

2. 4G Wireless Membrane Keyboard User Manual (v7.0)

● Product Overview

1. Compatible with USB 1.1/2.0 specifications, assists with USB-IF and WHQL compliance
2. High-quality BK2483, 16-channel adaptive frequency hopping for stable, low-power, interference-resistant, omni-directional operation
3. Ultra-low-power design (operating = 0.7 mA, sleep = 3 uA)
4. Supports an 8*18 matrix and multiple language layouts
5. Supports 18 standard multimedia functions
6. Supports CAPS LOCK and NUM LOCK indicator LEDs, with LED status synchronized with the host
7. Built-in maintenance mode for easy detection and repair of defective units
8. Supports wake-up from computer sleep and from its own sleep
9. Smart multi-level power-saving design
10. Supports Mouse/Keyboard combo mode

● Pairing Instructions

Method 1: Pairing via key combination

Press and hold "ESC" + "+/= " for 1 second. The keyboard enters pairing mode (the low-battery indicator stays on). Insert the receiver within 20 seconds. If pairing succeeds, the LED turns off immediately; if pairing fails, the keyboard exits pairing mode after 20 seconds and the LED turns off.

Method 2: Pairing via the pairing key

Press the pairing key. The keyboard enters pairing mode (the low-battery indicator stays on). Insert the receiver within 20 seconds. If pairing succeeds, the LED turns off immediately; if pairing fails, the keyboard exits pairing mode after 20 seconds and the LED turns off.

Method 3: Pairing via software

Launch the pairing software and insert the receiver into a USB port; pairing mode is entered automatically. Within 20 seconds, press the keyboard pairing key or press and hold "ESC" + "+/= " for 1 second to pair. If pairing succeeds, the software displays <Keyboard pairing successful>; otherwise, it exits pairing mode after 20 seconds.

● Function Description

I. Low-Battery LED: Indicates the low-battery and pairing status; it can also indicate fault points on defective units during repair

1. Pairing status indication — The low-battery LED stays on while the keyboard is in pairing mode and turns off when pairing succeeds
2. Low-battery status indication — The low-battery LED blinks when the battery voltage is low and turns off when the voltage is normal

3. Abnormal function status indication:

- 1) Normal case-----on power-up, the indicator lights up briefly and then turns off
- 2) Indicator does not light up-----MCU not working
- 3) Indicator stays on-----RF not working

** Numlock + Caps: LED status synchronized with the host

When Numlock/Caps is activated, the LED lights up and stays on for 5 seconds. If a key is pressed within 5 seconds, the timer resets to 5 seconds (the LED turns off 5 seconds after the key is released). After the LED turns off, pressing a key lights it up again for 5 seconds

Note: When the low-battery threshold is reached, the low-battery indicator blinks 5 times. If a key is pressed, the timer resets to 5 seconds, until the battery is fully drained

● Working Current

Overall power consumption (with 1 batteries at 1 . 5 V)

Operating current (key pressed)	0.7mA
Static current (key released)	3uA

● Keyboard Matrix Application Notes

Full-size Keyboard

1. The 104/107-key full-size keyboard matrix is compatible with EMC83053 (ELAN); key layout is shown in "Keyboard Matrix" on the following page

2. Fn + F1-F12 multimedia functions

Hold Fn and press F1-F12; they then act as multimedia function keys

Default	Hot key	Default	Hot key	Default	Hot key	Default	Hot key
F1	Media	F4	Mute	F7	Play/Pause	F10	E-mail
F2	Volume-	F5	PreTrack	F8	CD Stop	F11	My computer
F3	Volume+	F6	NextTrack	F9	web home	F12	wwwFavorite

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Keyboard Matrix

	R0	R1	R2	R3	R4	R5	R6	R7
C0	Pause	Power	usb dongle	Sleep	Ctrl-R	Wake up	Ctrl-L	F5 (pre track)
C1	Q	Tab	A	Esc	Z	N-chg	`(~)	1 (!)
C2	W	Caps	S	K45	X	Chg	F1 (media)	2 (@)
C3	E	F3 (vol+)	D	F4 (mute)	C	ROMA	F2 (vol-)	3 (#)
C4	R	T	F	G	V	B	5 (%)	4 (\$)
C5	U (4)	Y	J (1)	H	M (	N	6 (^)	7 (& (7)
C6	I (5)	] (})	K (2)	F6 (next track)	, (< , (>)	K56	+ ' (=)	8 (* (8)
C7	(6) P	F7 (play/pau	(3) ; (:)	type-c dongle	(.)	App / (?)	F8 (CD stop)	(9) O
C8	(-)	[(])	(+)	' (")	K42	(/)	_ (-)	(*)
C9	Scroll	Connect button	Fn	Alt-L		Alt-R	Connect button	Print
C10	K14	Back	\ ()	F11 (computer)	Enter	F12 (www fav)	F9 (web home)	F10 (mail)
C11	7 (K)	4 (	1 (K)	Space	Num	↓	Del	Power
C12	8 (K)	5 (	2 (K)	O (K)	/ (K)	→	Ins	Sleep
C13	9 (K)	6 (	3 (K)	. (K)	* (	- (K)	Page Up	Page down
C14	+ (K)	K107	Enter (K)	↑	Play/Pause	←	Home	End
C15	Wake up	Shift_L	Shift-R	Vo lume-	Vo lume+	Next Track	Prev Track	Media
C16	Mail	WIN-L	www Forward	www Stop	www Back	www Refrech	Mute	www Searc
C17	K150 (KC-L)	www Favourite	WIN-R	My Computer	Stop	Calculator	Web/Home	K151 (KC-R)

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● RF Product Technical Specifications (for FCC, CE, KCC)

1. Product Name : 2.4G_Wireless_Membrane_Keyboard
2. Rated Voltage and Current: DC 1 . 5 V,5mA
3. Frequency hopping method: FHSS
4. Frequency Band : 2.4GHz_ISM_band
5. Carrier Frequency : 2403.65~2479.65MH z
6. Channel Spacing: 2 . 5 MHz
7. RF Output Power (ERP OR EIRP) : -1dBm
8. Modulation Type : GFSK
9. Duty Cycle : <10%
11. Mode of operation (duplex , simplex): duplex
12. Bit Rate of Transmission : 2Mbps
13. Antenna Type: PCB Antenna
14. Antenna gain: 2.03dBi
15. Operating Temperature Range: -20℃ ~ 55℃
16. Channel Bandwidth : 2MHz
17. Preset Target Market: EUROPE
18. Number of Channel: 16

1. Channel List:

Channel	1	2	3	4	5	6	7	8
Frequency (MHz)	2403.65	2426.65	2441 .65	2463 .65	2407.65	2422.65	2445.65	2466.65
Channel	9	10	11	12	13	14	15	16
Frequency (MHz)	2414.65	2436.65	2459.65	2473.65	2419.65	2439.65	2453.65	2479.65

FCC Caution:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any 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.

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