Manuals+

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TOGRAN

Dongguan Togran Electronics Technology Co.,LTD
File Name Scissor Keyboard
Department R&D Edit

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Revision History

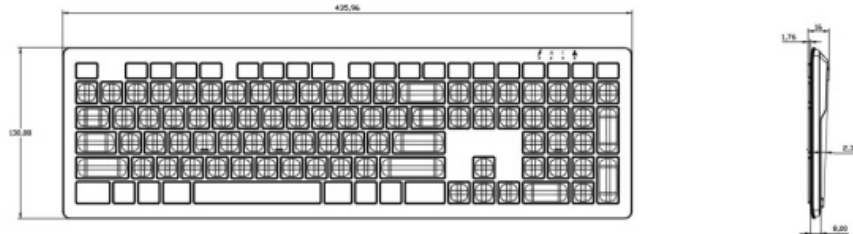| Date	version	page	Revised page	Description			
2024-11-05	A0			Start of the document, first release			
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Introduction

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:

Physical Specification

- Dimension

  Transmitter

  Height: 16.0±0.5mm

  Length: 436.0±0.5mm

  Width: 130.0±0.5mm
- Weight: approx. 540± 50g.

Mechanical Characteristics

3.1 Keyboard color

- Top case to gran black (According to customer requirements)
- Bottom case to gran black (According to customer requirements)
- Kepcap1# to gran black(According to customer requirements)
- Kepcap2# to gran 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±15 gf

- Tolal travel 1.5±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

Radio Characteristics:

4.1 Transmitter

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

Important Components

- Transmitter : IC: EP2T42F40E (TLSR8373C)

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

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.

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

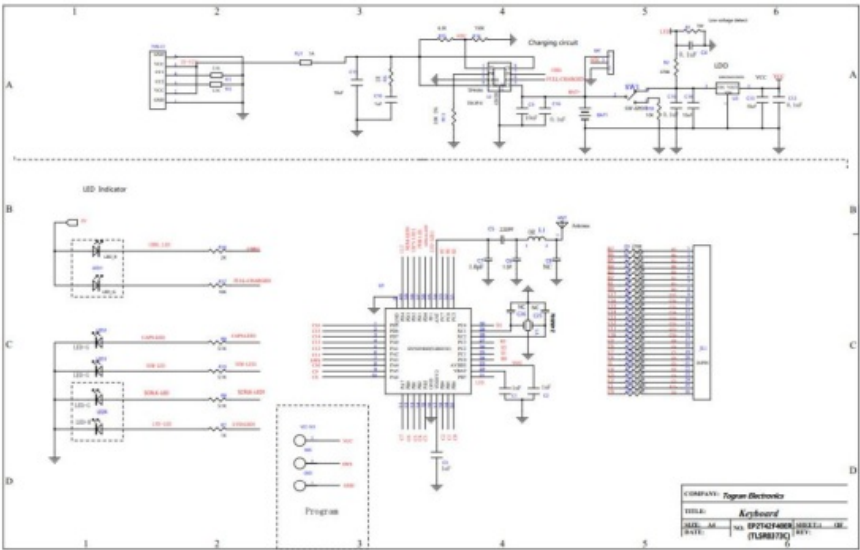Judging Criteria: No functional defect should be found.

Agency Certifications

FCC CLASS B PART15
CE

Schematic

Transmitter:

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~~ ~~WIN-R~~	Next Track	Sleep	WAKE UP
C1 P35	C	3(#)	€	Volume+	Volume-	WWW refresh	Ctrl-R	WWW favorite

C2P 36	V	5%	F5 (Pre Track)	WWW back	Alt-L	WWW Forward	WWW STOP	WWW search
C3P 37	ENTER	6^	F6 (Next Track)			Shift-L		G
C4P 00	F	F3 (VOL+)	PAUSE	M			Ctrl-L	MAIL
C5P 01	K56	4($)	SPACE	Win-L	WWW Home	131	132	~~133~~ ALT_R
C6	K14	F4	A	Calculator		K150	K151	WIN_R

P02		(MUTE)						
C7P 03	F7 (Play/Pause)	`(~)	S	Y	P	7(&)	B	
C8P 11	F8 (Stop)	-_	Tab	U	[{	8*	H	N

C 9 P 14	F9 (www Web)	=+	D	I	]}	9(	" "	FN
C 10 P 12	F11 (My Computer)	F1 (Media)	W	PRINT	HOME	DEL	Insert	.(>)
C 11 P 10	F12 (Favorite)	L	E	SCROLL LOCK	END	Page Up	Page Down	/?
C 12 P 13	F10 (Mail)	F2 (VOL-)	Q	O	|	0())	K42	,(<)
C 13 P 07	APP	;:	↑	NUM LOCK	7(K)	4(K)	1(K)	K45
C 14 P 06	ESC	K	←	/(K)	8(K)	5(K)	2(K)	0(K)
C 15 P 05	R	J	↓	*(K)	9(K)	6(K)	3(K)	.(K)

C 16 P 04	T		Back S pack	→	_(K)	+(K)	K107	Enter(K)	CAPS LOCK
C 17 P 16	X		2(@)	MyPC	Play/ Pa use	Media	Shift- R	Media Mute	Media Stop

Functional Specification.

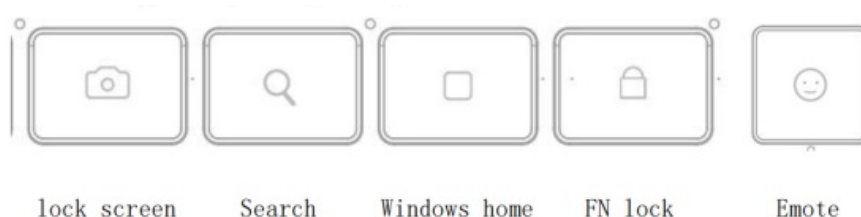| Item	Indicator	Icon	Color	Definition
1	Charging	⚡	Red	Red always on when charging.
			Green	Green always on when fully charged.
2	BT1	B1 ○	Green	Green indicator is on.
3	Caps lock/BT2	Ⓐ B2 ○	Green	Green indicator is on.
	FN lock/ BT3		Green	Green indicator is on.
4		🔒Fn B3 ○		

	LVD		Flash red	The indicator flashes red slowly when the battery is low.

2. Multimedia function

FN+ESC:FN Lock FN+F1: Screen brightness decrease FN+F2: Screen brightness increase FN+F3: display all active windows FN+F4:copy FN+F5:paste FN+F6: Pre track FN+F7: Play/Pause FN+F8: Next track FN+F9: mute FN+F10: volume- FN+F11: volume+ FN+F12 Pop-up Keyboard F13:Force out F14 Print F15 save

3. Hotkey

lock screen   Search   Windows home   FN lock   Emote

4. 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.

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 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.

Documents / Resources

	[Togran QW172 Scissor Keyboard](#) [[pdf](#)] Owner's Manual TK402B, 2AGLG-TK402B, QW172 Scissor Keyboard, QW172, Scissor Keyboard, Keyboard

References

- [User Manual](#)

🏷 2AGLG-TK402B , Keyboard, QW172, QW172 Scissor Keyboard, Scissor Keyboard, TK402B,
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