Transparent BLE AT Commands

BC202-01

V1.0

2025/06/01

Table of Contents

Version History

Version number	Date	Update content	Author
V1.0	01/06/25	Initial version	Dr. Sanjay Ahuja

Overview

The **BC202HZ** module supports a pre-loaded firmware that enables **transparent BLE (Bluetooth Low Energy) communication** via **AT commands** over UART. This feature allows an external microcontroller (MCU) or host device to interact with the module seamlessly, sending and receiving BLE data without requiring low-level BLE protocol handling.

Key Features

- **UART-Based BLE Communication**: The module acts as a bridge between UART and BLE, allowing bidirectional data transfer.
- **AT Command Interface**: Simple ASCII-based commands for configuration and data exchange.
- **Pass-Through Mode**: Enables transparent data transmission between a connected BLE device and the UART interface.
- **Configurable BLE Parameters**: Supports setting BLE device name, advertising intervals, connection parameters, and more via AT commands.
- **Low-Power Operation**: Optimized for energy-efficient BLE communication.

How It Works

1. The external MCU communicates with the BC202HZ module via **UART (Serial AT Commands)**.
2. The module can be configured as a **BLE Peripheral (Server)** or **Central (Client)**, depending on the application.
3. Once a BLE connection is established, data sent over UART is **transparently transmitted** to the connected BLE device, and vice versa.
4. Users can configure BLE settings (e.g., advertising mode, service UUID, connection interval) using dedicated AT commands.

Typical Use Cases

- **Wireless Serial Communication (BLE-UART Bridge)**
- **IoT Sensor Data Transmission**
- **BLE-Enabled Remote Control Systems**
- **Wireless Firmware Updates (OTA)**

This document provides a detailed guide on available **AT commands** for configuring and controlling the BC202HZ module in **transparent BLE mode**.

AT Commands Summary

Sr. No.	Commands	Funct ion	Remarks
System command			
1	AT+TEST	Test whether AT command is supported	
2	AT+RESET	Reset (restart) the device	
3	AT+RESTORE	Reset the device	All parameters are restored to factory Settings
4	AT+VERSION	Query the module version number	The version number is 4 bits
5	AT+MODE	Query/set the working mode of the module	Take effect immediately, and power failure does not save
6	AT+UART	Query/set the UART channel	Take effect immediately, save power failure
7	AT+BAUD	Query/set UART baud rate	Take effect immediately, save power failure
8	AT+UPARAM	Query/set UART parity and stop bits	Take effect immediately, save power failure
9	AT+DSLEEP	Query/set low power mode	
Master and Slave Common Instructions			
10	AT+LEMAC	Query/set the device MAC address	The re-broadcast takes effect and the power failure is saved
11	AT+LEMTU	Query/set MTU size	The reset takes effect and po- wer off is saved
12	AT+LEDISC	Disconnect	
13	AT+LEBOND	Query/set the master/slave binding address	Take effect immediately, save power failure
14	AT+LEAVDT	Query/set the master/slave connection type	Take effect immediately, save power failure
15	AT+NAME	Query/set the Bluetooth name	The reset takes effect and po- wer off is saved
16	AT+SN	Query/set serial number	Take effect immediately, save power failure
Transmit/Receive			
17	AT+LEDAVD	Query/set broadcast data	The re-broadcast takes effect and the power failure is saved
18	AT+LEAVDR	Query/set scan reply packet data	The re-broadcast takes effect and the power failure is saved
19	AT+LEAVDI	Query/set broadcast interval	The re-broadcast takes effect and the power failure is saved
20	AT+LEAVDE	Query/set broadcast status enabled Broadcast enabled: From the slave state, default slave Broadcast is prohibited: Host status	The reset takes effect and po- wer off is saved
21	AT+LEBUUID	Query/set BASE UUID	The reset takes effect and po- wer off is saved

22	AT+LESSU	Query/set SERVICE UUID	The reset takes effect and po- wer off is saved
23	AT+LESTXU	Query/set TX UUID	The reset takes effect and po- wer off is saved
24	AT+LESRXU	Query/set RX UUID	The reset takes effect and po- wer off is saved
25	AT+LESATU	Query/set the AT UUID	The reset takes effect and po- wer off is saved
26	AT+LESCONT	Query the handle of the already connected master device	Power loss is not saved
27	AT+LECINTER VAL	Query and set slave conne- ction parameters	Take effect immediately, save power failure
Main command			
28	AT+LESAFT	Set the scan filter for Bluetooth names	Take effect immediately, save power failure
29	AT+LEINQ	Query to set scan	
30	AT+LEINQC	Stop scanning voluntarily	Take effect immediately, and power failure does not save
31	AT+LECON	Active connection	Take effect immediately, and power failure does not save
32	AT+LECON?	Query the connection	
33	AT+LEACE	Automatic connection	Restart takes effect, and power off saves
34	AT+LEACM	Automatically connect to add- ress	Take effect immediately, save power failure
35	AT+LECONP	Update the connection parameters	Take effect immediately, and power failure does not save

Command Details

System Commands

AT Function Testing

AT+TEST\r\n	
Function	Test whether the AT command is supported
Command	AT+TEST\r\n
Return Value	OK+TEST\r\n

Restart Device

AT+RESET\r\n	
Function	Module soft reset
Command	AT+RESET\r\n
Return Value	OK+RESET\r\n
Remarks	Used for some control instructions that require reset control

Reset Device (Restore Factory Settings)

AT+RESTORE\r\n	
Function	You can set the parameters to restore factory Settings
Command	AT+RESTORE\r\n
Return Value	OK+RESTORE\r\n
Remarks	All parameters are restored to the default factory parameters

Module Version

AT+VERSION\r\n	
Function	Query the firmware version number of the module
Command	AT+VERSION\r\n
Return Value	OK+VERSION=1118r\n
Remarks	1118 is the module firmware version number

Module Working Mode

AT+MODE=?\r\n	
Function	Query the working mode level range of the current module
Command	AT+MODE=?\r\n
Return Value	OK+MODE=<0-1>\r\n
Remarks	<0-1> represents instruction mode and transparent mode respectively

AT+MODE?\r\n	
Function	Query the current working mode
Command	AT+MODE?\r\n
Return Value	OK+MODE=0\r\n
Remarks	Refers to the level of the current module working mode, that is, 0 is the instruction mode

AT+MODE=<param1>\r\n	
Function	Set the current working mode
Command	AT+MODE=0\r\n
Return Value	OK+MODE\r\n
Remarks	Param1: 0--instruction mode 1--transparent mode

Transmissive Function	
Function	The master end and the slave end transmit the interaction function
Example (master serial port instruction)	Set the end device address to F1:F2:F3:F4:F5: 24 AT+LECON=F1:F2:F3:F4:F5:24\r\n
Return Value	OK+LECON\r\n
	+LECON=0,F1:F2:F3:F4:F5:24\r\n
	+CONNECTED_S\r\n
Example (return value of the master end sending a transparent instruction)	AT+MODE= 1\r\n OK+
	MODE\r\n
	AT+MODE=

Example (return value from end-to-end transmission instruction	1\r\n OK+MODE\r\n

UART Port Selection

AT+UART=?\r\n	
Function	Query the range of ports that can be set
Command	AT+UART=?\r\n
Return Value	OK+UART=<1-2>\r\n
Remarks	<1-2> represents serial port 1 and serial port 2 respectively

AT+UART?\r\n	
Function	Query the current serial port channel
Command	AT+UART?\r\n
Return Value	OK+UART=1\r\n
Remarks	1 Indicates that the current communication is serial port 1

AT+UART=<param1>\r\n	
Function	Set the current serial port channel
Command	AT+UART=1\r\n
Return Value	OK+UART\r\n
Remarks	Param1: 1-serial port 1 2-serial port 2

Serial Port Baud Rate

AT+BAUD=?\r\n	
Function	Query the range of serial port baud rates that can be set
Command	AT+BAUD=?\r\n
Return Value	OK+BAUD=<0-6>\r\n
Remarks	<0-6> represents six levels of 9600,19200,38400,57600,115200,512000, and 1000000 (unit: bps)

AT+BAUD?\r\n	
Function	Query the current baud rate
Command	AT+BAUD?\r\n
Return Value	OK+BAUD=4\r\n
Remarks	4 Indicates that the current baud rate level is 4, i.e., 115200

AT+BAUD=<param1>\r\n	
Function	Set the current baud rate
Command	AT+BAUD=1\r\n
Return Value	OK+BAUD\r\n
Remarks	Param1 : 0—9600
	1—19200
	2—38400
	3—57600
	4—115200
	5—512000
	6-1,000,000 (unit: bps)

Serial Port Parity and Stop Bit

AT+UPARAM?\r\n	
Function	Query the current parity and stop bit levels
Command	AT+UPARAM?\r\n
Return Value	OK+UPARAM=01\r\n
Remarks	01 Indicates no check, stop bit is 1bit

AT+UPARAM=<param1>\r\n	
Function	Set the current parity and stop bit level
Command	AT+UPARAM=11\r\n
Return Value	OK+UPARAM\r\n
Remarks	Param1: 01-- no parity, stop bit is 1bit 02-- no parity, stop bit is 2bit 11-- odd parity, stop bit is 1bit 12-- odd parity, stop bit is 2bit 21-- even parity, stop bit is 1bit 22-- even Parity, stop bit is 2bit

Low Power Mode

AT+DSLEEP?\r\n	
Function	Check if the device is in low power mode (DEEP SLEEP)
Command	AT+DSLEEP?\r\n
Return Value	OK+DSLEEP=0,32\r\n
Remarks	Param1: 0 indicates normal working mode, and 1 is low power mode (DEEP SLEEP) Param2: 32 indicates that the wake-up IO is pin 32 after default low power consumption

AT+DSLEEP\r\n	
Function	Set the device to enter low power consumption (DEEP SLEEP) mode
Command	AT+DSLEEP\r\n
Return Value	OK+DSLEEP\r\n
Remarks	The default wake up IO is the PIN32 pin

Master-Slave Common Instruction

MAC Address

AT+LEMAC?\r\n	
Function	Query the current device MAC address
Command	AT+LEMAC?\r\n
Return Value	OK+LEMAC=11:22:33:44:55:66\r\n
Remarks	The MAC address is in big-endian mode

AT+LEMAC=<param1>\r\n	
Function	Set the MAC address of the current device
Command	AT+LEMAC=66:55:44:33:22:11\r\n
Return Value	OK+LEMAC\r\n
Remarks	Param1: The format must be in the form of XX:XX:XX:XX:XX:XX, with a total of 17 characters. XX is a HEX table

MTU Big or Small

AT+LEMTU=?\r\n	
Function	Query MTU, range value
Command	AT+LEMTU=?\r\n
Return Value	OK+LEMTU=<23-247>\r\n
Remarks	<23-247> indicates the number of bytes that can be sent and received at the bottom layer of LL at one time, and the actual effective data = MTU-3

AT+LEMTU?\r\n	
Function	Query the MTU value
Command	AT+LEMTU?\r\n
Return Value	OK+LEMTU=100\r\n
Remarks	100 Indicates the amount of data available to users is 100-3=97byte

AT+LEMTU=<param1>\r\n	
Function	Set the MTU value
Command	AT+LEMTU=100\r\n
Return Value	OK+LEMTU\r\n
Remarks	Param1: The maximum transmission unit ranges from 23 to 247

Disconnect

AT+LEDISC=<param>\r\n	
Function	Disconnect the connection of the specified handle. param indicates the condition of the connection
Command	AT+LEDISC=0\r\n
Return Value	OK+LEDISC +LECOND=0,11:22:33:44:55:66,16
Remarks	OK+LEDISC indicates that the connection is successfully disconnec- ted; +LECOND=result 1, result2, result3 +LECOND=0,11:22:33:44:55:66,16 indicates the result returned by the disconnection; result 1 is 0, representing the connection conidx, range 0~5, integer Result2 is 11:22:33:44:55:66, which indicates the Bluetooth address corresponding to the connection conidx, Result3 is 16, indicating the reason for disconnection. The hexadecimal number (refer to Bluetooth Core Spec error code, 0x16 indicates CONN_TERMINATED_BY_LOCAL_HOST)

Direct Address Binding

AT+LEBOND?\r\n	
Function	Query the address of an oriented connection (master active connec- tion) or the address of a connected object (slave passive connection
Command	AT+LEBOND?\r\n
Return Value	OK+LEBOND=AA:FF:FF:99:9A:C1\r\n
Remarks	AA:FF:FF:99:9A:C1 indicates the "paired" address that the master port can actively connect to or the "paired" device address that the slave is connected to

AT+LECONN=<param1>\r\n	
Function	Set the address of a directed connection (master active connection) or the address to be connected (slave passive connection)
Command	OK+LEBOND=AA:FF:FF:99:9A:CC\r\n
Return Value	OK+LECONN\r\n
Remarks	Param1: Specifies the binding address for the master or slave (if the master/ slave connection type is not set to 2, this address is not filtered)

Connection Type

AT+LEADVT=?\r\n	
Function	Query the range of levels that can be set for the master/slave connection type
Command	AT+LEADVT=?\r\n
Return Value	OK+LEADVT=<0-2>\r\n

Remarks	<0-2> indicates non-directional connectable broadcast, non-connectable broadcast, and master/slave directionally connectable

AT+LEADVT?\r\n	
Function	Query the current broadcast connection type level
Command	AT+LEADVT?\r\n
Return Value	OK+LEADVT=0\r\n
Remarks	The query is for the current broadcast connection type level of 0, that is, non-directional connectivity

AT+LEADVT=<param1>\r\n	
Function	Set the level of the current broadcast connection type
Command	AT+LEADVT=1\r\n
Return Value	OK+LEADVT\r\n
Remarks	Param1: 0--Non-directional from a connected broadcast 1--Non-directional from non-connected broadcast 2--Master/slave orientation can be connected (it needs to be used with AT+LEBOND. If this parameter is not set, master/slave can actively/passively pair any device without filtering the device)

Bluetooth Name

AT+NAME?\r\n	
Function	Query the device's Bluetooth name
Command	AT+NAME?\r\n
Return Value	OK+ name \r \n, OK+NAME?\r \n

AT+NAME=?\r\n	
Function	Set the device's Bluetooth name
Command	AT+NAME=TEST\r\n
Return Value	OK+NAME\r\n

Serial Number

AT+SN?\r\n	
Function	Query the device serial number
Command	AT+SN?\r\n
Return Value	OK+AABBED2116310162817151C00295LVWH\r\n, OK+SN?\r\n

AT+SN=?\r\n	
Function	Set the device serial number, up to 40 characters
Command	AT+SN=AABBED2116310162817151C00295LVWH\r\n
Return Value	OK+SN\r\n

From the Directive

Broadcast Data

AT+LEADVD?\r\n	
Function	Query the broadcast data of the current device
Command	AT+LEADVD?\r\n
Return Value	OK+LEADVD=05FF11223344\r\n
Remarks	Data format: LEN+TYPE+DATA 11 is two characters, representing a HEX

AT+LEADVD=<param1>\r\n	
Function	Set broadcast data for the current device
Command 1	AT+LEADVD=06FF1122334455\r\n «Manufacturer Specific Data»
Command 2	AT+LEADVD=07094a4454454348\r\n «Complete Local Name»
Command 3	AT+LEADVD=0303F122\r\n
«Complete List of 16-bit Service Class UUIDs»	
Command 4	AT+LEADVD=020AC5\r\n «Tx Power Level»4
Command 5	AT+LEADVD=0616F1F2F3F4F5\r\n «Service Data»
Return Value	OK+LEADVD\r\n
Remarks	Param1 Format: LEN+TYPE+DATA (If not this format, broadcast is not possible)
	For details, please refer to: https://www.bluetooth.com/specifications/assigned-numbers/generic-acces s-profile/

Note: The above example can also be combined to combine up to 31-3 HEX data, because the factory broadcast packet «flag» is fixed to occupy 3 HEX

Scan the Reply Packet Data

AT+LEADVR?\r\n	
Function	Query the current device scan reply packet data
Command	AT+LEADVR?\r\n
Return Value	OK+LEADVR=05FF11223344\r\n
Remarks	Data format: LEN+TYPE+DATA "05" is two characters, indicating a HEX

Note: Other common examples are the same as broadcast data, but the maximum data is <=31 HEX!

Broadcast Interval

AT+LEADVI=?\r\n	
Function	Query the range of levels that can be set for broadcast intervals
Command	AT+LEADVI=?\r\n
Return Value	OK+LEADVI=<0-8>\r\n
Remarks	<0-8> indicates 20,50,100,200,300,500,1000,2000,4000,8000,8 levels (unit: ms)

AT+LEADVI?\r\n	
Function	Query the current broadcast interval level
Command	AT+LEADVI?\r\n
Return Value	OK+LEADVI=4\r\n
Remarks	The query is for the current broadcast interval level of 4, that is, 300ms

AT+LEADVI=<param1>\r\n	
Function	Set the current broadcast interval level
Command	AT+LEADVI=2\r\n
Return Value	OK+LEADVI\r\n
Remarks	Param1: 0—20 1—50 2—100 3—200 4—300 5—500 6—1000 7—2000 8—4000 9-8000 (unit: ms)

Broadcast Status

AT+LEADVE=?\r\n	
Function	You can set the level range when querying broadcast status
Command	AT+LEADVE=?\r\n
Return Value	OK+LEADVE=<0-1>\r\n
Remarks	<0-1> indicates stop broadcast and start broadcast respectively

AT+LEADVE?\r\n	
Function	Query the current broadcast status level
Command	AT+LEADVE?\r\n
Return Value	OK+LEADVE=1\r\n

AT+LEADVE=<param1>\r\n	
Function	Set the current broadcast status level
Command	AT+LEADVE=1\r\n
Return Value	OK+LEADVE\r\n
Remarks	Param1: 0-Stop broadcasting 1-Start broadcasting

Base UUID

AT+LEBUUID?\r\n	
Function	query BASEUUID
Command	AT+LEBUUID?\r\n
Return Value	OK+LEBUUID=0000FC0100001000800000805F9B34FB \r\n
Remarks	The ASE UUID is fixed to 128 bits (16 bytes)

AT+LEBUUID=<param1>\r\n	
Function	Set the BASE UUID
Command	AT+LEBUUID=6940FC11B5A3F393E0A9E50E24DCCA99\r\n
Return Value	OK+LEBUUID\r\n
Remarks	Param1: A 32-character table of 128-bit UUIDs

Serve UUID

AT+LESSU?\r\n	
Function	query SERVICEUUID
Command	AT+LESSU?\r\n
Return Value	OK+LESSU=FC01\r\n
Remarks	If BASE UUID is set to default, 4BIT is valid. If not, 128BIT is valid (displayed as 3, 4byte)

AT+LESSU=<param1>\r\n	
Function	Set the SERVICE UUID
Command	AT+LESSU=FC11\r\n
Return Value	OK+LESSU\r\n
Remarks	Param1: 4 characters (2 HEX) to represent a 16-bit UUID

TX Characteristic UUID

AT+LESTXU?\r\n	
Function	query TXUUID
Command	AT+LESTXU?\r\n
Return Value	OK+LESTXU=FC02\r\n
Remarks	If BASE UUID is set to default, 4BIT is valid. If not, 128BIT is valid (displayed as 3, 4byte)

AT+LESTXU=<param1>\r\n	
Function	Set TX UUID
Command	AT+LESTXU=FC12\r\n
Return Value	OK+LESTXU\r\n
Remarks	Param1: 4 character tables and a 16-bit UUID

RX Characteristic UUID

AT+LESRXU?\r\n	
Function	query RXUUID
Command	AT+LESRXU?\r\n
Return Value	OK+LESRXU=FC03\r\n
Remarks	If BASE UUID is set to default, 4BIT is valid. If not, 128BIT is valid (displayed as 3, 4byte)

AT+LESRXU=<param1>\r\n	
Function	Set the RX UUID
Command	AT+LESRXU=FC13\r\n
Return Value	OK+LESRXU\r\n
Remarks	Param1: A 16-bit UUID with four character tables

AT Characteristic UUID

AT+LESATU?\r\n	
Function	query ATUUID
Command	AT+LESATU?\r\n
Return Value	OK+LESATU=FC04\r\n
Remarks	If BASE UUID is set to default, 16 bits are valid. If not, 128 bits are valid

AT+LESATU=<param1>\r\n	
Function	Set the AT UUID
Command	AT+LESATU=FC14\r\n
Return Value	OK+LESATU\r\n
Remarks	Param1: A 16-bit UUID with four character tables

Query the handle

AT+LESCONT?\r\n	
Function	Query all the main handles that have been connected from the end to disconnect the specified master device
Command	AT+LESCONT?\r\n
Return Value	OK+LESCONT=0\r\n OK+LESCONT=1\r\n
Remarks	Print two data to indicate that it has been connected to two master devices 0 Indicates that the handle of the connected master device is 0 1 NULL indicates that there is no connected master device with handle 1 (and so on)

Query and Set Slave Connection Parameters

AT+LECINTERVAL?\r\n	
Function	Query the slave connection parameters
Command	AT+LECINTERVAL?\r\n
Return Value	OK+LECINTERVAL=40,0,600\r\n
Remarks	con_interval: 40; con_latency: 0; sup_to: 600

AT+LECINTERVAL=<parameter>\r\n	
Function	Set slave connection parameters
Command	AT+LECINTERVAL=60,1,800\r\n
Return Value	OK+LECINTERVAL\r\n

Main Command

Scan

AT+LEINQ=<param1,param2,param3>\r\n	
Function	Scan starts and sets the relevant parameters
Command	AT+LEINQ=10,1,1\r\n
Return Value	OK+LEINQ "1,AA:FF:FF:99:9A:01,-64,0,02010610094A445 F4141464646463939394130312,AA:FF:FF:99:9A:01,-64,4,03FF0000C 3, 14:ED:F2:FA:2B:B3,-74,3, 1EFF060001092002E2519716 E21AE9212132 E6D2699DB0B0710A2958A47EE3 +LEINQE"
Remarks	Param1: Table scan duration, in seconds (s), ranging from 10 to 60s Param2: The function of repeated filtering of table scan results. 0 means no filtering, and 1 means filtering Param3: Whether the table reports RAW data function, 0 means not to report, 1 means to report Return value example 1 Description: If Param3 is 0, the format is: Ser_num, addr, rssi, NAME (string displayed directly) If Param3 is 1, the format is: ser_num, addr, rssi, raw_type, RAW (HEX escape form, display HEX) Ser_num: The serial number of the returned data, 1, 2, 3, 4..... Address: From the device address rssi: The RSSI value of the scanned device Raw_type: 0/3-all are broadcast packets (scan response/request) 4- scan reply packet NAME: The name of the device scanned RAW: Raw data scanned, i.e. broadcast packet/reply packet Other notes: When the scan command is input multiple times, if the previous scan command is not completed, the next scan command cannot be executed; the underlying scan is frequent, and the information "+scan freq high, at cmd wait" will be reported

AT+LEINQ=?\r\n	
Function	Query the valid range of the scan duration parameter. The range unit is s (seconds)
Command	AT+LEINQ=?\r\n
Return Value	OK+LEINQ=<10-60>
Remarks	The scanning time ranges from 10 to 60s

AT+LEINQ?\r\n	
Function	Query the current scan parameter information
Command	AT+LEINQ?\r\n
Return Value	OK+LEINQ=10,1,1\r\n
Remarks	The scan duration is set to 10s, filter the scan device information, and upload the RAW data

Scan filtering

AT+ LESAFT =<param1>\r\n	
Function	Set the scan filter for Bluetooth names
Command	AT+LESAFT=3435\r\n
Return Value	OK+ LESAFT\r\n
Remarks	Param1: Bluetooth name to scan and filter. Incomplete name matching, as long as the Bluetooth name contains the set scan filter Bluetooth name is matched, such as: AT+LESAFT= 3435\r\n The following Bluetooth names are all matched 3535xxx, xx 3435, xx3435xxx,... Other notes: AT+LESAFT=NULL\r\n When param1 is "NULL", the function is turned off, that is, the name filter is not enabled. The default is off.

AT+ LESAFT?\r\n	
Function	Query the current scan filter Bluetooth name
Command	AT+ LESAFT?\r\n
Return Value	OK+ LESAFT=3435\r\n
Remarks	The current scan filter Bluetooth name is "3435", and when the return parameter is NULL, it indicates that this function is turned off.

Stop Scanning

AT+LEINQC\r\n	
Function	Stop scanning
Command 1	AT+LEINQ=15\r\n AT+LEINQC\r\n
Return Value 1	OK+LEINQC
Command 2	AT+LEINQC\r\n
Return Value 2	ER+LEINQC=9
Remarks	Example 1 Return value description: Instruction 1 Return value, OK+LEINQC indicates that the scan is stopped successfully Example 2 Return value description: If the current state is non-scanning, this instruction is invalid and returns ER+LEINQC; ER+LEINQC=9, where 9 represents the error code BK_ERROR_ALREADY, which means that the current instruction has been executed and the state is already stopped scanning

Active Connection

AT+LECON=<param>\r\n	
Function	The active connection address param is connected and the status is reported. Param represents the Bluetooth address
Command 1	AT+LECON=11:22:33:44:66:98\r\n
Return Value 1	OK+LECON +LECON=0, 11:22:33:44:66:98
Command 2	AT+LECON=11:22:33:44:66:98
Return Value 2	ER+LECON=9
Remarks	Example 1 Return value description: OK+LECON indicates that the connection has only just started; + LECON=0, 11:22:33:44:66:98 indicates that the connection is conne- cted After receiving the successful report information, 0 indicates the connection conidx, and 11:22:33:44:66:98 indicates the connection address. Example 2 Return value description: ER+LECON=9 indicates that the instruction fails; in ER+LECON=9, 9 is the error code BK_ERROR_ALREADY; means that the current instruction has been executed and the device has been connected to other instructions: The default maximum number of connections is 1; if you need to connect multiple devices, set the maximum number of connections to 6; Exceeds the maximum number of connections, and returns ER+LECON=9

Query the Connection

AT+LECON?\r\n	
Function	Query the connection status and reply the connection information
Command 1	AT+LECON?\r\n
Return Value 1	OK+LECON +LECON=0,11:22:33:44:66:98
Command 2	AT+LECON?\r\n
Return Value 2	ER+LECON=7
Remarks	Example 1 Return value description: OK+LECON indicates that the query is successful; +LECON=0, 11:22:33:44:66:98, where 0 indicates the connection conidx, and 11:22:33:44:66:98 indicates the address; Example 2 Return value description: ER+LECON=7 indicates that the instruction failed; ER+LECON=7 indi- cates the error code 7, BK_ERROR_STATE means state error and indicates that no device is connected

Automatic Connection

AT+LEACE=<param>\r\n	
Function	Enable automatic connection; Disable automatic connection
Command	AT+LEACE=1\r\n
Return Value	OK+LEACE+LEINQE
Remarks	Param value is optional Param: 0 means to turn off the automatic connection function; 1 means to turn on the automatic connection function Automatic connection and active connection cannot exist at the same time. When automatic connection is enabled, the active connection command becomes invalid and returns ER+LECON=7

AT+LEACE?\r\n	
Function	Query the automatic connection enabled status
Command	AT+LEACE?\r\n
Return Value	OK+LEACE=1
Remarks	1 Indicates that the automatic connection function is enabled; 0 indicates that the automatic connection function is disabled

Set the Automatic Connection Address

AT+LEACM=<param>\r\n	
Function	Set the automatic connection address
Command	AT+LEACM=11:22:33:44:66:98\r\n
Return Value	OK+LEACM
Remarks	Example 1 Return value description: OK+LEACM indicates that the automatic connection address is set successfully; Other notes: In the case of single connection, you need to set it up first by AT+LEBOND or automatically bind the MAC address and the source address

AT+LEACM?\r\n	
Function	Query the automatic connection address
Command	AT+LEACM?\r\n
Return Value	OK+LEACM=11:22:33:44:66:98
Remarks	The default is a single connection; 11:22:33:44:66:98 indicates the automatically set connection address, which must be consistent with the bound address, otherwise the status error 7 will be reported

Update the Connection Parameters

AT+LECONP=<param1,param2>\r\n	
Function	Update the connection parameters
Command	AT+LECONP=1,100\r\n
Return Value	OK+LECONP
Remarks	Param1 and param2 are required. Param1: Connect to conidx, range 0~5, integer Param2: Connection interval range, 16 hexadecimal, 0x0006~0x0C80, refer to the range of Bluetooth Core specification

Disclaimer

The documentation is provided on an "as-is" basis only. Cionlabs reserves the right to make any updates, corrections, and any other modifications to its documentation without further notice and limitation to product information, descriptions, and specifications herein. Cionlabs do not give warranties regarding the included information's accuracy or completeness. Cionlabs shall have no liability for using the information in this documentation. You should obtain the latest relevant information before placing orders and should verify that such information is current and complete. Information published by Cionlabs regarding any third-party products does not constitute a license to use such products or a warranty or endorsement thereof. Use of such information may require approval from a third party under the intellectual property rights of such third party or alicense from Cionlabs under the intellectual property rights of Cionlabs.

Trademarks

The Cionlabs logo and combinations thereof are trademarks or registered trademarks of Cionlabs. All other product orbrand names mentioned herein are trademarks or registered trademarks of their respective holders.

Cionlabs Private Limited

2nd Floor, Building 380,

9th Main, Sector 7, HSR Layout,

Bengaluru, Karnataka - 560102

http://www.cionlabs.com

Cionlabs Inc.
112 Capital Trail Suite A Newark DE 19711
United States