



**FEASYCOM**

# **FSC-BT630**

**BT5.0 Mesh Programming User Guide (Node)**

**Version 1.1**

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## Revision History

Version	Date	Notes	Author
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# 1. Introduction

This specification presents design guidelines for software engineers that use FSC-BT630 Mesh series modules for Bluetooth requirements.

## 1.1 Terms

Throughout this specification:

- {} : Content between {...} is optional
- << : Content behind << represents a *COMMAND* sent from Host to Module
- >> : Content behind >> represents a *RESPONSE* sent from Module to Host

## 1.2 Hardware Interface

- GPIO
- PWM
- UART
- SPI Master
- I2C Master/Slave
- Analog Input/Output

## 1.3 Supported Bluetooth Profile

- GATT Server (Generic Attribute Profile)
- Mesh (Mesh Profile)

## 1.4 Command Format

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

- All commands start with "AT", end with <CR><LF>
- <CR> stands for "carriage return", corresponding hex is 0x0D
- <LF> stands for "line feed", corresponding hex is 0x0A
- If command has parameter, parameter keep behind "="
- If command has multiple parameters, parameter must be separated by ","
- If command has response, response start with <CR><LF>, end with <CR><LF>

- Module will always report command's execution result using "OK" for success or "ERROR" for failure

e.g.

1. Read module's BR/EDR local name

```
<< AT+NAME
>> +NAME=Feasycom
>> OK
```
2. Write a baudrate which is not supported

```
<< AT+BAUD=0
>> ERROR
```

## 1.5 Indication Format

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

- All indications start with <CR><LF>, end with <CR><LF>
- If indication has parameter, parameter keep behind "="
- If indication has multiple parameters, parameter must be separated by ","

e.g.

1. Received "1234567890" from mobile phone via SPP profile

```
>> +SPPDATA=10,1234567890
```

## 1.6 Module Default Settings

Network Pin Code	0000
Physical UART Baudrate	115200bps/8/N/1

## 2. Command Table

### 2.1 General Commands

#### 2.1.1 UART Communication Test

<b>Format:</b> AT
<b>Response:</b> OK
<b>Description:</b> Test the UART communication between HOST and Module after power on, baudrate changed, etc.
<b>Example:</b> UART communication test << AT >> OK

#### 2.1.2 Read Firmware Version

<b>Format:</b> AT+VER
<b>Response:</b> +VER=Param Param: Firmware version
<b>Example:</b> Read module's firmware version << AT+VER >> +VER=Mesh-Node,1.0.0 >> OK

#### 2.1.3 Read Mesh Network Address

<b>Format:</b> AT+NDID
<b>Response:</b> +NDID=Param1 Note: param1 is 0 means module does not join in the mesh network.

**Example:** Read Module's Mesh Network address

```
<< AT+NADDR
>> +NADDR=263
>> OK
```

## 2.1.4 Read/Write UART Baudrate

**Format:** AT+BAUD{=Param}

Param: Baudrate (2400/4800/9600/19200/38400/57600/115200/230400/256000/  
460800/512000/921600, default:115200)

**Response:** +BAUD=Param

**Description:** Need Reset Module.

## 2.1.5 Soft Reboot

**Format:** AT+REBOOT

**Description:** Module software reboot.

## 2.1.6 Restore Factory Settings

**Format:** AT+RESTORE

**Description:** Module restore all factory settings then reboot