BR2262e BR2266e BR2220e

Programming Manual

July 3, 2020

V1.8

VERSION HISTORY

REVISION	AMENDMENT	DATE	AUTHOR
1.0	Initial release	2018-03-01	Rui Fan
1.1	Add Central commands	2018-06-01	Rui Fan
1.2	Add channel switch command; Add disconnect command; Modify connect succeeds indication; Remove GPIO disconnect function.	2018-06-29	WenQing Qiu
1.3	Add OTA command and description	2018-07-02	WenQing Qiu
1.4	Add set adv. data command: AT+ADVDATA	2018-07-04	WenQing Qiu
1.5	Add query adv. data command: AT+ADVDATA? Add scan reply data command: AT+SRDATA Add query config. firmware version command: AT+GCFGVER Add set and query connect parameters command: AT+CONNPARAM Add set target service UUID command: AT+TARGETUUID	2018-07-13	WenQing Qiu
1.6	Writing hex data to FF03(Characteristic) of smart phone's FF00(Service) to make module enter OTA mode. The hex data changes to "64 00 00 00".	2018-07-24	WenQing Qiu

1.7	Add HID Commend	2019-06-15	Rui Fan
1.8	Update document formet	2019-07-27	Kaiyue Wu
1.9	For FCC	2020-06-03	Kaiyue Wu

Contents

1. FCC ID

FCC ID: 2AOXV-BR2262E

Labeling requirements. 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.
Changes or modification warning. Any 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.
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be colocated or operating in conjunction with any other antenna or transmitter.
The portable device is designed to meet the requirements for exposure to radio waves established by the Federal Communications Commission (USA).
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.

Figure 1 FCC warning

2. Introduction

- BR2262e, BR2266e, BR2220e module is Bluetooth V5.0 single-mode module, and its firmware only supports GATT application.
- This document introduces module's default setting and AT commands.
- AT command is composed of ASCII characters, and it ends with "\r" (0x0d). Therefore, it should avoid using "\r" (0x0d) in the command. Once "\r" appears, all data following "\r" will be discarded.
- UART default setting: 115200 baud rate, 8bits data, 1bit stop, no parity bit, enable hardware flow control.
- Default device name: BR2262e,BR2266e, BR2220e

2.1 Format

2.1.1 Command

1) Test

AT+NAME? \r

2) Enquiry

AT+<command>? \r

AT+	Command prefix
<command>	Command. For example: NAME
\r	Command suffix

3) Setting

AT+<command>=<Parameter1>, [< Parameter2>]\r

AT+	Command prefix
<command>	Command. For example: NAME
<Parameter1>	Parameter 1： at least one parameter
< Parameter2>	Parameter 2： one or more parameters
\r	Command suffix

2.1.2 Indication

1) Result

\r\n<indication>\r\n

\r\n	Indication prefix
< indication >	Indication, For example: OK,ERR
\r\n	Indication suffix.

2) Value

\r\n+<indication>:<value>\r\n

\r\n	Indication prefix
<indication>	Indication, For example: NAME
<value>	Return value
\r\n	Indication suffix.

3. Commands&Indications

3.1 Query Firmware Version

Command	AT+GVER\r	
Indication	\r\n<version> \r\n\r\nOK\r\n	
Parameter	version	Firmware version. For example: IVT_BR2262e_00_20180704_r1745
Note	N/A	

3.2 Query Config. Version

Command	AT+GCFGVER\r	
Indication	\r\n<config_version> \r\n\r\nOK\r\n	
Parameter	config_version	Configuration version
Note	N/A	

3.3 Query Local Device Name

Command	AT+NAME?\r

Indication	\r\n+NAME:<name>\r\n\r\nOK\r\n	
Parameter	name	Device name. Default setting: BR2262e, BR2266e, BR2220e
Note	N/A	

3.4 Set Local Device Name

Command	AT+NAME=<name>\r	
Indication	Succeed: \r\nOK\r\n Fail: \r\nERR:<err_code>\r\n	
Parameter	name	Device name. Default setting: BR2262e, BR2266e, BR2220e
Note	The max length of device name is 20 bytes.	

3.5 Query Local Bluetooth Address

Command	AT+LBDADDR?\r	
Indication	\r\n+LBDADDR:<bdaddr>\r\n\r\nOK\r\n	
Parameter	bdaddr	Local Bluetooth address
Note	N/A	

3.6 Query Baud Rate

Command	AT+BAUD?\r	
Indication	\r\n+BAUD:<baud>\r\n\r\nOK\r\n	
Parameter	baud	Baud rate. Default setting: 115200
Note	N/A	

3.7 Set Baud Rate

Command	AT+BAUD=<baud>\r	
Indication	Succeed: \r\nOK\r\n Fail: \r\nERR:<err_code>\r\n	
Parameter	baud	Supported baud rate: 9600、19200、38400、115200、230400、460800、921600. Default setting: 115200
Note	N/A	

3.8 Query ADV

Command	AT+ADV?\r	
Indication	\r\n+ADV:<adv>\r\n\r\nOK\r\n	
Parameter	adv	0：not advertising; 1：advertising
Note	N/A	

3.9 Set ADV

Command	AT+ADV=<adv>\r	
Indication	Succeed: \r\nOK\r\n Fail: \r\nERR:<err_code>\r\n	
Parameter	adv	0：stop advertising; 1：start advertising.
Note	N/A	

3.10 Query Adv. Parameters

Command	AT+ADVPARAM?\r

Indication	\r\n+ CONNPARAM:<adv_interval>\r\n\r\nOK\r\n	
Parameter	adv_interval	Advertisement interval. Default setting: 2048. Smaller advertisement interval, easier to be found, but larger power consumption.

3.11 Set Adv Parameters

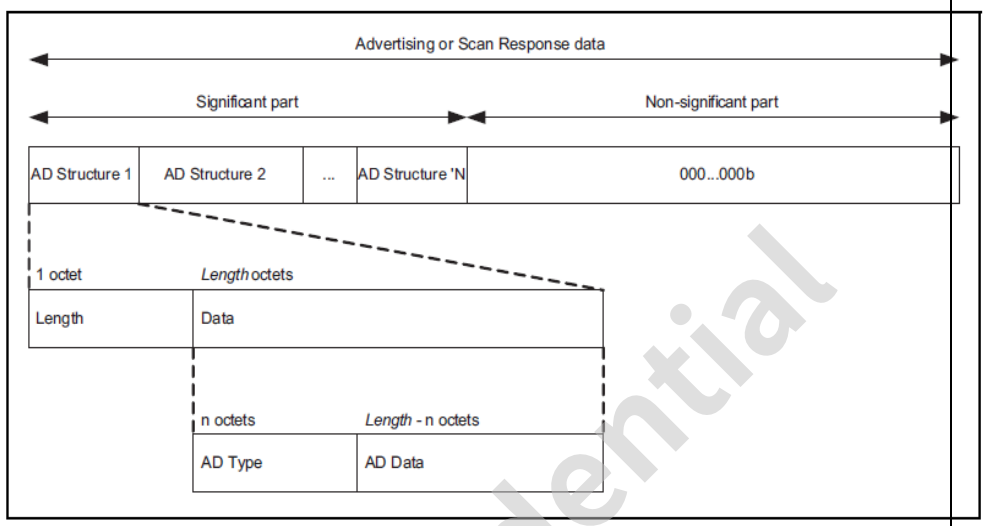
Command	AT+ADVPARAM=<adv_interval>\r	
Indication	Succeed: \r\nOK\r\n Fail: \r\nERR:<err_code>\r\n	
Parameter	adv_interval	Advertisement interval. Default setting: 2048. Smaller advertisement interval, easier to be found, but larger power consumption.

3.12 Query Adv Data

Command	AT+ADVDATA?\r	
Indication	Succeed: \r\n +ADVDATA :<data>\r\n Fail: \r\nERR:<err_code>\r\n	
Parameter	data	Advertisement data. Data length less than 31 bytes

3.13 Set Adv. Data

Command	AT+ADVDATA=<data>\r	
Indication	Succeed: \r\nOK\r\n Fail: \r\nERR:<err_code>\r\n	
Parameter	data	Data length less than 31 bytes 1. It must include data: 020105 2. Setting advertisement data will lead Bluetooth device name

		to change. Querying advertisement data at the first and then add self-defined data after queried data to keep Bluetooth device name unchangeable.
Note	Advertisement data format as follows:  The definition of AD Type and AD Data as follows:	

Data Type Value	Data Type Name	Reference for Definition
0x01	«Flags»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.3 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, sections 11.1.3 and 18.1 (v4.0)Core Specification Supplement, Part A, section 1.3
0x02	«Incomplete List of 16-bit Service Class UUIDs»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.1 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, sections 11.1.1 and 18.2 (v4.0)Core Specification Supplement, Part A, section 1.1
0x03	«Complete List of 16-bit Service Class UUIDs»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.1 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, sections 11.1.1 and 18.2 (v4.0)Core Specification Supplement, Part A, section 1.1
0x04	«Incomplete List of 32-bit Service Class UUIDs»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.1 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, section 18.2 (v4.0)Core Specification Supplement, Part A, section 1.1

0x05	«Complete List of 32-bit Service Class UUIDs»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.1 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, section 18.2 (v4.0)Core Specification Supplement, Part A, section 1.1
0x06	«Incomplete List of 128-bit Service Class UUIDs»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.1 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, sections 11.1.1 and 18.2 (v4.0)Core Specification Supplement, Part A, section 1.1
0x07	«Complete List of 128-bit Service Class UUIDs»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.1 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, sections 11.1.1 and 18.2 (v4.0)Core Specification Supplement, Part A, section 1.1
0x08	«Shortened Local Name»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.2 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, sections 11.1.2 and 18.4 (v4.0)Core Specification Supplement, Part A, section 1.2
0x09	«Complete Local Name»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.2 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, sections 11.1.2 and 18.4 (v4.0)Core Specification Supplement, Part A, section 1.2
0x0A	«Tx Power Level»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.5 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, sections 11.1.5 and 18.3 (v4.0)Core Specification Supplement, Part A, section 1.5
0x0D	«Class of Device»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.6 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, sections 11.1.5 and 18.5 (v4.0)Core Specification Supplement, Part A, section 1.6
0x0E	«Simple Pairing Hash C»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.6 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, sections 11.1.5 and 18.5 (v4.0)
0x0E	«Simple Pairing Hash C-192»	Core Specification Supplement, Part A, section 1.6
0x0F	«Simple Pairing Randomizer R»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.6 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, sections 11.1.5 and 18.5 (v4.0)

0x0F	«Simple Pairing Randomizer R-192»	Core Specification Supplement, Part A, section 1.6
0x10	«Device ID»	Device ID Profile v1.3 or later
0x10	«Security Manager TK Value»	Bluetooth Core Specification:Vol. 3, Part C, sections 11.1.7 and 18.6 (v4.0)Core Specification Supplement, Part A, section 1.8
0x11	«Security Manager Out of Band Flags»	Bluetooth Core Specification:Vol. 3, Part C, sections 11.1.6 and 18.7 (v4.0)Core Specification Supplement, Part A, section 1.7
0x12	«Slave Connection Interval Range»	Bluetooth Core Specification:Vol. 3, Part C, sections 11.1.8 and 18.8 (v4.0)Core Specification Supplement, Part A, section 1.9
0x14	«List of 16-bit Service Solicitation UUIDs»	Bluetooth Core Specification:Vol. 3, Part C, sections 11.1.9 and 18.9 (v4.0)Core Specification Supplement, Part A, section 1.10
0x15	«List of 128-bit Service Solicitation UUIDs»	Bluetooth Core Specification:Vol. 3, Part C, sections 11.1.9 and 18.9 (v4.0)Core Specification Supplement, Part A, section 1.10
0x16	«Service Data»	Bluetooth Core Specification:Vol. 3, Part C, sections 11.1.10 and 18.10 (v4.0)
0x16	«Service Data - 16-bit UUID»	Core Specification Supplement, Part A, section 1.11
0x17	«Public Target Address»	Bluetooth Core Specification:Core Specification Supplement, Part A, section 1.13
0x18	«Random Target Address»	Bluetooth Core Specification:Core Specification Supplement, Part A, section 1.14
0x19	«Appearance»	Bluetooth Core Specification:Core Specification Supplement, Part A, section 1.12

0x1A	«Advertising Interval»	Bluetooth Core Specification:Core Specification Supplement, Part A, section 1.15
0x1B	«LE Bluetooth Device Address»	Core Specification Supplement, Part A, section 1.16
0x1C	«LE Role»	Core Specification Supplement, Part A, section 1.17
0x1D	«Simple Pairing Hash C-256»	Core Specification Supplement, Part A, section 1.6
0x1E	«Simple Pairing Randomizer R-256»	Core Specification Supplement, Part A, section 1.6
0x1F	«List of 32-bit Service Solicitation UUIDs»	Core Specification Supplement, Part A, section 1.10
0x20	«Service Data - 32-bit UUID»	Core Specification Supplement, Part A, section 1.11
0x21	«Service Data - 128-bit UUID»	Core Specification Supplement, Part A, section 1.11
0x22	«LE Secure Connections Confirmation Value»	Core Specification Supplement Part A, Section 1.6
0x23	«LE Secure Connections Random Value»	Core Specification Supplement Part A, Section 1.6
0x24	«URI»	Bluetooth Core Specification:Core Specification Supplement, Part A, section 1.18
0x25	«Indoor Positioning»	Indoor Posiioning Service v1.0 or later

		Data»	
	0x27	«LE Supported Features»	Core Specification Supplement, Part A, Section 1.19
	0x28	«Channel Map Update Indication»	Core Specification Supplement, Part A, Section 1.20
	0x29	«PB-ADV»	Mesh Profile Specification Section 5.2.1
	0x2A	«Mesh Message»	Mesh Profile Specification Section 3.3.1
	0x2B	«Mesh Beacon»	Mesh Profile Specification Section 3.9
	0x3D	«3D Information Data»	3D Synchronization Profile, v1.0 or later
	0xFF	«Manufacturer Specific Data»	Bluetooth Core Specification:Vol. 3, Part C, section 8.1.4 (v2.1 + EDR, 3.0 + HS and 4.0)Vol. 3, Part C, sections 11.1.4 and 18.11 (v4.0)Core Specification Supplement, Part A, section 1.4

3.14 Query Scan Reply Data

Command	AT+SRDATA?\r	
Indication	Succeed: \r\n+SRDATA :<data>\r\n Fail: \r\nERR:<err_code>\r\n	
Parameter	data	Data length less than 31 bytes

3.15 Set Scan Reply Data

Command	AT+SRDATA=<data>\r
Indication	Succeed: \r\nOK\r\n Fail: \r\nERR:<err_code>\r\n

Parameter	data	Data length less than 31 bytes
Note	Refer to： AT+ADVDATA=<data>\r	

3.16 Query Connect Parameters

Command	AT+CONNPARAM?\r
Indication	\r\n+ CONNPARAM:<intervalMin>,<intervalMax>,<connLatency>,<connTimeout>\r\n\r\nOK\r\n
Parameter	Default setting： intervalMin, 24 intervalMax, 48 connLatency, 0 connTimeout, 400 Refer to settings defined in Bluetooth core specifications:

intervalMin: (2 octets)

Range	
6 - 3200	Defines minimum value for the connection event interval in the following manner: connIntervalMin = Interval Min * 1.25 ms. Interval Min range: 6 to 3200 frames where 1 frame is 1.25 ms and equivalent to 2 BR/EDR slots. Values outside the range are reserved. Interval Min shall be less than or equal to Interval Max.

intervalMax: (2 octets)

Range	Parameter Description
6 - 3200	Maximum value for the connection event interval. This shall be greater than or equal to *intervalMin*. Range: 0x0006 to 0x0C80 Time = *intervalMax* * 1.25 msec Time Range: 7.5 msec to 4 seconds.

connLatency: (2 octets)

Range	Parameter Description
0 - 499	Slave latency for the connection in number of connection events. Range: 0x0000 to 0x01F3

	connTimeout: (2 octets) **Range** | **Parameter Description** 10 - 3200 | Supervision timeout for the LE Link. Range: 0x000A to 0x0C80 Time = *connTimeout* * 10 msec Time Range: 100 msec to 32 seconds

3.17 Set Connect Parameters

Command	AT+CONNPARAM=<intervalMin>,<intervalMax>,<connLatency>,<connTimeout>\r
Indication	Succeed：\r\nOK\r\n Fail：\r\nERR:<err_code>\r\n
Parameter	Default setting： intervalMin, 24 intervalMax, 48 connLatency, 0 connTimeout, 400 Refer to settings defined in Bluetooth core specifications: ***intervalMin: (2 octets)*** **Range** | 6 - 3200 | Defines minimum value for the connection event interval in the following manner: connIntervalMin = Interval Min * 1.25 ms. Interval Min range: 6 to 3200 frames where 1 frame is 1.25 ms and equivalent to 2 BR/EDR slots. Values outside the range are reserved. Interval Min shall be less than or equal to Interval Max. ***intervalMax: (2 octets)*** **Range** | **Parameter Description** 6 - 3200 | Maximum value for the connection event interval. This shall be greater than or equal to *intervalMin*. Range: 0x0006 to 0x0C80 Time = *intervalMax* * 1.25 msec Time Range: 7.5 msec to 4 seconds.

	connLatency: (2 octets) **Range** / **Parameter Description** 0 - 499 / Slave latency for the connection in number of connection events. Range: 0x0000 to 0x01F3 ***connTimeout: (2 octets)*** **Range** / **Parameter Description** 10 - 3200 / Supervision timeout for the LE Link. Range: 0x000A to 0x0C80 Time = *connTimeout* * 10 msec Time Range: 100 msec to 32 seconds

3.18 Scan BLE Devices

Command	AT+SCAN=<scan>\r	
Indication	Succeed： \r\Ndev_addr, addr_type, rssi \r\nUUID:dev_uuid \r\nNAME:dev_name \r\nMANU:manu_data Fail： \r\nERR:<err_code>\r\n	
Parameter	Scan	1: start scanning；0：stop scanning
Note	UUID, NAME, MANU are only shown when they are included in advertisement package.	

3.19 Set Target Service

Command	AT+TARGETUUID=< service_uuid >\r	
Indication	Succeed：\r\nOK\r\n Fail：\r\nERR：err_code	
Parameter	service_uuid	Connected service UUID. Only support 16bits UUID. For

		128bits service UUID, choose its UUID's 12~13bytes. 16 bits： FF00 AT+TARGETUUID=FF00\r 128 bits： 49535343-FE7D-4AE5-8FA9-9FAFD205E455 AT+TARGETUUID=5343\r

3.20 Connect

Command	AT+CONN=< bdaddr >\r	
Indication	Succeed： \r\nOK\r\n \r\nIM_CONN:<cid>\r\n Fail： \r\nERR： err_code	
Parameter	bdaddr	Connected device mac address
Note	Only supports the specified Service (set by AT+TARGETUUID), requires the service to have at least two Characteristic, one is Notify in the attribute, and one attribute contains Write or Write Without Response. If the above conditions are not met, the connection will be automatically disconnected. If there are multiple Characteristics in the service that meet the above criteria, the module will select the first one as the Characterization for data transfer. Service and Characteristic refer to chapter <6>	

3.21 Disconnect

Command	AT+DISC=<cid>\r
Indication	Succeed： \r\nOK\r\n Fail： \r\nERR： err_code

Parameter	cid	Channel ID, 8: passive connection (connect in) channel 0-7: active connection (connect out) channel Channel ID is reported when the connection is established.

3.22 Channel Switch

Command	AT>< cid >\r	
Indication	Succeed： \r\nOK\r\n Fail： \r\nERR：err_code	
Parameter	cid	Channel ID, 9: AT commands channel 8: passive connection (connect in) channel 0-7: active connection (connect out) channel Channel ID is reported when the connection is established.
Note	Channel switch strategy: After the connection is established, it automatically switches to the channel set in the command. Once receiving data from one channel, it automatically switches to the channel set in the command. After the connection is released, it automatically switches to the AT command channel. Once receiving the command: "AT>x\r" via UART, it automatically switches to x channel.	

3.23 Report HID button

Command	AT+KBRPT=<FuncKey>,<KEY1>,<KEY2>,<KEY3>,<KEY4>,<KEY5>,<KEY6>,\r

Indication	Command indication	
Parameter	FuncKey	|--bit0: Whether the Left Control button is pressed, press 1 |--bit1: Whether the Left Shift button is pressed, press 1 |--bit2: Whether the Left Alt button is pressed, press 1 |--bit3: Whether the Left GUI(Windows key) button is pressed, press 1 |--bit4: Whether the Right Control button is pressed, press 1 |--bit5: Whether the Right Shift button is pressed, press 1 |--bit6: Whether the Right Alt button is pressed, press 1 |--bit7: Whether the Right GUI button is pressed, press 1
	KEY1---KEY6	HID button value (refer to HID Usage Tables specification for key values) Up to 6 buttons can be sent at the same time.
Note	Report HID button	

3.24 Report CONSUMER button

Command	AT+FUNCRPT=<FuncKey>\r	
Indication	Command indication	
Parameter	FuncKey	HID button value (refer to HID Usage Tables specification for key values)
Note	N/A	

3.25 OTA

Command	AT+OTA\r
Indication	Succeed： \r\nOK\r\n Fail： \r\nERR:<err_code>

4. Indication

4.1 Ready Status

Indication	\r\n IM_READY\r\n
Parameter	N/A
Note	Initialization completes, The module is in working mode where GATT can be connected.

4.2 Connect Succeed

Indication	\r\n IM_CONN:<cid>\r\n	
Parameter	cid	Channel ID, 8: passive connection (connect in) channel 0-7: active connection (connect out) channel Channel ID is reported when the connection is established.
Note	N/A	

4.3 Disconnect

Indication	\r\n IM_DISC:[cid] \r\n	
Parameter	cid	Channel ID, 8: passive connection (connect in) channel 0-7: active connection (connect out) channel Channel ID is reported when the connection is established.
Note	N/A	

5. PIO Control

PB0 always outputs low level when the module is in working status.

PB1 periodically outputs 500ms high level and 500ms low level during advertising; it always outputs low level when connected.

Pulling up PA7 to make module enter sleep mode (module cannot receive data via UART); Pulling down PA7 and module is unable to enter sleep mode.

6. Bluetooth Knowledge

6.1 Service

Service, GATT protocol performs Bluetooth data exchange through service, provides service from device, master device connects slave device, and accesses its service. Each service contains multiple characteristic values (Characteristics), and each specific feature value is the main body of GATT communication. The master device can write data to the feature values of the slave device, and can also read the feature value data. The master device can also subscribe to the feature values of the slave device so that when the slave device feature value data changes, the data is notified to the master device.

6.2 Characteristic

Characteristic.The communication between the BLE master and slave is realized by Characteristic .It can be understood as a label through which the desired content can be obtained or written.

6.3 UUID

Universally Unique Identifier. All services and characteristics have unique UUID to identify.

7. Company Profile

Barrot Technology – Barrot is a world leading one-stop chipset level solution provider who offers wireless connectivity and audio intelligent hardware solutions featuring with own IPs. The company is an associated member of The Bluetooth SIG, and it is the only one who contributes to Bluetooth specification definition in Greater China. Barrot owns three high-tech IPs: Bluetooth RF, Bluetooth stack and Acoustic algorithms, so Barrot offers most integrated, robust, reliable, and easy-to-use wireless

turn-key solutions for IOT, Automotive and Wireless audio applications.

Barrot devotes itself to being the most reliable short distance wireless technologies' solution provider in the world.

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