

## **Dongguan Togran Electronics Technology Co.,LTD**

File Name: Keyboard: Scissor Keyboard

Dongle: Scissor Keyboard receiver

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| <b>Revision History</b> |
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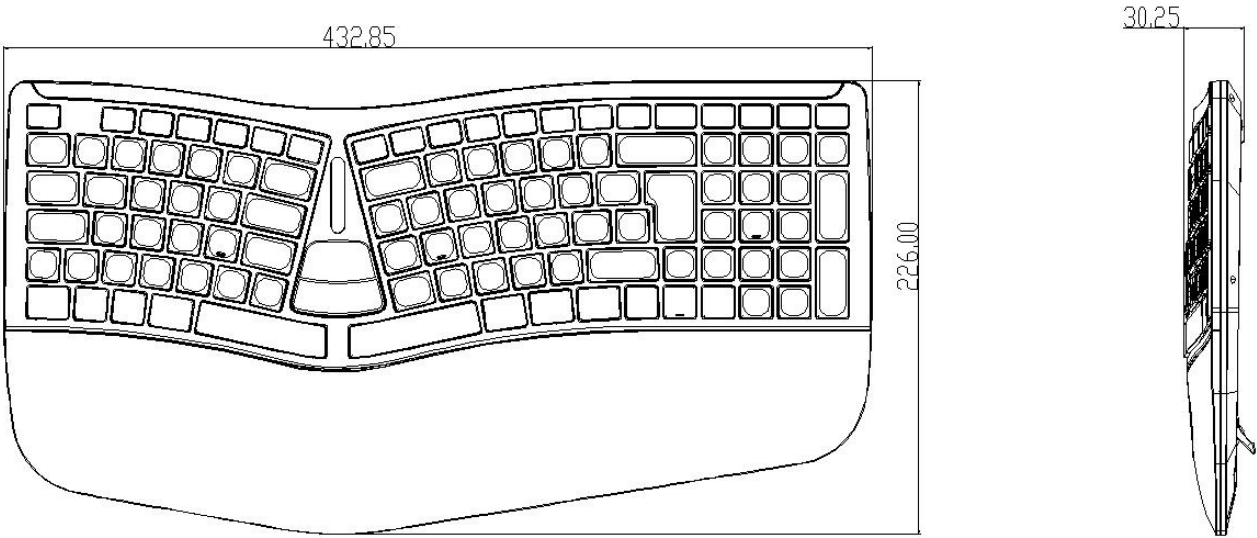


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| Dongguan Togran Electronics Technology CO.,Ltd | DN: QW172 | Version: A0 |
|  | Page      | 2 / 8       |

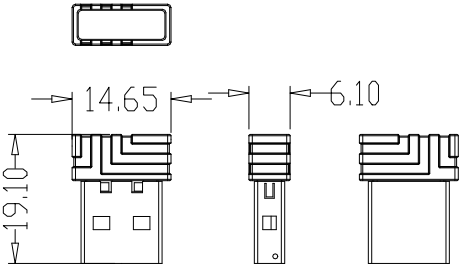
# 1 Introduction

This document contains a functional and performance specification of the Wireless slim Keyboard. BT5.0 compatible with Win XP, Win Vista, Win7, Win8, Win8.1, Win10, Win11 and other operating systems.

Transmitter:



Receiver



# 2 Physical Specification

## ● Dimension

Transmitter:

|         |                |
|---------|----------------|
| Height: | 30.25 ± 0.5mm  |
| Length: | 432.85 ± 0.5mm |
| Width:  | 226.0 ± 0.5mm  |

Receiver:

|         |              |
|---------|--------------|
| Height: | 6.0 ± 0.5mm  |
| Length: | 19.0 ± 0.5mm |
| Width:  | 15.0 ± 0.5mm |

## ● Weight: approx. 789.5 ± 50g.

# 3 Mechanical Characteristics

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|--|-----------|-------------|
| Dongguan Togran Electronics Technology CO.,Ltd | DN: QW172 | Version: A0 |
|  | Page      | 3 / 8       |

### 3.1 Keyboard color

- Top case togran black (According to customer requirements)
- Bottom case togran black (According to customer requirements)
- Kepcap1# togran black(According to customer requirements)
- Kepcap2# togran gray (According to customer requirements)
- LED lens transparency clear
- Legend printing Pantone white/305C for Fn+ key
- LED indicator icon Pantone 403C

### 3.2 Key switch

- Operating force of Keys:  $65 \pm 15$  gf
- Total travel  $1.5 \pm 0.3$  mm
- Click ratio >40%
- Bounce 5ms

### 3.3 Keyboard material

- Top case ABS or HIPS
- Bottom case ABS or HIPS
- Kepcap1# ABS
- Kepcap2# ABS
- LED lens transparency PC
- Mid-board transparency PC
- Scissors POM
- Rubber dome Silicone
- Foot (turn) ABS+TPE
- Foot Silicone

## 4 Radio Characteristics:

### 4.1 Transmitter

- Rating: 5V=500mA (with DC 3.7V, 500mAh battery inside)
- Frequency: BLE: 2.402~2.48 GHz, 2.4G: 2.405~2.46 GHz.
- Working channel: BLE: 40channel, 2.4G: : 5channel
- Power consume: Key working <10mA ; (Suspend I) <0.1mA ; (Suspend II) <0.02mA
- Working distance: >10Metre

### 4.2 Receiver

- System interface: USB port of PC.
- Supply voltage:  $4.75V \pm 10\%$
- Working Power consumption: 30 mA (Max)
- Frequency: 2.405~2.46 GHz.
- Working channel : 5 channel

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|--|-----------|-------------|
| Dongguan Togran Electronics Technology CO.,Ltd | DN: QW172 | Version: A0 |
|  | Page      | 4 / 8       |

## 5 Important Components

- Transmitter : IC: EP2T42F40E (TLSR8373C)
- Receiver : IC: TLSR8373A

## 6 Environment

### 6.1 Operating Temperature and Humidity

Temperature: -5° C to 45° C

Humidity: 85% RH or less

### 6.2 Storage Temperature and Humidity

Temperature: -15 ° C to 65° C

Humidity: 85% RH or less

## 7 Reliability Specifications

### 7.1 Key Life Test

Switching speed: 30 cycles/min.

Operating force of Key: 65gf

Operating cycles: 5,000,000 cycles

Judging Criteria : No functional defect should be found for the switch actuation.

### 7.2 High Temperature Test

Temperature: 60±2°C

Storage time: 96 hours.

After this test the mouse shall be left in room temperature for 1 hour.

Judging Criteria : No functional defect should be found.

### 7.3 Low Temperature Test

Temperature: -15±2°C

Storage time: 96 hours

After this test the mouse shall be left in room temperature for 1 hour.

Judging Criteria : No functional defect should be found.

### 7.4 Moisture Test

Temperature: 40±2°C

Humidity: 90~95% R.H.

Storage time: 96 hours.

After this test the mouse shall be left in room temperature for 1 hour.

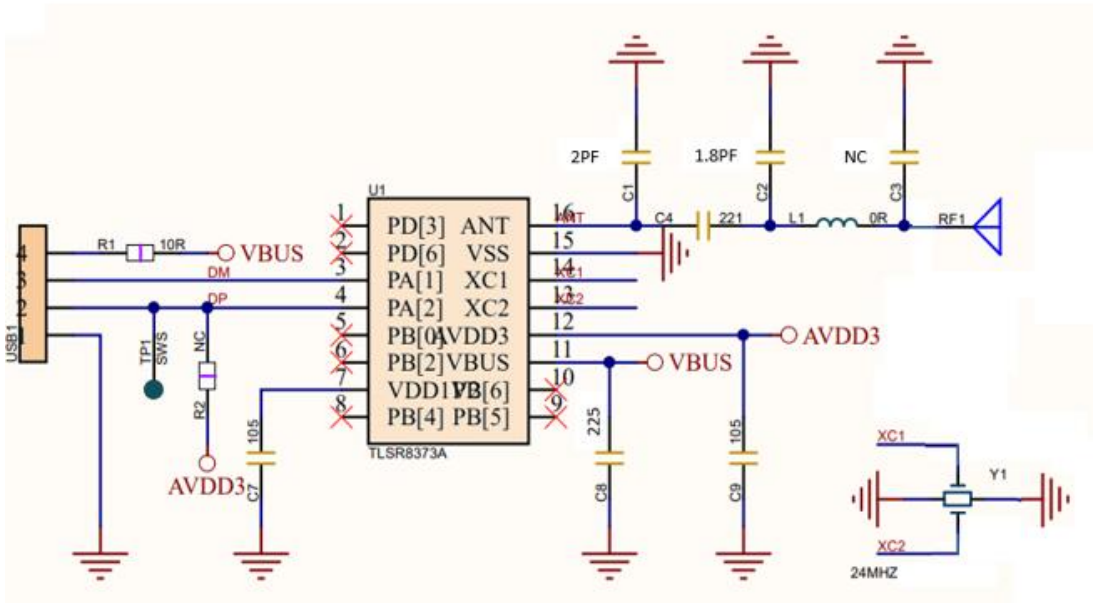
Judging Criteria : No functional defect should be found.

### 7.5 Heat Cycle Test

Temperature: -15±2°C for 1 hour and then 60±2°C for 1 hour

Storage time: 5 cycles.





10 Application Matrix.

|        | R0 P20          | R1 P21    | R2 P22         | R3 P23     | R4 P24         | R5 P25      | R6 P26   | R7 P27       |
|--------|-----------------|-----------|----------------|------------|----------------|-------------|----------|--------------|
| C0 P15 | Z               | 1 (!)     | POWER          | Prev Track | Alt-R<br>WIN-R | Next Track  | Sleep    | WAKE UP      |
| C1 P35 | C               | 3 (#)     | €              | Volume+    | Volume-        | WWW refresh | Ctrl-R   | WWW favorite |
| C2 P36 | V               | 5%        | F5 (PreTrack)  | WWW back   | Alt-L          | WWW Forward | WWW STOP | WWW search   |
| C3 P37 | ENTER           | 6 ^       | F6 (NextTrack) |            |                | Shift-L     | ¥        | G            |
| C4 P00 | F               | F3 (VOL+) | PAUSE          | M          |                |             | Ctrl-L   | MAIL         |
| C5 P01 | K56             | 4 (\$)    | SPACE          | Win-L      | WWW Home       | 131         | 132      | 133<br>ALT_R |
| C6 P02 | K14             | F4 (MUTE) | A              | Calculator |                | K150        | K151     | WIN_R        |
| C7 P03 | F7 (Play/Pause) | ` (~)     | S              | Y          | P              | 7 (&)       | B        |              |
| C8 P11 | F8 (Stop)       | - _       | Tab            | U          | [ {            | 8 *         | H        | N            |
| C9     | F9              | = +       | D              | I          | ] }            | 9 (         | " "      | FN           |





|            |                         |                 |      |                |       |         |               |               |
|------------|-------------------------|-----------------|------|----------------|-------|---------|---------------|---------------|
| P14        | (www Web)               |                 |      |                |       |         |               |               |
| C10<br>P12 | F11<br>(My<br>Computer) | F1<br>( Media ) | W    | PRINT          | HOME  | DEL     | Insert        | . (>)         |
| C11<br>P10 | F12<br>(Favorite)       | L               | E    | SCROLL<br>LOCK | END   | Page Up | Page<br>Down  | /?            |
| C12<br>P13 | F10<br>(Mail)           | F2<br>(VOL-)    | Q    | O              | \     | O())    | K42           | , (<)         |
| C13<br>P07 | APP                     | ;:              | ↑    | NUM LOCK       | 7 (K) | 4 (K)   | 1 (K)         | K45           |
| C14<br>P06 | ESC                     | K               | ←    | / (K)          | 8 (K) | 5 (K)   | 2 (K)         | 0 (K)         |
| C15<br>P05 | R                       | J               | ↓    | * (K)          | 9 (K) | 6 (K)   | 3 (K)         | . (K)         |
| C16<br>P04 | T                       | Back<br>Spack   | →    | _ (K)          | + (K) | K107    | Enter (K)     | CAPS<br>LOCK  |
| C17<br>P16 | X                       | 2 (@)           | MyPC | Play/<br>Pause | Media | Shift-R | Media<br>Mute | Media<br>Stop |

**11 Functional Specification.**



**1. LED Indicator:**



| Item | Indicator      | Icon  | Color     | Definition                          |
|------|----------------|---|-----------|-------------------------------------|
| 1    | Charging       |  | Red       | Red always on when charging.        |
|      |                |   | Green     | Green always on when fully charged. |
| 2    | BT1            |  | Green     | Green indicator is on.              |
| 3    | Caps lock/BT2  |  | Green     | Green indicator is on.              |
| 4    | ScrLock/BT CH3 |  | Green     | Green indicator is on.              |
|      | LVD            |   | Flash red | 2.4G Pairing/Low Battery            |

## 2. Multimedia function

**Fn**+Q: Switch to Android, **Fn**+W: Switch to Windows, **Fn**+E: Switch to Mac.

**FN**+ ↑ changer DPI

**FN**+ESC:FN Lock, **FN**+F1: Screen brightness decrease, **FN**+F2: Screen brightness increase, **FN**+F3: Windows Selection, **FN**+F4:All active tasks, **FN**+F5:Back to Desktop, **FN**+F6: Search, **FN**+F7: Pre track, **FN**+F8: Play/Pause, **FN**+F9: Next track, **FN**+F10: mute, **FN**+F11: volume-, **FN**+F12: volume+,

## 3. Bluetooth forced pairing instructions

Press and hold **FN**+BT1/ BT2/ BT3 for more than 3 seconds to enter the pairing state,, and the green LED flashes quickly (the pairing time is 2minutes) ,Search BTSLKEYCB, click to enter the pairing , LED will be on for 2 seconds and then turn off , means that BLE pairing is successful.

## 4. 2.4G forced pairing instructions

Press **FN**+2.4G to Switch to 2.4G mode, and then Press and hold **FN**+2.4G for more than 3 seconds to enter the pairing state, and the red LED flashes quickly(the pairing time is 20 seconds), insert USB Dongle within 20 seconds , let keyboard close to the Dongle, LED will be on for 2 seconds and then turn off , means that 2.4G pairing is successful.

## FCC STATEMENT:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:  
This device may not cause harmful interference, and This device must accept any interference received, including

|  |           |             |
|--|-----------|-------------|
| Dongguan Togran Electronics Technology CO.,Ltd | DN: QW172 | Version: A0 |
|  | Page      | 9 / 8       |

interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF warning statement:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.