

## NCTS-WM23

#### **Prodution specification**

This mouse is a high performance, low power, CMOS process optical mouse sensor., As a non-mechanical motion estimation engine for implementing a computer wireless mouse.

- 1.2 Product feature:
- 1.2.1 optical guidance technology
- 1.2.2 Ergonomic design, feel comfortable, reduce hand fatigue
- 1.2.3 Highest DPI: 1600DPI 1.2.4 Polling rate: 250Hz<sub>o</sub>

### Mechanical specification

- 2.1 Structural dimensions and weight
- 2.1.1 Mouse size :110 \* 62\*22mm
- 2.1.2 Mouse weight: about 68g ± 0.2g
- 2.2 Specifications of the main mechanism components
- 2.2.The main plastic material

Key: #PVC material

Bottom cover: #PVC material Inner base: #ABS material

Roller: Metal roller

- 2.3 Microswitches and encoders
- 2.3.1The operation force of the left and right keys:  $70gf \pm 15gf$ ,

The difference of the operation force of the left and right keys:15gf

- 2.3.2 The operating force of the roller downward pressure: 70 gf  $\pm$  15gf
- 2.3.3 Roller rolling operation force: 25  $\pm$  5gf

### Electrical specification

- 3.2 Tracking system: Red light
- 3.3 Working voltage :DC 5V
- 3.4 Rated current: <20mA
- 3.5 Photoelectric component performance
- 3.6 SENSOR: 8650
- 3.7 Key Function
- 3.7.1 Left Button 1: The standard function of the left mouse button.
- 3.7.2 Right- button 2: Standard right function of the mouse.
- 3.7.3 Middle Button 3: Standard function of the middle button of the mouse;







- NO. MODE
- 1 LEFT BUTTON2 MIDDLE BUTTON
- 3 RIGHT BUTTON
- 3.8 Coding Mode:
- 3.8.1 Code alignment is not required in fixed connectionless hibernation
- 3.8.2 Bluetooth pairs reside for 3 to 5S
- 3.8.3 Exit the Bluetooth code matching immediately after the Bluetooth code matching succeeds



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# 2.4G+BT Wireless Mouse

# Technical Specifications Model: NCTS-WM23

#### Ambient temperature and reliability test specifications

- 4.1 Reliability test of ambient temperature
- 4.1.1 Temperature and humidity operation test:
- 4.1.2 High temperature and humidity operating test: 65+/-2°C RH95%+/-5%,48H
- 4.1.2 Low temperature operation test: -40+/-2, 48H
- 4.1.3 Cyclic Temperature and Humidity storage test (the following 10 cycles)
- -20+/-2°C, 2H; 25+/-2°C, RH50%+/-5%,2H;
- 65+/-2°C,95%+/-5%,2H; 25+/-2°C, RH50%+/-5%,2H;
- 4.2 Other reliability tests
- 4.2.1 Basic functions testing
- 4.2.2 Use mouse basic test software to test its electrical basic function
- 4.2.3 Key switch life test:

Left and right keys: 5 million times

Middle key: 2 million times

DPI:3 million times

- 4.2.4 Code switch life test: 200,000 times
- 4.2.5  $\,\,$  Focal length test of occupational hazard observation and notification system: N/Amm  $\,$
- 4.2.6 Left and right gyro elasticity test:44-74g
- 4.2.7 Roller torque test :10g-40g
- 4.2.8 Seam test: the seam between the top cover, the bottom cover and the top cover is 0.2 $\pm$  0.1mm, and the height key is  $\leq$ 0.15
- 4.2.9 Segment difference test: down-segment difference  $\leq$ 0.1mm, inverse segment difference  $\leq$ 0.15mm:10q-40q
- $4.2.10\,\mathrm{Draw}$  a circle test: can draw a circle on ordinary black paper and white paper as required
- 4.2.11 High and low voltage test: 4.50V, 5.25V, can be used normally
- 4.2.12 Black paper test: It can be used normally on ordinary black printing paper
- 4.2.13 Mouse pad testing; It can be used normally on ordinary white, black and blue mouse pads
- 4.2.14 Anti-interference test: multiple mice working in the same place at the same time can be used normally.
- 4.2.15 Light resistance test:500W
- 4.2.16 Roller centered: the line of sight is perpendicular to it, rolling at a uniform speed, the roller can be  $\pm0.2$ MM without eccentricity
- 4.2.17 Other reliability tests: Refer to the QE test requirements
- 4.3 Drop test
- 4.3.1 Bare machine: height 76cm, down 6 sides, 4 angles
- 4.3.2 Gift box fall: height 76cm, fall 6 sides, 4 corners, impact surface is steel plate
- 4.3.3 Outer box: 1 corner, 3 edges, 6 sides

GW	Drop Height	shock surface
0-20kg	76cm	steel plate
20-40kg	60cm	steel plate

- 4.3.3 Mouse noise test: Distance 420mm+/-10mm, ≦50db
- 4.3.4 Chemical resistance test: N/A
- 4.3.5 Mouse common material reliability test: Refer to common material reliability test items
- 4.3.6 Electrical safety certification testing
- 4.3.6.1This product is ESD tested
- 4.3.6.2 Air discharge +/-8KV, 10 times each;
- 4.3.6.3 Contact discharge +/-4KV, 10 times each;
- 4.3.7 EMI electromagnetic interference: N/A

#### Electromagnetic interference

- 5.1 computer system requirements:
- 5.1.1 Windows 2000, WIN XP, WIN7, WIN8, WIN10 operating systems
- 5.1.2 Equipped with USB 1.1 or above version port, Bluetooth 3.0/5.2 version port.





