



BT1035 programming user guide

Release 1.1.1

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Chapter 1

Introduction

1.1 Description

This design guide is suitable for engineers to develop FSC-BT1035 series Bluetooth modules, also suitable for BT806、BT802 series modules

1.2 Module Default Settings

Name	FSC-BT1035
LE-Name	FSC-BT1035-LE
Pin Code	0000
Secure Simple Pairing Mode	ON
UART Baudrate	115200/8/N/1

2.2 Pin Description

Pin	Pin Name	Type	Pin Descriptions
4	I2S_CLK	I/O	I2S BCLK
5	I2S_IN	I	I2S DATA IN
6	I2S_OUT	O	I2S DATA OUT
7	I2S_WS	I/O	I2S SYNC
8	RESET	I	External reset input: active Low
13	UART_TX	O	UART TX
14	UART_RX	I	UART RX
15	UART_CTS	I/O	UART CTS
16	UART_RTS	I/O	UART RTS(default: PA mute pin)
17	LED0	I/O	Output square wave in pairing mode, output high level when bluetooth is connected
32	GND	GND	GND
33	VDD	VDD	Power supply for I/O ports, DC 3.3V
34	SYS_CTRL	I	Delay 100ms, pull high
36	VDD_IO	I	pio supply
37	USB_DP		USB D+
38	USB_DN		USB D-
43	MIC_LP	Audio	MIC0/Line_IN differential L input, positive
44	MIC_LN	Audio	MIC0/Line_IN differential L input, negative
45	MIC_BIAS	Audio	MIC Power Supplies
46	SPK_RN	Audio	Headphone/speaker differential R output, negative
47	SPK_RP	Audio	Headphone/speaker differential R output, positive
48	SPK_LN	Audio	Headphone/speaker differential L output, negative
49	SPK_LP	Audio	Headphone/speaker differential L output, positive
51	EXT_ANT	ANT	Change the 0 ohm resistance near the antenna, you can connect an external Bluetooth antenna

2.3 Hardware Design Notes

- The simple test of the module only needs to connect VDD/VDD_IO/VREG_IN/GND/UART_RX/UART_TX to use
- After drawing the schematic diagram,
- please send it to Feasycom for review,so as to avoid the Bluetooth distance not reaching the best effect

Chapter 3

Function Description

3.1 Profiles & Features

- SPP (Serial Port Profile)
- GATTs (Generic Attribute Profile LE-Peripheral role)
- GATTC (Generic Attribute Profile LE-Central role)
- HFP-HF (Hands-Free Profile)
- HFP-AG (Hands-Free-AG Profile)
- A2DP-Sink (Advanced Audio Distribution Profile)
- A2DP-Source (Advanced Audio Distribution Profile)
- AVRCP-Controller (Audio/Video remote controller Profile)
- AVRCP-Target (Audio/Video remote controller Profile)
- HID-DEVICE (Human Interface Profile)
- PBAP (Phonebook Access Profile)

3.2 GATT Default service and characteristic

Type	UUID	Characteristic	Description
Service	0xFFFF0		throughput services
Write	0xFFFF2	Write,Write Without Re-sponse	app send to module
Notify	0xFFFF1	Notify	module send to app

Chapter 4

Command Description

4.1 Terms

- Throughout this specification:
- Content between { } is optional
- Content behind << represents a COMMAND from Host
- Content behind >> represents a RESPONSE/EVENT to Host

4.2 Command Format

AT+Command{=Param1{,Param2{,Param3...}}}<CR><LF>

- All commands start with “AT” , end with <CR><LF>
- <CR> means “carriage return” , corresponds to hex value 0x0D
- <LF> means “line feed” , corresponds to hex value 0x0A
- If Command has Parameter, Parameter follows behind ‘=’
- If Command has multiple Parameters, Parameter must be separated by ‘,’
- If Command has Response, Response starts with <CR><LF>, ends with <CR><LF>
- Module will always report command’ s execution result by using “OK” for success or “ERROR” for failure

Example: Read module's BR/EDR local name

<< AT+NAME

>> +NAME=FSC-BT1035XXXX

>> OK

Example: Pick up an incoming call when no call incoming actually

<< AT+HFPANSW

>> ERROR

4.3 Event Format

<CR><LF>+Indication{=Param1{,Param2{,Param3...}}}<CR><LF>

- All Events start with <CR><LF>, end with <CR><LF>
- If Event has Parameter, Parameter follow behind '='
- If Event has multiple Parameters, Parameter must be separated by ','

Example: Received "1234567890" from mobile phone via SPP profile

>> +SPPDATA=10,1234567890

Chapter 5

Commands Table

5.1 General Commands

5.1.1 AT+HELP - Firmware Function/Command Summary

Command	AT+HELP
Response	<FIRMWARE FUNCTION: appropriate working scenario > <OTA PATH: latest suitable firmware path on server for upgrade On-The-Air> <ENABLED PROFILES: LINKS: ON/OFF> <COMMAND SUMMARY: DESCRIPTION: PROFILE CATEGORY>
Description	Using help command to get the basic summary information

5.1.2 AT+VER - Get Firmware Version

Command	AT+VER
Response	+VER=Param1,Param2,Param3
Param1	Module type
Param2	Firmware version
Param3	Firmware Compile time

Example:

<< AT+VER

>> +VER=BT1035,V2.6.1,20220922

>> OK

5.1.3 AT+BAUD - Get/Set Uart Baudrate

Command	AT+BAUD{=Param}
Param	9600/19200/38400/57600/115200(default)/230400/460800/921600
Response	+BAUD=Param
Description	Module will change baudrate to target value immediately or after reboot depending on firmware

Example:Read module' s baudrate

<< AT+BAUD

>> +BAUD=115200

>> OK

<< AT+BAUD=921600

>> OK

Module switch baudrate to 921600 immediately, host change baudrate as well, query module' s

name at new baudrate

<< AT+NAME

>> +NAME=FSC-BT1035-1F26

>> OK

5.1.4 AT+I2SCFG - Get/Set I2S Settings

Command	AT+I2SCFG{=Param}
Param	A base-10 representation of a bit field, default:0, for each bit
BIT[0]	0:disable; 1:enable
BIT[1]	0:master; 1:slave
BIT[2]	0:FS=48000Hz;1:FS=44100Hz
BIT[3]	0:left justified; 1:right justified
BIT[4]	0:data 1 bit delay; 1:data no delay
BIT[5-6]	00: bit depth=16bits 01: bit depth=24bits 10: bit depth=32bits
Response	+I2SCFG=Param

Example:usual configuration and description

1	I2S Master; Sample rate=48000Hz; Resolution=16bits; Bit clock= 48000*16*2ch=1.536Mhz
3	I2S Slave; Sample rate=48000Hz; Resolution=16bits; Bit clock= 48000*16*2ch=1.536Mhz
65	I2S Master; Sample rate=48000Hz; Resolution=32bits; Bit clock= 48000*32*2ch=3.072Mhz
67	I2S Slave; Sample rate=48000Hz; Resolution=32bits; Bit clock= 48000*32*2ch=3.072Mhz

5.1.5 AT+MICGAIN - Get/Set Analog Input Gain

Command	AT+MICGAIN{=Param}
Param	Microphone input gain (0~15, default:10)

5.1.6 AT+SPKVOL - Get/Set Analog Output Volume

Command	AT+SPKVOL{=Param}
Param	audio speaker volume (0~15, default:10)

5.1.7 AT+REBOOT - Soft Reboot

Command	AT+REBOOT
Response	OK
Description	Module release all Bluetooth connections with remote device then re-boot

5.1.8 AT+RESTORE - Restore Factory Settings

Command	AT+RESTORE
Response	OK
Description	Module restore all factory settings then reboot

5.1.9 AT+BTEN - Bluetooth On/Off

Command	AT+BTEN{=Param}
Param	0-Power off 1-Power on

5.1.10 AT+PROFILE - Bluetooth Profile Selection

Command	AT+PROFILE{=Param}
Param	A base-10 representation of a bit field, for each bit:
BIT[0]	SPP (Serial Port Profile)
BIT[1]	GATT Server (Generic Attribute Profile)
BIT[2]	GATT Client (Generic Attribute Profile)
BIT[3]	HFP-HF (Hands-Free Profile Handsfree)
BIT[4]	HFP-AG (Hands-Free Profile Audio Gateway)
BIT[5]	A2DP Sink (Advanced Audio Distribution Profile)
BIT[6]	A2DP Source (Advanced Audio Distribution Profile)
BIT[7]	AVRCP Controller (Audio/Video remote controller Profile)
BIT[8]	AVRCP Target (Audio/Video remote controller Profile)
BIT[9]	HID Keyboard (Human Interface Profile)
BIT[10]	PBAP Server (Phonebook Access Profile)
Response	+PROFILE=Param
Description	BT1035、BT806 not support HFP-HF、A2DP Sink、AVRCP Controller、HID Keyboard、PBAP

Example:Read current profile selection

```
<< AT+PROFILE
```

```
>> +PROFILE=341
```

Example:Enable SPP, GATT Server, HFP Source, A2DP Source profile, disable the others

```
<< AT+PROFILE=83
```

```
>> OK
```

5.1.11 AT+AUTOCONN - Turn On/Off Power On Auto Reconnect

Command	AT+AUTOCONN{=Param}
Param	(0~15, default:3) (0) Turn Off (1-15) Turn on and reconnect times
Response	+AUTOCONN=Param
Description	Module will attempt to connect last device after power on if set.

5.1.12 AT+STAT - Get All Profile State

Command	AT+STAT
Response	+STAT=Param1, Param2, Param3...
Param1	DEVSTAT
Param2	SPPSTAT
Param3	GATTSTAT
Param4	HFPSTAT
Param5	A2DPSTAT
Param6	AVRCPSTAT

5.1.13 AT+DEVSTAT - Read Device State

Command	AT+DEVSTAT
Response	+DEVSTAT=Param
Param	A base-10 representation of a bit field, for each bit:
BIT[0]	0: Power Off; 1: Power On
BIT[1]	0: BR/EDR Not Discoverable; 1: BR/EDR Discoverable
BIT[2]	0: BLE Not Advertising; 1: BLE Advertising
BIT[3]	0: BR/EDR Not Scanning; 1: BR/EDR Scanning
BIT[4]	0: BLE Not Scanning; 1: BLE Scanning

Example:usual combination and description

0	Device power off
1	Device power on
3	Device power on, BR/EDR Discoverable
5	Device power on, BR/EDR Not Discoverable, BLE Advertising
7	Device power on, BR/EDR Discoverable, BLE Advertising
13	Device power on, BR/EDR Not Discoverable, BLE Advertising, Scanning nearby BR/EDR devices

5.1.14 AT+ADDR - Get BR/EDR MAC Address

Command	AT+ADDR
Response	+ADDR=Param
Param	Module' s BR/EDR MAC address (12 Bytes ASCII)

Example:

<< AT+ADDR

>> +ADDR=DC0D30010203

>> OK

5.1.15 AT+LEADDR - Get BLE MAC Address

Command	AT+LEADDR
Response	+LEADDR=Param
Param	Module' s LE MAC address (12 Bytes ASCII)

5.1.16 AT+NAME - Get/Set BR/EDR Local Name

Command	AT+NAME{=Param1{,Param2}}
Param1	BR/EDR local name(1~31 Bytes ASCII)
Param2	MAC address suffix(0/1,default:0) 0: Disable suffix 1: Enable suffix “XXXX” (lower 4 bytes of MAC address) after local name
Response	+NAME=Param
Description	Write local name if parameter exist, otherwise read current local name

Example:Read current BR/EDR local name

<< AT+NAME

>> +NAME=FSC-BT1035XXXX

>> OK

Example:Change module’ s BR/EDR local name to “ABC” ,and disable suffix

<< AT+NAME=ABC,0

>> OK

Example:Change module’ s BR/EDR local name to “ABC” and enable suffix

<< AT+NAME=ABC,1

>> OK

5.1.17 AT+LENAM - Get/Set BLE Local Name

Command	AT+LENAM{=Param1{,Param2}}
Param1	BLE local name(1~31 Bytes ASCII)
Param2	MAC address suffix(0/1,default:0) 0-Disable suffix 1-Enable suffix “XXXX” (lower 4 bytes of MAC address) after local name
Response	+LENAM=Param

5.1.18 AT+PIN - Get/Set BR/EDR Pin Code

Command	AT+PIN{=Param}
Param	Pin code(4~15 Bytes ASCII, default:0000)
Response	+PIN=Param
Description	Pin code only work in legacy pairing mode, see AT+SSP

Example:Read module' s pin code

<< AT+PIN

>> +PIN=0000

>> OK

Example: Change module' s pin code to “1234”

<< AT+PIN=1234

>> OK

5.1.19 AT+COD - Get/Set Device Class

Command	AT+COD=Param
Param	Class of device(6 bytes ASCII, default:5A020C Handsfree device)
Response	+COD=Param

Related configuration reference: [COD](#).

5.1.20 AT+PAIR - Get/Set BR/EDR/BLE Visibility

Command	AT+PAIR=Param
Param	Mode(0-1),default:0 0: Leave BR/EDR/BLE discoverable mode (stop advertising/broadcasting) 1: Enter BR/EDR/BLE discoverable mode (start advertising/broadcasting)
Description	Module will always be discoverable if no device connected (BR/EDR or BLE), and be undiscoverable if connected with remote device, unless received this command

5.1.21 AT+SCAN - Scan Nearby Devices

Command	AT+SCAN=Param1{,Param2}}
Param1	scan type(0~2) 0: Stop scan 1: Scan nearby BR/EDR devices 2: Scan nearby BLE devices
Param2	BLE SCAN report type or BR/EDR scan time BLE Sacn 0: Report like BR/EDR, 1: Report advertising data BR/EDR Sacn 0 - 255
Description	Format description reference: +SCAN - Scan Result

5.1.22 AT+PLIST - Get/Delete Paired List

Command	AT+PLIST{=Param}
Param	(0/1~8/12 Bytes MAC address) (0) Clear all paired record (1~8) Clear specific paired record with index (MAC) Clear specific paired record with MAC address
Response1	+PLIST=Param1, Param2{,Param3}
Param1	(1~8) Paired device' s index
Param2	(MAC) Paired device' s MAC address
Param3	(UTF8) Paired device' s name
Response2	+PLIST=E End of the paired record

Example:Read module' s paired record


```
<< AT+PLIST
```

```
>> +PLIST=1,1C5CF226D773, iPhone12
```

```
+PLIST=2, A0BC30075421, Samsung S8
```

```
+PLIST=E
```

```
>> OK
```

Example: Clear module's paired record

```
<< AT+PLIST=0
```

```
>> OK
```

5.1.23 AT+DSCA - Release All Connections

Command	AT+DSCA
Description	Module release all Bluetooth connections with remote device

5.1.24 AT+TPMODE - Turn On/Off Throughput Mode

Command	AT+TPMODE{=Param}
Param	Throughput mode(0~1,default:0) 0: Turn Off 1: Turn On
Response	+TPMODE=Param
Description	When SPP/GATT profile connected and throughput mode is on, the AT command will be de-active, every byte received via physical UART will be sent to air, vice visa

5.1.25 AT+AUXCFG - Audio Input Mode Configuration

Command	AT+AUXCFG{=Param}
Param	mode(0-3,default:0) 0: USB Mode 1: LineIn Mode 2: Spdif Mode 3: I2S Mode
Description	This command is used to configure the input mode of the module, BT1035、BT806 does not support spdif

Example:Set LineIn mode input

<< AT+AUXCFG=1

>> OK

5.1.26 AT+PRINT - Turn on/off reporting data

Command	AT+PRINT{=Param}
Param	0-off 1-on 。 default: Open report data

5.1.27 AT+MUTEPIO - Set PA_MUTE pin

Command	AT+MUTEPIO{=Param}
Param	PIO(0 ~ 63, default:PIO2)

5.1.28 AT+LINKKEY - Get Link key

Command	AT+LINKKEY=Param
Param	MAC address of target device (12 Bytes ASCII)
Response	+LINKKEY=Param1,Param2
Param1	MAC address of target device (12 Bytes ASCII)
Param2	Device' s link key
Description	Get Paired Device' s link key

5.1.29 AT+RSSI - Get RSSI

Command	AT+RSSI=Param
Param	MAC address of target device (12 Bytes ASCII)
Response	+RSSI=Param1,Param2
Param1	MAC address of target device (12 Bytes ASCII)
Param2	Device' s RSSI
Description	Get Paired Device' s RSSI

5.1.30 AT+MUTEDELAY - Get/Set Mute Delay

Command	AT+MUTEDELAY{=Param}
Param	Mute Delay(0 ~ 60, default:20) Units:50ms

5.1.31 AT+LINEPIO - Get/Set Analog input detect PIO

Command	AT+LINEPIO{=Param}
Param	Analog input detect PIO(0 ~ 63, default:PIO44)

5.1.32 AT+LINKCFG - Turn On/Off Auto Link

Command	AT+LINKCFG{=Param1{,Param2}}
Param1	0:turn off 1:turn on
Param2	0:scan all devices 1: only scan Major Service Class is Rendering or Audio
Description	if set, Module will scan nearby devices for 5.12 seconds, find the one which has best signal strength, then connect to it automatically. Module is not connected, it will always scan nearby devices
Note	BT1035 use AT+LINKCFG, BT806 use AT+AUTOLINK

5.2 HFP Commands

5.2.1 AT+HFPSTAT - Read HFP State

Command	AT+HFPSTAT
Response	+HFPSTAT=Param
Description	Format description reference: +HFPSTAT - HFP State

5.2.2 AT+HFPCONN - Establish HFP Connection

Command	AT+HFPCONN{=Param}
Param	MAC address of target device (12 Bytes ASCII)
Description	Reconnect to last HFP device if parameter not exist

Example:Connect to last HFP device

```
<< AT+HFPCONN
```

```
>> OK
```

Example:Connect to specific HFP device with MAC address

```
<< AT+HFPCONN=1C5CF226D773
```

```
>> OK
```

5.2.3 AT+HFDPISC - Release HFP Connection

Command	AT+HFDPISC
Description	Release current HFP connection with remote device

5.2.4 AT+HFPRING - Simulate Incoming Call

Command	AT+HFPRING{=Param}
Param	Phone number (1~15 Bytes ASCII)
Description	Dial specific number if parameter exist, otherwise redial

Example:Redial

```
<< AT+HFPRING
```

```
>> OK
```

Example:Simulate Incoming Call number “075527924639”

```
<< AT+HFPRING=075527924639
```

```
>> OK
```

5.2.5 AT+HFPANSW - Pick Up Incoming Call

Command	AT+HFPANSW
Description	Pick up an incoming call

5.2.6 AT+HFPCHUP - Reject/Hung up Call

Command	AT+HFPCHUP
Description	Reject incoming call or hung up outgoing/active call

5.2.7 AT+HFPAUDIO - Establish/Release Voice Audio

Command	AT+HFPAUDIO{=Param}
Param	0-Release voice audio connection with remote hfp sink device 1-establish voice audio connection with remote hfp sink device

5.3 A2DP/AVRCP Commands

5.3.1 AT+A2DPSTAT - Read A2DP State

Command	AT+A2DPSTAT
Response	+A2DPSTAT=Param
Description	Format description reference: +A2DPSTAT - A2DP State

5.3.2 AT+A2DPCONN - Establish A2DP Connection

Command	AT+A2DPCONN{=Param}
Param	MAC address of target device (12 Bytes ASCII)
Description	Reconnect to last A2DP device if parameter not exist

5.3.3 AT+A2DPDISC - Release A2DP Connection

Command	AT+A2DPDISC
Description	Release current A2DP connection with remote device

5.3.4 AT+A2DPCFG - Read/Write A2DP Configuration

Command	AT+A2DPCFG{=Param}
Param	A base-10 representation of a bit field, for each bit
BIT[0]	0: Disable AAC Codec 1: Enable AAC Codec
BIT[1]	0: Disable APTX Codec 1: Enable APTX Codec
BIT[2]	0: Disable APTX-LL Codec 1: Enable APTX-LL Codec
BIT[3]	0: Disable APTX-HD Codec 1: Enable APTX-HD Codec
BIT[4]	0: Disable APTX-AD Codec 1: Enable APTX-AD Codec
BIT[5]	0: Disable LDAC Codec 1: Enable LDAC Codec
Description	BT806 does not support

Example:Read current A2DP configuration

```
<< AT+A2DPCFG
```

```
>> +A2DPCFG=0
```

```
>> OK
```

Example::Set A2DP configuration to: Only enable AAC Codec

```
<< AT+A2DPCFG=1
```

```
>> OK
```

5.3.5 AT+A2DPENC - Read A2DP Encoder

Command	AT+A2DPENC
Response	+A2DPENC=Param
Param	BT1035: 1:SBC 2:APTX 3:APTX-HD 4:APTX-LL 5:APTX-AD BT806: 1:SBC 2:FASTSTREAM 3:APTX 4:APTX-LL

5.3.6 AT+A2DPAUDIO - Establish/Release A2DP Audio Connection

Command	AT+A2DPAUDIO{=Param}
Param	0-Release A2DP audio connection with remote a2dp sink device 1-Establish A2DP audio connection with remote a2dp sink device

5.3.7 AT+AVRCPSTAT - Read AVRCP State

Command	AT+AVRCPSTAT
Response	+AVRCPSTAT=Param
Description	Format description reference: +AVRCPSTAT - AVRCP State

5.3.8 AT+AVRCPCONN - Establish AVRCP Connection

Command	AT+AVRCPCONN{=Param}
Param	MAC address of target device (12 Bytes ASCII)
Description	Reconnect to last device if parameter not exist

5.3.9 AT+AVRCPDISC - Release AVRCP Connection

Command	AT+AVRCPDISC
Description	Release current AVRCP connection with remote device

5.4 SPP Commands

5.4.1 AT+SPPSTAT - Read SPP State

Command	AT+SPPSTAT
Response	+SPPSTAT=Param
Description	Format description reference: +SPPSTAT - SPP State

5.4.2 AT+SPPCONN - Establish SPP Connection

Command	AT+SPPCONN{=Param}
Param	MAC address of target device (12 Bytes ASCII)

5.4.3 AT+SPPDISC - Release SPP Connection

Command	AT+SPPDISC
Description	Release current SPP connection with remote device

5.4.4 AT+SPPSEND - Send Data Via SPP

Command	AT+SPPSEND=Param1,Param2
Param1	Payload length (1~492)
Param2	Payload (1~492 Bytes UTF8)
Description	If throughput mode is on, this command is de-active
Note	BT1035 max payload length only support 236

Example: Send data “1234567890” to remote device via SPP

```
<< AT+SPPSEND=10,1234567890
```

```
>> OK
```

5.5 GATT Commands

5.5.1 AT+GATTSTAT - Read GATT State

Command	AT+GATTSTAT
Response	+GATTATAT=Param
Description	Format description reference: +GATTSTAT - GATT State

5.5.2 AT+GATTDISC - Release GATT Connection

Command	AT+GATTDISC
Description	Release current GATT connection with remote device

5.5.3 AT+GATTCONN - Establish GATT Central Connection

Command	AT+GATTCONN=Param1{,Param2,Param3,Param4}
Param1	MAC address of target device & MAC address type (13 Bytes ASCII)
Param2	Service-UUID, Support 16 Bit and 128 Bit(4 Bytes/32 Bytes ASCII)
Param3	Write-UUID, Support 16 Bit and 128 Bit(4 Bytes/32 Bytes ASCII)
Param4	Notify-UUID, Support 16 Bit and 128 Bit(4 Bytes/32 Bytes ASCII)
Description	GATT Client enable is valid

Example: Specified remote device service connections

```
<< AT+GATTCONN=123456ABCDEF0,FFF0,FFF2,FFF1
>> OK
```

5.5.4 AT+GATTSEND - Send Data Via GATT

Command	AT+GATTSEND=Param1,Param2
Param1	Payload length (1~492)
Param2	Payload (1~492 Bytes UTF8)
Description	If throughput mode is on, this command is de-active
Note	BT1035 max payload length only support 236

Example: Send data “1234567890” to remote device via GATT

```
<< AT+GATTSEND=10,1234567890
>> OK
```

Chapter 6

Events Table

6.1 General Events

6.1.1 +SCAN - Scan Result

Format	+SCAN =Param1,Param2,Param3,Param4,Param5,Param6,Param7
Param1	Index
Param2	Device address type (0~2) (0) LE public address (1) LE random address (2) BR/EDR address
Param3	MAC address (12 Bytes ASCII)
Param4	RSSI (-127 ~ -1)
Param5	Size of Param6 if exist
Param6	Device Name for BR/EDR devices or advertising data for LE devices
Param7	Class of device

Example: Scan BR/EDR nearby devices

<< AT+SCAN=1

>> OK

```
>> +SCAN=1,2,DC0D30000057,-42,11,FSC-BT1026C,240408
>> +SCAN=2,2,DC0D30000012,-70,16,FSC-BT1006A-0012,240404
>> +SCAN=3,2,DC0D300011B9,-70,14,222qqqqqqqqqqq,240404
>> +SCAN=E
```

6.1.2 +PAIRED - Pair Result

Format	+PAIRED=Param
Param	MAC address (12 Bytes ASCII) of current pairing device

6.2 HFP Events

6.2.1 +HFPSTAT - HFP State

Format	+HFPSTAT=Param
Param1	(0) Unsupported (1) Standby (2) Connecting (3) Connected (4) Outgoing call (5) Incoming call (6) Active call

6.2.2 +HFPDEV - HFP Remote Device Information

Format	+HFPDEV=Param1{,Param2}
Param1	(12 Bytes ASCII), Remote MAC address of current HFP connection
Param2	(UTF8), Remote device name of current HFP connection

Example: HFP connect success with device

>> +HFPDEV=1C5CF226D774, iPhone

6.2.3 +HFPAUDIO - HFP Voice Audio State

Format	+HFPAUDIO=Param
Param	(0) HFP voice audio disconnected, audio input/output routed to remote device (1) HFP voice audio connected, audio input/output routed to module

6.2.4 +HFPBATT - HFP Remote Device Battery Level

Format	+HFPBATT=Param
Param	(0~9) Battery level of remote device

6.2.5 +HFPSR - HFP Sample rate

Format	+HFPSR=Param
Param	Sample rate: 8000/16000/32000

6.3 A2DP/AVRCP Events

6.3.1 +A2DPSTAT - A2DP State

Format	+A2DPSTAT=Param
Param	(0) Unsupported (1) Standby (2) Connecting (3) Connected (4) Streaming (5) Paused

6.3.2 +A2DPDEV - A2DP Remote Device Information

Format	+A2DPDEV=Param1{,Param2}
Param1	(12 Bytes ASCII), Remote device' s MAC address of current A2DP connection
Param2	(UTF8), Remote device' s name of current A2DP connection

6.3.3 +AVRCPSTAT - AVRCP State

Format	+AVRCPSTAT=Param
Param	(0) Unsupported (1) Standby (2) Connecting (3) Connected

6.3.4 +PLAYSTAT - Media Player State

Format	+PLAYSTAT=Param
Param	(0) Stopped (1) Playing (2) Paused (3) Fast Forwarding (4) Fast Rewinding

6.3.5 +CTPLAY - Track Play

Format	+CTPLAY
Description	Receive play command

6.3.6 +CTPAUSE - Track PAUSE

Format	+CTPAUSE
Description	Receive pause command

6.3.7 +CTSTOP - Track STOP

Format	+CTSTOP
Description	Receive stop command

6.3.8 +CTFWD - Track Forward

Format	+CTSTOP
Description	Receive forward command

6.3.9 +CTBACK - Track Backward

Format	+CTBACK
Description	Receive backward command

6.4 SPP Events

6.4.1 +SPPSTAT - SPP State

Format	+SPPSTAT=Param
Param	(0) Unsupported (1) Standby (2) Connecting (3) Connected

6.4.2 +SPPDATA - SPP Received Incoming Data

Format	+SPPDATA=Param1,Param2
Param1	Payload length
Param2	Payload

Example: Received data “1234567890” from remote device via SPP

<< +SPPDATA=10,1234567890

6.5 GATT Events

6.5.1 +GATTSTAT - GATT State

Format	+GATTSTAT=Param
Param	(0) Unsupported (1) Standby (2) Connecting (3) Connected

6.5.2 +GATTDATA - GATT Received Incoming Data

Format	+SPPDATA=Param1,Param2
Param1	Payload length
Param2	Payload

Example: Received data “1234567890” from remote device via GATT

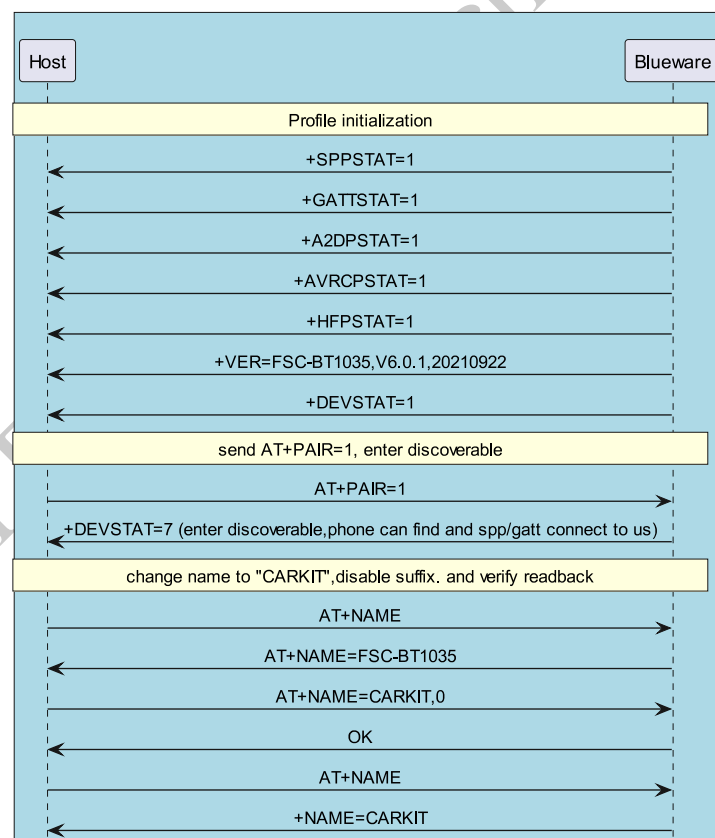
<< +GATTDATA=10,1234567890

Chapter 7

Application scenarios

7.1 profiles initializing and change parameter

The following figure shows Profile initialization and name modification



MCU change device name CARKIT reference code:

```

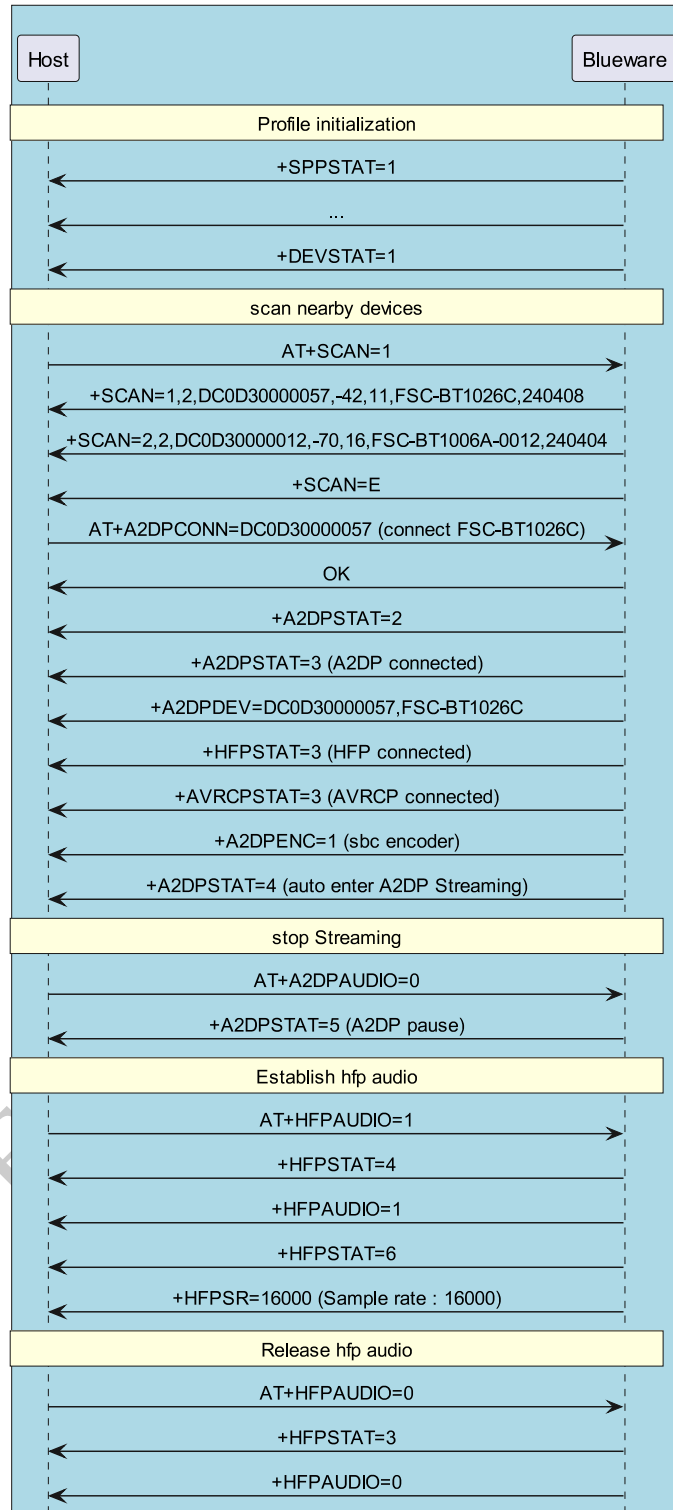
1 void change_name(void)
2 {
3     uart_send("AT+NAME\r\n");
4     if(uart_read("+NAME", name_buf))
5     {
6         if(memcmp(name_buf, "CARKIT", 6))
7         {
8             uart_send("AT+NAME=CARKIT,0\r\n"); //defalut_
9             ↪disable MAC address suffix
10            uart_send("AT+NAME\r\n"); // read bt name
11            if(uart_read("+NAME", name_buf))
12            {
13                if(memcmp(name_buf, "CARKIT", 6))
14                {
15                    //change name fail
16                }
17                else
18                {
19                    //change name success
20                }
21            }
22        }
23    }

```

Note

modify any parameters, it is recommended to query first and then modify the final verification

7.2 Source mode connection



Chapter 8

Appendix

8.1 Download PDF Document

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