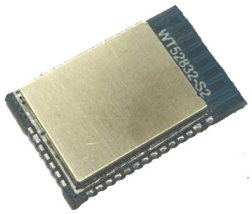
WT52832

USER MANUAL

Description:

WT52832 is a high performance ,low power radio transmit and receive system module use Nordic BLE nRF52832 as the controller chips. It has the smallest volume package in the industry, the size is 19.6*12.9*2.0mm, suitable for most applications which pay more attention to the size. The module support low energy Bluetooth 5.0 protocol stack S132 drive.



Customer's MCU is connected to the module by UART port, it will automatically send a broadcast code after the module starts. As the master, APP device can scan and search the broadcast fron module in order to establish the connection. After success, it ca conduct two-way communication link with mobile device APP by serial port. Through UART interface, the user can exchange data or control the communication parameters of module. The meaning of data is defined by the upper application user. The mobile device can operate to the module through APP, the data will receive by the module and pushed through UART MCU. After the module received a data packet from the client MCU serial port, it will be automatically forwarded to the mobile device.

Features：

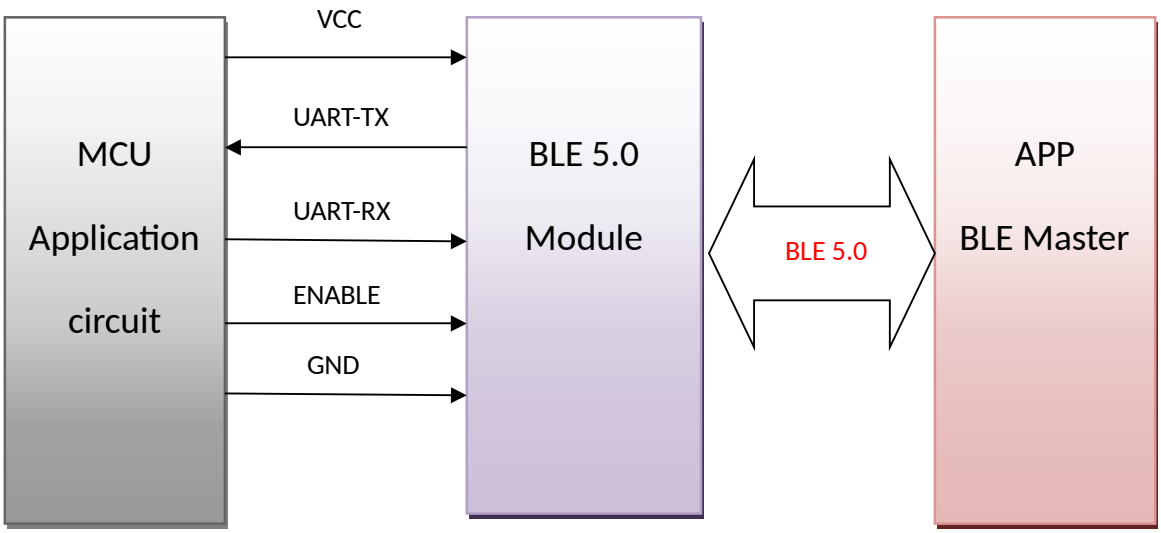
- Operating temperature: -25℃~75℃, typical 25℃
- CPU: nRF52832-QFAA (ARM Cortex™-M4F 32 bit processor)
- Memory: 512KB flash + 64KB RAM memory
- Transparent transmission (Bridged method) easy to use and fast, no Bluetooth protocol stack development experience can use too.
- The user interface uses a standard UART (TTL) Interface, bidirectional data read, easy to operate
- Supports serial AT commands, the user can modify the basic parameters like the serial port baud rate, name, MAC address of the module, etc.
- Serial data packet length, single data packet can support data length up to 200byte;
- Serial hardware enable control, low-power control applications
- With the support under the test mode but not connect the serial mode, mutual communication between test module and bluetooth master devices
- Operating distance: 0~45m，class II level
- Support System: IOS & Android
- Supply voltage:3.3V
- Module comes with PCB antenna, optional external antenna
- Size: 19.6*12.9*2.0mm
- With shield enhancing the module's anti-interference ability.

Applications：

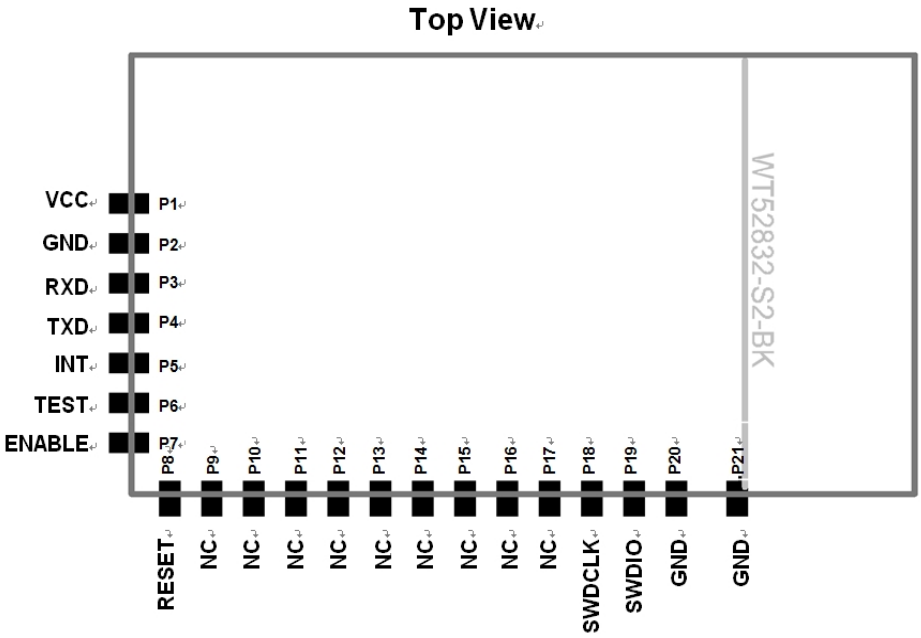
- Electronic scales
- Electronic cigarette

- Smart cups
- Smart bracelet
- Smart Watch
- Bluetooth toys
- Intelligent hardware
- Smart Home

1. Work Mode Image



2. Module Pin Definitions



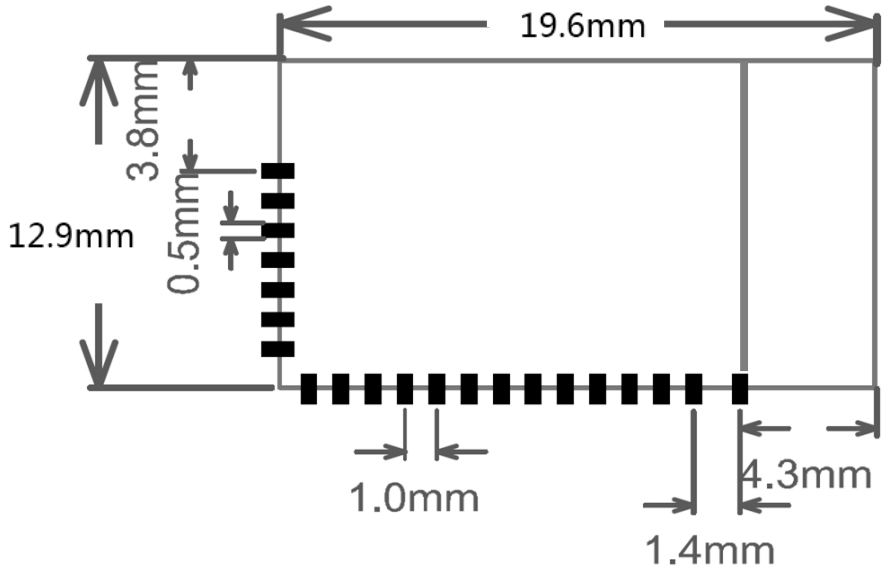
3. Pin Directions

No.	Chip pin	Module pin	Function Description
Pin1	VCC	VCC	DC 2.0~3.6V
Pin2	GND	GND	Ground
Pin3	P0.01	RXD	UART--RX
Pin4	P0.02	TXD	UART--TX
Pin5	P0.03	INT	Interrupt output pin, the bluetooth will deliver output 100ushigh-level pulse signal tips after received the primary-side data
Pin6	P0.04	TEST	Test mode control pin, high level is effective, the module will enter into the Bluetooth test mode after being set high, the module will send back the received data
Pin7	P0.09	ENABLE	Serial Port Enable pin, High level is effective. .Activate module serial port function after set high, and the serial port will close after being set low, which result in module functions reduction.
Pin8	P0.10	RESET	Serial port reset pin, low level restored, and the baud rate restored to the default setting
Pin9	NC	NC	No connection
Pin10	NC	NC	No connection
Pin11	NC	NC	No connection
Pin12	NC	NC	No connection
Pin13	NC	NC	No connection
Pin14	NC	NC	No connection
Pin15	NC	NC	No connection
Pin16	NC	NC	No connection
Pin17	NC	NC	No connection
Pin18	SWDCLK	SWDCLK	Debug clock signal input
Pin19	SWDIO	SWDIO	Debug data input
Pin20	GND	GND	Ground

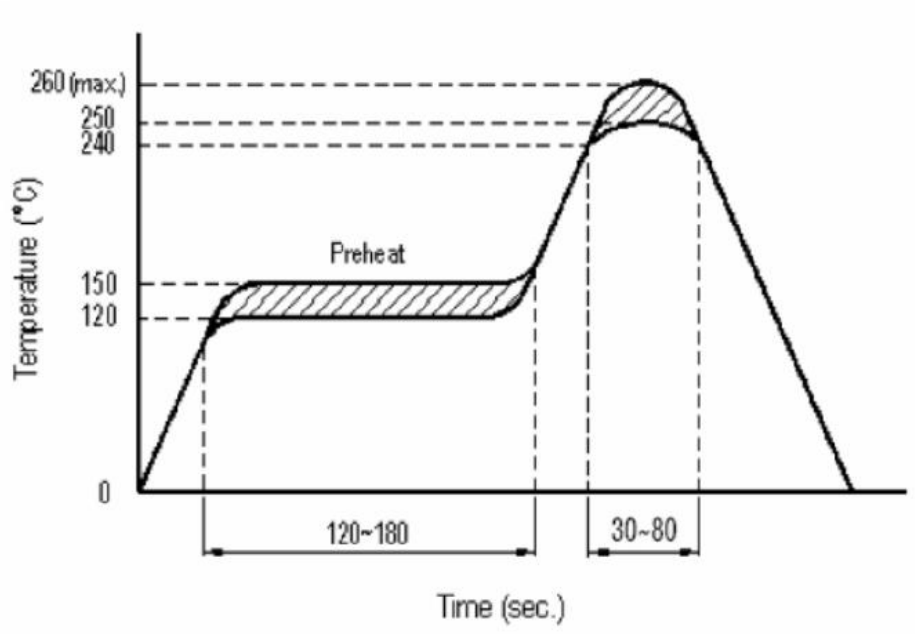
Pin21	GND	GND	Ground

4. Module package size

Top View



5. Reflow reference to FIG.



6. Appendix：

For more technical supports, please send e-mail to technical@wireless-tag.com

FCC Warning Statement
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee
that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one
or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement:
This 2.4G Module complies with FCC radio-frequency exposure guidelines set forth for an uncontrolled environment.

This device is intended only for OEM integrators under the following conditions:
(1) According to FCC Part 15 Subpart C Section 15.212, the radio elements of the modular transmitter must have their own shielding. This module is granted as a Single Modular Approval and complies with FCC rule part 15C on its own.
(2) This device has been designed to operate with a PCB Antenna having a maximum gain of 0dBi(max.). Only this type of antenna may be used.
(3) Integration is typically strictly restricted to Grantee himself or dedicated OEM integrators under control of the Grantee.
(4) The host device itself shall be tested and show compliance with FCC rule part 15B. In addition the power, spurious emissions according to 15C shall be verified.
As long as 4 conditions above are met, further transmitter test will not be required. However, the OEM integrator remains responsible for testing their end product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

USER MANUAL OF THE END PRODUCT:

In the user manual of the end product, the end user has to be informed that the equipment complies with FCC radio-frequency exposure guidelines set forth for an uncontrolled environment.

The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the user manual: This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following" Contains TX FCC ID: 2AFOS-WT52832 ". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available on the label: This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1)this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.