EH-MC-10

Command Interface
User Guide

Ver 1.3.3

2014. 7. 16

ShangHai Ehong Technology Inc

Version	Date	Comments
V1.0	2014-12-09	Release
V1.1	2014-03-02	Add ibeacon AT command
V1.2	2014-04-02	Add Soc air command
V1.3	2014-04-09	Solve the document error
V1.3.0	2014-06-24	Add AT+BY command Add AT+VR command Add AT+AT new function
V1.3.1	2014-07-02	Add AT+BY=8000, control the PIO3 as state indicate. Add AT+BY=4000, control the PIO11 as a button for user's application. Add AT+BD=FF, to save the module's current when user don't connect the UART to MCU's UART port.
V1.3.2	2014-07-08	Change the connect parameter, and the parameter not right in ios, the module not reset.
V1.3.3	2014-07-16	Solve the AT+AR's bug, the ble's address display error.

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1.Introduction

The Command Interface is a set of ASCII commands and indicators with which the user can Command the 's Bluetooth module (BLE) via UART interface by a host (PC, MCU, etc.).

The commands are used to Command the Bluetooth module sent by host. The indicators are output from the Bluetooth module to the host to indicate the status of the module.

In addition, there are some IO indicators available when the UART is used to transfer raw data . As a complement of ASCII commands and indicators, the IO indicators are also a part of AT COMMAND Spec.

1.1. Default UART Configuration

The default configuration of UART is given below:
Baud rate: 2400
Data bits: 8
Stop bits: 1
Parity: None
Flow Command: None

2. Command and Indicator Syntax

2.1. General Syntax

The general syntax of AT command is shown as below:
→AT+CMD[=Para1][,Para2][, RawData] <CR><LF>

The general syntax of AT indicator is shown as below:

←IDC[=Para1]<CR><LF>

Note: *1. For the examples in this document, the command sent to the Bluetooth Module will be shown with*

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"→" at the beginning of the line, while the indicator output by Bluetooth Module will be shown with "←" at the beginning of the line.

2.2 Description of each field:

"AT+" is the command line prefix.

"CMD" is the command. All of the commands are listed in section 5.

"IDC" is the basic indicator. All of the indicators are listed in section 4.

"=" is the separator between command/indicator and parameter. It's only needed if a parameter is presented. Para1 is the first parameter. Not all of the commands have a parameter.

, is the separator between parameters. It's only needed if subsequent parameter is presented. Para2 is the second parameter if available.

RawData is the raw data which will be sent by the command. Only parts of the commands have this field.

<CR><LF> is the terminator of the command line.

Notes:

1.   All of the parameters are composed of ASCII characters while the RawData field can composed of any data contents.

2.   In indicators, the module prints hex values in low case. For other places in the document we always use upper case characters for hex values.

2.3. Examples

Here is some examples show how to use the AT commands and indicators.

→AT+NM=EH-MC10<CR><LF> *configure the GAP device name characteristic. The new name is "EH-MC10".*

←OK<CR><LF> *response from the module to indicate the command is adopted.*

Notes:

For the examples in this document, the command sent to the Bluetooth Module will be shown with "→" at the beginning of the line, while the indicator output by Bluetooth Module will be shown with "←" at the beginning of the line. "→"and"←" not send with the ascii data.

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3. Command List

All the available AT commands are listed and briefly described in the tables below. The detailed description of each command is given in chapter 5 .

Command	Short Description
AD	Make the Bluetooth Module discoverable/connectable, in BLE the peripheral start/stop the advertising after got this command.
BD	Query or configure the UART baud rate.
NM	Query or configure the GAP device name characteristic.
AT	Query or configure the Advertise Type of the Bluetooth Module.
DA	Send data packet to the connected BLE central.
DC	Disconnect with remote BLE central
ST	Query the current radio status.
UD	Query or configure the GATT service UUID128 the module
RT	Reset module
CB	Clear the paired Bluetooth device list.
RI	Query the RSSI for the current connection.
AR	Query the Bluetooth address of the module
DF	Configure all setting to factory default values
CN	Query or configure the peripheral preferred connection parameter characteristic
CC	Query current connection parameter characteristic
BM	Query or configure the Major ID of ibeacon Module.
BS	Query or configure the MinorID of ibeacon Module.
BP	Query or configure the Power of ibeacon Module.
BY	Configure the module as by pass mode
VR	Query the module's version
AP	Query or configure the module's appearance

Table 1. AT Command List for BLE

4. Indicator List

All the available AT Command indicators are listed and briefly described in the tables below. The detailed description of each indicator is given in chapter 5 and chapter 6.

Indicator	Short Description
OK	Indicates a command was adopted by the Bluetooth Module.
ER	Indicates there is an error detected in the command sent by the host.
BD	Reports the UART baud rate.
UD	Report the GATT service UUID128 the module
AR	Report the Bluetooth address of the Module
CC	Report the Current connection parameter
RI	Report the RSSI for the current connection.
ST	Report the radio state.
NM	Reports the device name of the Bluetooth Module.
AT	Reports the device Advertisement Config
CN	Report the peripheral preferred connection parameter
BM	Report the ibeacon major id of the ibeacon Module
BS	Report the ibeacon minor id of the ibeacon Module
BP	Report the Power of the ibeacon Module

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VR	Report the version of the module
BY	Report the module's bypass mode
AP	Report the module's appearance

Table 2. AT Indicator List for BLE

5. Description of ASCII Commands

5.1. General Information Commands

5.1.1. BD—Module UART BaudRate

5.1.1.1 Description:

This command can query or change the UART baud rate of Bluetooth Module. Once changed, the new baud rate will take effect next power on. The Bluetooth module stores the value in its non-volatile memory so the value won't change until be set again.

If the parameter is not presented, the Bluetooth Module will report current baud rate by the Indicator BD.

5.1.1.2 Syntax:

→AT+BD[= BaudRate]<CR><LF>

←BD=BuadRate<CR><LF>

5.1.1.3. Parameter Description:

Parameter	Description	Nvram	Comments

| BaudRate

Value: 00 – 09/ff
Default: 00 | The new BaudRate of the Module.

00: 2400 bps
01: 9600 bps
02: 19200 bps
03: 38400 bps
04: 57600 bps
05: 115200 bps
06: 230400 bps
07: 460800 bps
08: 921600 bps
09: 1382400 bps
FF: work as 2400, but when your UART NC, the cpu will in sleep, else the current will about 1.2 mA if UART NC. | YES | The default baud rate may not be 2400 per software version.
Using default 2400 baud rate – no need to assert (pull up to high logic level) the WAKE pin to wake up the module from deep sleep before transmitting to it.

If MC10 not use for UART application, please set FF. |

Note:

1. Please do NOT try to change to a new baud rate if you don't have a host which can work in that baud rate, for there is no other way to reset it except for UART port.

2. If baud rate other than 2400 is used, please keep pulling up the WAKE pin during sending data to the module.

5.1.1.4. Examples:

Ex. 5.1. To query the baud rate of Bluetooth Module:
→AT+BD<CR><LF> _query the baud rate._
←BD=00<CR><LF> _report the baud rate, it's 2400._
Ex. 5.2. To change the baud rate of Bluetooth Module:
→AT+BD=01<CR><LF> _change the baud rate to 9600._
←OK _response from the module to indicate the command is adopted._

5.1.2. AD—Start or Stop Adverting (Discoverble)

5.1.2.1 Description:

This command can start or stop the BLE Module advertising. The module is discoverable/connectable only when the module is advertising.

5.1.2.2. Syntax:

→AT+AD[=Flag]<CR><LF>

←AD=Flag<CR><LF>

5.1.2.3. Parameter Description:

Parameter	Description	Nvram	Comments
Flag	**Start or Stop BLE Module advertising** **00: stop** **01: start**	**NC**	

5.1.2.4. Examples:

Ex. 5.3. To make Bluetooth Module discoverable:
→AT+AD=01<CR><LF>　　make Bluetooth Module discoverable.
←OK<CR><LF>　　response from the module to indicate the command is adopted.
Ex. 5.4. To make Bluetooth Module no discoverable:
→AT+AD=00<CR><LF>　　make Bluetooth Module don't discoverable.
←OK<CR><LF>　　response from the module to indicate the command is adopted.

5.1.3. NM—query or configure module's name

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5.1.3.1 Description:

This command can query or configure the BLE Module's name.

5.1.3.2. Syntax:

→AT+NM[=Name]<CR><LF>

←NM=Name<CR><LF>

5.1.3.3. Parameter Description:

Parameter	Description	Nvram	Comments
Name	**query or configure the BLE Module's name.**	YES	**The lenth of the name can't over 20 bytes**.

5.1.3.4. Examples:

Ex. 5.5 To query the name of module:
→AT+NM<CR><LF>   *Query the name of module*
←NM=EH-Link-MC-10<CR><LF>   *response the name of the module .*
Ex. 5.6 configure the name of the module:
→AT+NM=EH-LINK<CR><LF>   *Configure the name of module as EH-LINK*
←OK<CR><LF>   *response from the module to indicate the command is adopted.*

5.1.4. AT — Query or Config Advertise Type

5.1.4.1 Description:

This command can query or configure the advertise type

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5.1.4.2. Syntax:

→AT+AT[=Type]<CR><LF>

←AT=Type<CR><LF>

5.1.4.3. Parameter Description:

Parameter	Description	Nvram	Comments
Type **Lenth: 2** **Default: 0001**	**query or configure the advertise type** **Bit15: ibeacon mode config** **Bit14-5: reserved** **Bit11: config by AT+BY.** **Bit4: Auto Clear Bonded infor,** **1: auto clear when disconnect;** **0:needn't clear the pair&bond information.** **Bit3: Bonded Flag, 1: need pair and bond. 0: needn't pair and bond.** **Bit2: always slow advertising** **Bit1: always fast advertising** **Bit0:auto advertising when power on or disconnect**	YES	**when the module advertising,30s fast advertising, and 60s slow advertising, then goto idle state**

5.1.4.4. Examples:

Ex. 5.7   To query the advertise type of the module:
→AT+AT<CR><LF>   *query the module advertising type.*
←AT=0001<CR><LF>   *response the advertising type.of the module .*
Ex. 5.8   To configure the advertise type of the module:
→AT+AT=0009<CR><LF>   *make Bluetooth Module need bonded*
←OK<CR><LF>   *response from the module to indicate the command is adopted.*
Ex. 5.9   To configure the advertise type of the module:
→AT+AT=0000<CR><LF>   *make Bluetooth Module no auto advertising when power on or*

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disconnect action.
←OK<CR><LF>　　　*response from the module to indicate the command is adopted.*

5.1.5. RT— Reset the Module

5.1.5.1 Description:

This command can reset the Module by UART.

5.1.5.2. Syntax:

→AT+RT<CR><LF>
←OK<CR><LF>

5.1.5.3. Parameter Description:

None

Note:
　　When at command send ,indicate OK, and after 1s, the module reset

5.1.5.4. Examples:

Ex. 5.10. To reset the module.
→AT+RT<CR><LF>　　*reset the module.*
←OK<CR><LF>　　*response from the module to indicate the command is adopted.*

5.1.6. DC— Disconnect from Module

5.1.6.1 Description:

This command can disconnect the module

5.1.6.2. Syntax:

→AT+DC<CR><LF>

←OK<CR><LF>

5.1.6.3. Parameter Description:

None

Note:

   This command only valid when the module in connected state.

5.1.6.4. Examples:

Ex. 5.11. To disconnect the module.
→AT+DC<CR><LF>   *disconnect the module.*
←OK<CR><LF>   *response from the module to indicate the command is adopted.*

5.1.7. UD— Query or Config Module's Service UUID

5.1.7.1 Description:

This command can query or configure the module's Service UUID.Every command can't config the 2 bytes UUID.

5.1.7.2. Syntax:

→AT+UD[=inx, uuid]<CR><LF>

←UD=UUID0,UUID1,UUID2,UUID3,UUID4,UUID5,UUID6,UUID7<CR><LF>

5.1.7.3. Parameter Description:

Parameter	Description	Nvram	Comments
inx Value: 00-07	The index of the uuid	YES	
uuid Value: 0000-FFFF	The value of the UUID, 2 hex byte.	YES	
UUID0-UUID7	The 128bits UUID, every uuid 2 Hex bytes		

5.1.7.4. Examples:

Ex. 5.12. To _query_ the module' service UUID.
→AT+UD<CR><LF>   _query the module's service UUID._
←UD=1111,2222,3333,4444,5555,6666,7777,8888<CR><LF>   _response from the module's service UUID_
Ex. 5.13. To _configure_ the module' service UUID, 2 Hex Byte.
→AT+UD=00,1234<CR><LF>   _configure the module's fisrt UUID_
←OK<CR><LF>   _response from the module to indicate the command is adopted._

5.1.8. RI— Query Module's rssi value

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5.1.8.1 Description:

This command can query the connected module's rssi.

5.1.8.2. Syntax:

→AT+RI<CR><LF>

←RI=rssi<CR><LF>

5.1.8.3. Parameter Description:

Parameter	Description	Nvram	Comments
Rssi Value:-128 to 127	**The rssi value, 1 Hex byte.**	**NC**	**This command valid only the module in connected state.**

5.1.8.4. Examples:

Ex. 5.14. To query the module's rssi
→AT+RI<CR><LF>   _query the module's rssi_
←RI=e2<CR><LF>   _response from the module's rssi, e2=-30_

5.1.9. DF— Reset Module's nvram

5.1.9.1 Description:

This command can configure the setting of the module to default.

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5.1.9.2. Syntax:

→AT+DF<CR><LF>

←OK<CR><LF>

5.1.9.3. Parameter Description:

None

Note:
  This command send, all of the configure data is clear, and set the default.

5.1.9.4. Examples:

Ex. 5.15.To reset the module's configure data
→AT+DF<CR><LF>   *reset the all configure data of the module*
←OK<CR><LF>   *response from the module to indicate the command is adopted.*

5.1.10. AR— Query Module's address

5.1.10.1 Description:

This command can query the module's address.

5.1.10.2. Syntax:

→AT+AR<CR><LF>

←AR=address<CR><LF>

5.1.10.3. Parameter Description:

Parameter	Description	Nvram	Comments
address	**The module's local address** **6 Hex byte**	**NC**	

5.1.10.4. Examples:

Ex. 5.16. To query the module's address.
→AT+AR<CR><LF>   _query the module's address_
←AR=000196F00018<CR><LF>   _response the module's address_

5.1.11. ST— Query Module's state

5.1.11.1 Description:

This command can query the module's state

5.1.11.2. Syntax:

→AT+ST<CR><LF>

←ST=State<CR><LF>

5.1.11.3. Parameter Description:

Parameter	Description	Nvram	Comments
State **Value:** **00-04**	**The Module state** **00: idle** **01: fast advertising** **02: slow advertising** **03: connected**	**NC**	

	04: connected and bonded		

5.1.11.4. Examples:

Ex. 5.17. To query the module' state.

→AT+ST<CR><LF>   *query the module's state*

←ST=01<CR><LF>   *response the module's state is fast advertising.*

5.1.12. CB— Clear Module's bond information

5.1.12.1 Description:

This command can clear the module's bond information

5.1.12.2. Syntax:

→AT+CB<CR><LF>

←OK<CR><LF>

5.1.12.3. Parameter Description:

None

5.1.12.4. Examples:

Ex. 5.18. To reset the module's bond information.

→AT+CB<CR><LF>   *clear the module's bond information*

←OK<CR><LF>   *response from the module to indicate the command is adopted.*

5.1.13. CN — Query or Config the repect connect parameter

5.1.13.1 Description:

This command can query or configure the respect connect parameter of the module

5.1.13.2. Syntax:

→AT+CN[=MinInterval, MaxInterval, Latency, Timeout]<CR><LF>

←CN=MinInterval,MaxInterval,Latency,Timeout<CR><LF>

5.1.13.3. Parameter Description:

Parameter	Description	Nvram	Comments
MinInterval Value: 0006- 0C80 Default:0190	The minimum value for the connection interval. 2 Hex Byte	YES	Uinit: 1.25 ms
MaxInterval Value: 0006- 0C80 Default:0190	The Maximum value for the connection interval. 2 Hex Byte	YES	Uinit: 1.25 ms
Latency Value: 0000-03E8 Default:0004	The slave latency for the connection in number of connectionevents. 2 Hex Byte	YES	
Timeout Value: 0006- 0C80 Default:03E8	The connection supervisor timeout multiplier as a multiple of10ms. 2 Hex Byte	YES	Uinit: 10 ms

Note:
The Mininteral and MaxInterval just a range for connect parameter. The real interval need query after the comminicate successful between the slave and central.

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5.1.13.4. Examples:

Ex. 5.19. *query the module's connection parameter*
→AT+CN<CR><LF> *query the module's connection parameter*
←CN=0190,0190,0004,03e8<CR><LF>   *response the module's connection parameter*
Ex. 5.20. *configure the module's connection parameter*
→AT+CN=0010,0050,0004,0256<CR><LF>   *configure the module's connection parameter*
←OK<CR><LF>   *response from the module to indicate the command is adopted.*

5.1.14. CC— Query the current connect parameter

5.1.14.1 Description:

This command can query the current connect parameter of the module

5.1.14.2. Syntax:

→AT+CC<CR><LF>

←CC=Interval,Latency,Timeout<CR><LF>

5.1.14.3. Parameter Description:

Parameter	Description	Nvram	Comments
Interval Value: 0006- 0C80	**Current connect Interval 2 Hex Byte**	**NC**	**Uinit: 1.25 ms**
Latency Value: 0000-03E8	**Current connect Latency 2 Hex Byte**	**NC**	
Timeout Value:	**Current connect Timeout 2 Hex Byte**	**NC**	**Uinit: 10 ms**

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0006- 0C80			

5.1.14.4. Examples:

<u>Ex. 5.21. To reset the module.</u>
→AT+CC<CR><LF>   *query the module's current connection parameter*
←CC=0020,0008,0048<CR><LF>   *response the module's current connection parameter*

5.1.15. DA— Send the data to BLE Central

5.1.15.1 Description:

This command can send a pakage data to BLE Central

5.1.15.2. Syntax:

→AT+DA=string<CR><LF>

←OK<CR><LF>

5.1.15.3. Parameter Description:

Parameter	Description	Nvram	Comments
String Format:ASCII	**Custom need send data, ascii format The max lenth of the data is 20**	**NC**	

Note:
    This command valid only the module in connected state.

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5.1.15.4. Examples:

Ex. 5.22. To send the data bypass to central
→AT+DA=0123456789<CR><LF> send "0123456789" bypass to central (ex. iphone)
←OK<CR><LF>   *response from the module to indicate the command is adopted.*

5.1.16. BM— Query or Config the ibeacon Major UID

5.1.16.1 Description:

This command can query or Config the ibeacon Major UID

5.1.16.2. Syntax:

→AT+BM[=Major]<CR><LF>

←BM=Major<CR><LF>

5.1.16.3. Parameter Description:

Parameter	Description	Nvram	Comments
Major Value: 0000-FFFF Default: 0000	**Ibeacon's Major UID 2 Hex Byte**	**YES**	**This command valid only in ibeacon mode**

5.1.16.4. Examples:

Ex. 5.23. To *query* the ibeacon module's Major UID.
→AT+BM<CR><LF>   *query the ibeacon module's Major UID.*
←BM=0000<CR><LF>   *response the ibeacon module's Major UID*

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Ex. 5.24. To _configure_ the ibeacon module's Major UID.
→AT+BM=0001<CR><LF>   _configure the ibeacon module's Major UID._
←OK<CR><LF>   _response from the module to indicate the command is adopted._

5.1.17. BS— Query or Config the ibeacon Minor UID

5.1.17.1 Description:

This command can query or Configure the ibeacon Minor UID

5.1.17.2. Syntax:

→AT+BS[=Minor]<CR><LF>

←BS=Minor<CR><LF>

5.1.17.3. Parameter Description:

Parameter	Description	Nvram	Comments
Minor Value: 0000-FFFF Default: 0000	**Ibeacon's MinorUID 2 Hex Byte**	**YES**	**This command valid only in ibeacon mode**

5.1.17.4. Examples:

Ex. 5.25. To _query_ the ibeacon module's MinorUID.
AT+BS<CR><LF>   _query the ibeacon module's_ Minor_UID._
BS=0000<CR><LF>   _response the ibeacon module's_ Minor _UID_
Ex. 5.26. To _configure_ the ibeacon module's MinorUID.
AT+BS=0001<CR><LF>   _configure the ibeacon module's_ Minor _UID._

OK<CR><LF>   _response from the module to indicate the command is adopted._

5.1.18. BP— Query or Config the ibeacon Power Value

5.1.18.1 Description:

This command can query or Configure the ibeacon Power value

5.1.18.2. Syntax:

→AT+BP[=Power]<CR><LF>

←BP=Power<CR><LF>

5.1.18.3. Parameter Description:

Parameter	Description	Nvram	Comments
Power Value: 00-FF Default: 00	**Ibeacon's Power value 1Hex Byte, -128 - 127**	**YES**	**This command valid only in ibeacon mode**

5.1.18.4. Examples:

Ex. 5.27. To _query the ibeacon module's_ Power value
AT+BP<CR><LF>   _query the ibeacon module's_ Power value
BP=00<CR><LF>   _response the ibeacon module's_ Power value
Ex. 5.28. To _configure the ibeacon module's_ Power value
AT+BP=01<CR><LF>   _configure the ibeacon module's_ Power value.
OK<CR><LF>   _response from the module to indicate the command is adopted._

5.1.19. BY— Config the module as bypass mode

5.1.19.1 Description:

This command can Config the module as bypass mode

5.1.19.2. Syntax:

→AT+BY[=Bypass]<CR><LF>

←OK<CR><LF>

5.1.19.3. Parameter Description:

Parameter	Description	Nvram	Comments
Bypass Value: 0000-FFFF Default: 0000	**Command to set module to bypass or at command mode** **Bit:15 this bit used for PIO3 as indicate the module's state.** **1: connected, 0: disconnected.** **Bit:14 this bit used for configure the PIO11 as a button. Short press work.** **Bit:1 this bit if set, then all of the indicate information will disable.** **Bit:0 this bit if set ,after connected, the indicate information will disable.**	**YES**	**Bit0, bit1 used for disable or enble the information.** **Bit15, bit14 used for the PIO action.** **User can configure these bits used for your application.**

5.1.19.4. Examples:

Ex. 5.29. To *config the module's* as bypass mode

AT+BY=0001<CR><LF>   *configure the module as bypass mode.*

OK<CR><LF>   *response from the module to indicate the command is adopted.*

Ex. 5.30. To *config the module's* at command mode

AT+BY=0000<CR><LF>   *configure the module as at command mode.*

OK<CR><LF>   *response from the module to indicate the command is adopted.*

Ex. 5.31. To *config the module's* pio indicate mode

AT+BY=8000<CR><LF>   *configure the module's PIO3 as the indicate the state*

OK<CR><LF>   *response from the module to indicate the command is adopted.*

5.1.20. VR— Query Module's version

5.1. 20.1 Description:

This command can query the module's *firmware version*

5.1. 20.2. Syntax:

→AT+VR<CR><LF>

←ST=version<CR><LF>

5.1. 20.3. Parameter Description:

Parameter	Description	Nvram	Comments
version Value: ASCII	**NC**	**NC**	**This command support only query.**

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5.1. 20.4. Examples:

Ex. 5.32. To query the module' state.

→AT+VR<CR><LF>   *query the module's firmware version*

←VR=C000_V1.2.0<CR><LF>   *response the module firmware version: C000_V1.2.0*

5.1.21. AP— Query And Config Module's APPEARANCE

5.1. 21.1 Description:

This command can query and configure the module's APPEARANCE

5.1.21.2. Syntax:

→AT+AP[=APPEARANCE]<CR><LF>

←OK<CR><LF>

5.1.21.3. Parameter Description:

Parameter	Description	Nvram	Comments
Appearance Value: 0000-FFFF Default: 00	**Command to set module's appearance**	**YES**	

5.1.21.4. Examples:

Ex. 5.33. To *config the module's* as appearance

AT+AP= 0200 <CR><LF>   *configure the module as alert TAG*

OK<CR><LF>   *response from the module to indicate the command is adopted.*

Ex. 5.34. *To query the module's appearance*

AT+AP<CR><LF>   *configure the module as at command mode.*
AP=0200<CR><LF>   *response from the module appearance is alert TAG*

6. Description of ASCII Indicators

6.1. General Indicators

6.1.1. OK—Command is Adopted by the Bluetooth Module

6.1.1.1. Description:

This indicator indicates a command was adopted by the Bluetooth Module successfully.

6.1.1.2. Syntax:

←OK<CR><LF>

6.1.1.3. Parameter Description:

None

6.1.1.4. Examples:

Ex. 6.1. To make Bluetooth Module discoverable:
→AT+AD=01<CR><LF>   *make Bluetooth Module discoverable.*
←OK<CR><LF>   *response from the module to indicate the command is adopted.*

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6.1.2. ER—Error

6.1.2.1. Description:

This indicator indicates there is an error detected in the command sent by the host.

6.1.2.2. Syntax:

←ER=Code<CR><LF>

6.1.2.3. Parameter Description:

Parameter	Description	Comments
Code	**The error code to give the reason** **01: The command is not support** **02: The command Parameter is not right** **03: The command is not allowed in current state.**	

6.1.2.4. Examples:

Ex. 6.1. To make Bluetooth Module discoverable:
→AT+AD=06<CR><LF> 06 is not a allowed parameter.
←ER=03<CR><LF>   *response from the module to indicate the command is not allowed.*