067-1018-鼠标规格书

Version 1.0.1

编制：_____

审核：_____

审定：_____

会签：_____

批准：_____

内部资料：技术

保密级别：保秘

Document modification history

date	Version	Modifications	Modified by
2014-10-14	V1.0.0	Initial setup	Yi Qian
2015-04-28	V1.0.1	Perfect specifications	Yi Qian

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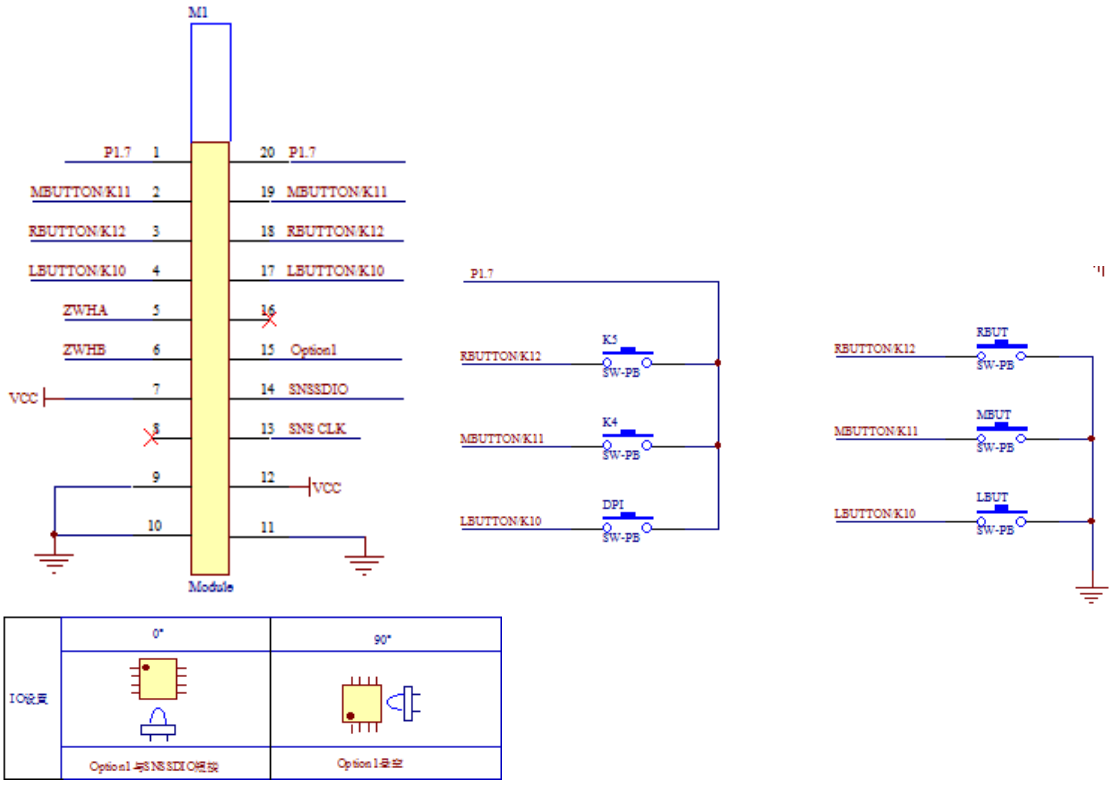
1 Overview

- Support standard 2D 5Key or 3D 5Key mouse;
- Supports multiple sensors: KA8, V108, MX8650A;
- Supports 6 buttons with customizable functions;
- Mouse wheel support
- Supports changing DPI by buttons and upper software;
- Support combination key pairing;
- Support 4 power saving modes;
- Support waking up the PC by pressing the mouse button in PC standby mode;
- Supports 16 frequency hopping points working at 2402MHz~2480MHz;
- Support 32bit pairing ID;
- Support FCC testing;

2 Hardware Description



illustrate:

- The filter capacitor at the power input should be as close to the VDD pin as possible.
- The ground wire and the negative pole of the power filter capacitor should be as close as possible.

3 Functional Description

3.1 Coding method

- Fixed code synchronization word
- Fixed code frequency: 2402, 2482
- The code power receiver can be equipped with
  - Support 16 levels of coding power
  - Binding power range: -46dBm~8dBm
- In the fixed no connection sleep state, press the middle right button for 1s to enter the pairing mode.
- Code pairing stays for 15 seconds
- Exit the code immediately after successful pairing

3.2 Buttons, scroll wheel, sensor

- Scan cycle 4ms
- Support up to 6 buttons
- Support 1 scroll wheel
- Button and wheel function receiver configuration
- XY data uses 12 bits

3.3 Hibernation

- level 1 sleep mode without any operation
  - Supports configuration of the mouse's first-level sleep time
    - Support 8 gears
    - 10s; 30s; 60s; 90s; 120s; 150s; 180s; 240s;
    - Default 60s
  - Supports first-level sleep and enters deep sleep without operation
    - Enter deep sleep mode
    - Support 8 gears
    - No deep sleep, 1min, 2min, 4min, 8min, 15min, 30min, 60min
    - Default 15 minutes
  - Level 1 sleep wake-up operation: buttons, scroll wheel, cursor
- Supports connectionless sleep
  - Sleep for 1s without connection, RF performs a connection detection
  - In no connection mode, the key changes to enter the wake-up synchronization
  - In no connection mode, press the middle right button for 1s to enter the pairing mode.
  - No connection for 2 minutes and enter deep sleep
- Support deep sleep
  - Deep sleep wake-up operation: left button, right button, middle button, fourth button, fifth button, DPI

3.4 Advanced Features

- Support upper software configuration of low power consumption and normal working mode
  - Low power consumption, 8ms to send data once
  - Normal: send once every 4ms
  - The current of the low-power version drops to about 0.7mA
- Support upper software configuration redundant cycle non-sending mode
  - In low power mode, send once every 16ms
  - In normal mode, the transmission time is 8ms.
  - The current drops by about 0.4mA

- No impact on data delay, but increases the probability of packet loss

3.5 RF Characteristics

- Device identification uses 32-bit ID
- Automatically synchronize dongle configuration information
- DPI settings respond in real time
- Support wake up PC

4 FCC Testing

- Support RF FCC testing
- Press the left, right, and middle buttons to power on and enter FCC
- Enter 2402 frequency carrier test by default
- When transmitting, the middle button switches between fixed frequency transmission mode and frequency hopping transmission mode; the left button enters and is fixed in the no-load test mode.
- In the fixed frequency transmission mode, you can switch the transmission frequency point by right clicking, and the frequency points are 2402MHz, 2440MHz, and 2480MHz.
- Carrier transmission and empty carrier transmission duty cycle is fixed
  - Carrier transmission duty cycle: 10%
  - Empty carrier duty cycle: 100%
- Enter FCC test mode and the LED will be on
- After entering FCC mode, power off to exit FCC test mode

5 Production

- Support new version of ARM test tool
- Supports attenuation receiver testing