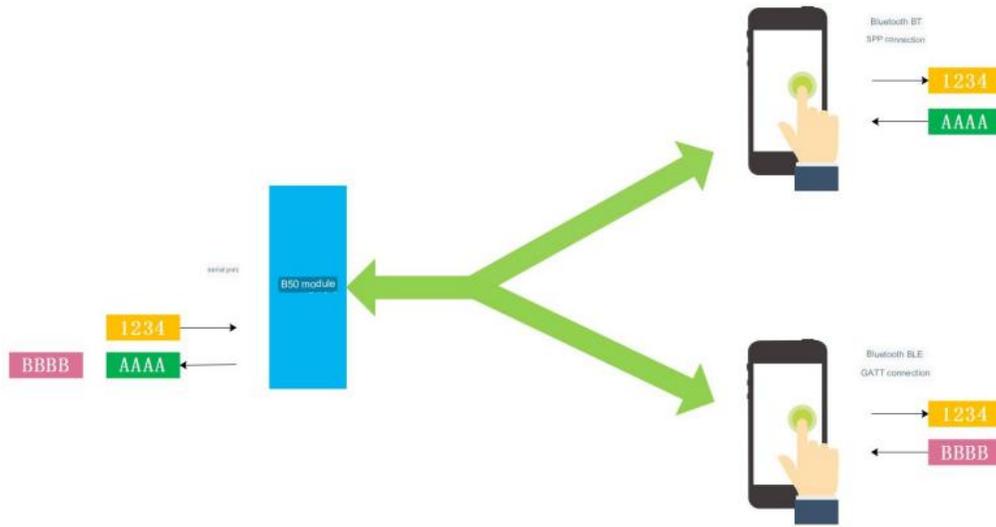
- Built-in 32-bit ARM Cortex M3 core with main frequency up to 48MHz
- Fast and stable Bluetooth-serial pass-through with serial baud rate up to 921600
- Master-slave Bluetooth BLE 5.0, can be set as master or slave mode, support binding encryption
- Dual-mode Bluetooth with data transit via GATT or SPP and simultaneous connectivity
- Support A2DP V1.3 and AVRCP V1.6, built-in Audio CODEC

- Built-in lithium battery charging circuit, charging current up to 200mA
- Built-in LDO, adjustable LDO output voltage
- Built-in Watchdog for long and reliable operation
- Wide operating voltage 2.6~4.2V, 3.3V typical
- Rich output pins (UART, I2C, SPI, GPIO, ADC, PWM, I2S, etc.) for flexible and in-depth hardware and software customization development services

## Pin Configuration:



Transparent transmission is short for transparent transmission, that is, the role of the module is equivalent to the establishment of a transparent transmission pipeline between the serial port and the Bluetooth connection, the data sent by the user in the serial port will be forwarded to the device connected through the Bluetooth, the data sent through the Bluetooth will also be forwarded to the serial port, the whole process of the user does not need to care about the complex Bluetooth connection how to achieve, and HLK-B50 module from the beginning to the end only The HLK-B50 module only carries out the original data handling and forwarding without parsing and processing the data transmitted by the user, so the user can safely and conveniently use this transparent transmission capability.



This module supports master and slave when using BLE connection, the module can be set not as a master role or slave role. In the master role, the module can actively connect to other slave devices or modules, and in the slave role, it can be connected by other Bluetooth host devices, including other as the master B50 module. SPP connection and BLE connection can exist at the same time, the data received by the module serial port will be forwarded to each connected Bluetooth device via Bluetooth, and the data sent by each connected Bluetooth device will also be forwarded to the module serial port.

## Applications:

- **Smart home/home appliances**  
Control smart sockets, smart lights, smart door locks, etc. via mobile phones
- **IOT**  
Mobile phone and device, wireless data transmission between device and device
- **Instrumentation**  
Read data, configure parameters, etc. wirelessly via Bluetooth
- **Industrial and Agricultural Control**  
Connect various control or sensing devices wirelessly via Bluetooth for reading and control, etc.
- **Medical and health**  
Health data monitoring, wireless nursing equipment, etc.
- **Automotive Electronics**  
Wireless detection and control, etc.  
Toy entertainment  
Bluetooth remote control, wireless control and transmission