



Feasycom Module

Programming Example

Version 1.1

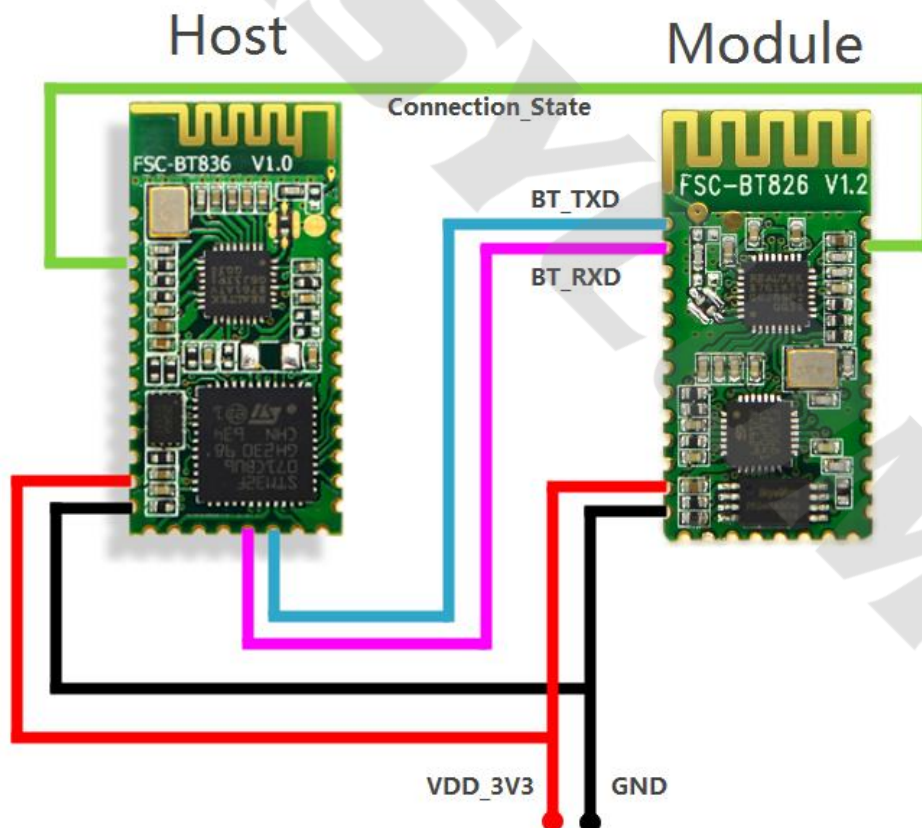
1. Introduction

The *Feasycom Module Programming Example* enables developers to quickly develop applications of the host MCU that wiring with Feasycom Bluetooth module, which could be one of the modules including BT826, BT836, BT906, BT909, etc.

1.1 Main Features

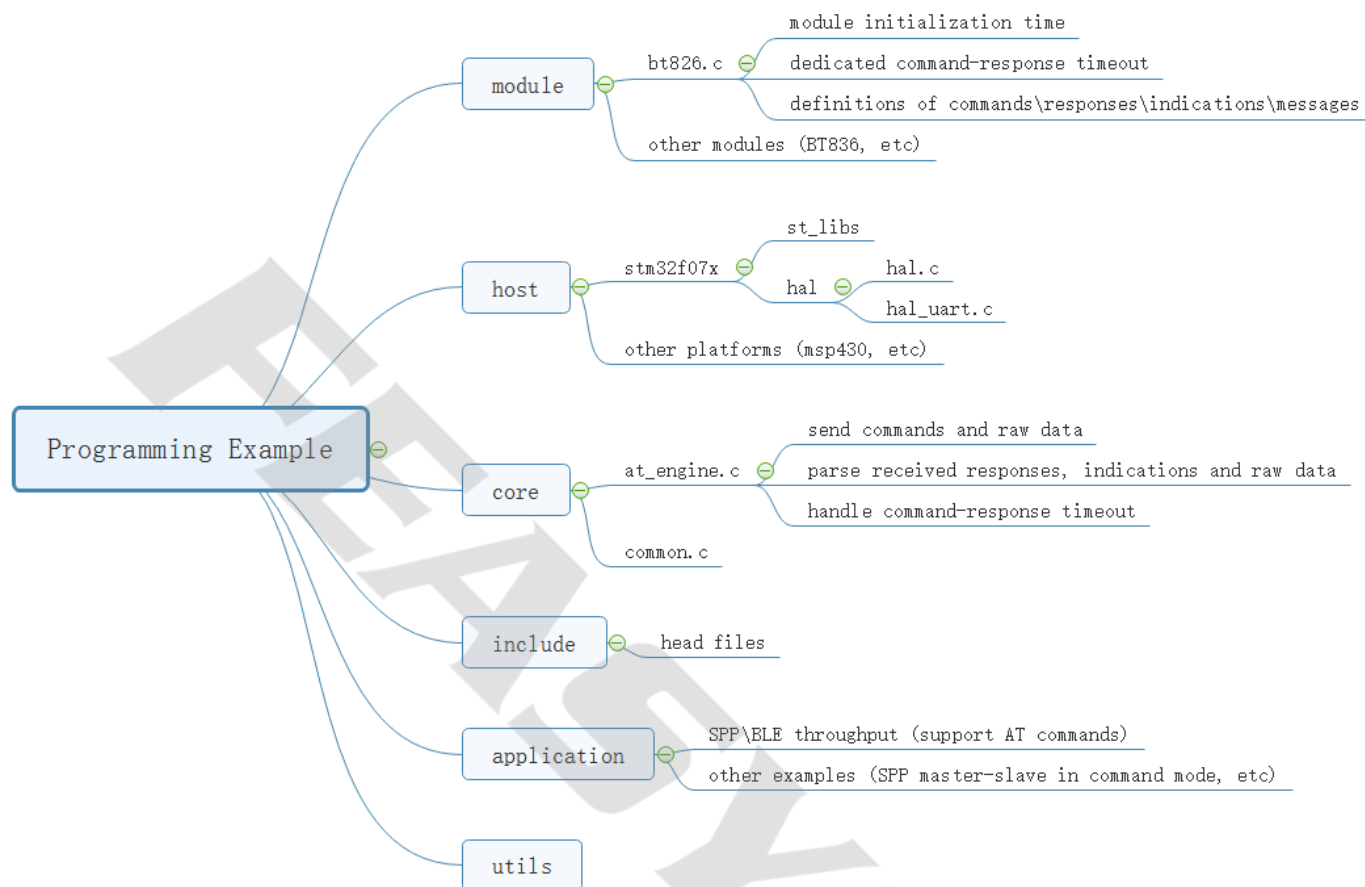
- Supported MCU:
 - Tested and Qualified on STM32F071CBU6
- Very easy to port to other MCUs
- Feasycom's Host AT Engine
 - Improved AT Commands Transmitting with initialization time and timeout handler
 - Flexible Patterns for Send and Receive
- Advanced Data FIFOs
- Smoothly Switching Between Command Mode and Throughput Mode
- Configurable LED for Indication and Host UART for Debug

2. Wiring Diagram



[1]. Since wiring bare modules is not easy for some of the beginners, Feasycom could provide development board with areadymade wiring.

3. Project Overview



4. Main APIs

4.1 Instances

```

/*
 * @instance theApp
 * @discussion
 *
 */
theApp_t theApp
  
```

Main instance of the application

4.2 Methods

```

/*
 * @method bt_message_dispatcher
 * @discussion
 *
 */
void bt_message_dispatcher(const bt_pattern_t *pattern, uint8_t *packet, int size)

/*
 * @method at_cmd_send
 * @discussion
  
```

Responses, indications, messages received from the module.

Send AT commands.

```

*/
int at_cmd_send(bt_pattern_index_t cmd_idx, const uint8_t *params, uint16_t plen)
/*
 * @method tp_send
 * @discussion          Send raw data.
 */
int tp_send(const uint8_t *packet, uint16_t size)

```

5. Porting Tips

- Files listed below need to be updated when porting to a new platform:
 - hal\hal.c
 - hal\hal.h
 - hal\hal_uart.c
 - hal\hal_uart.h
- Replace the MCU related libraries.
- Module specified parameters and patterns are defined in module/MODLUE_NAME/MODLUE_NAME.c. For example, module/bt826/bt826.c defines the parameters and patterns that may only be applicable for BT826.

6. SPP Throughput Test (BR/EDR)

6.1 Operating Procedure

- Prepare FSC-BT826 (Module), FSC-BT836 (Host), Android device.
- Wiring up (Refer to chapter 2), and power the host and module on. Upload the firmware that generated by *Programming Example* to host MCU.
- Install FeasyBlue from Google Play app store, make sure FeasyBlue have permissions for using the locations of Android device, turn on Bluetooth of Android device. Installation link for FeasyBlue app: <https://play.google.com/store/apps/details?id=com.feasycom.feasyblue>
- Open FeasyBlue on Android device, pull down to refresh, tap the specific device (recognize by name, MAC, RSSI) to connect it, if connection established, the status bar on the top of FeasyBlue app will show 'connected', input data into the Send edit box, and click 'Send', then the data in the Send edit box will echo on Receive box.

6.2 Operating Example

