KB-911 Keyboard Specification

1.Preface:

The functionality and performance requirements related to keyboard are defined in this specification.

2.Product Version & Function:

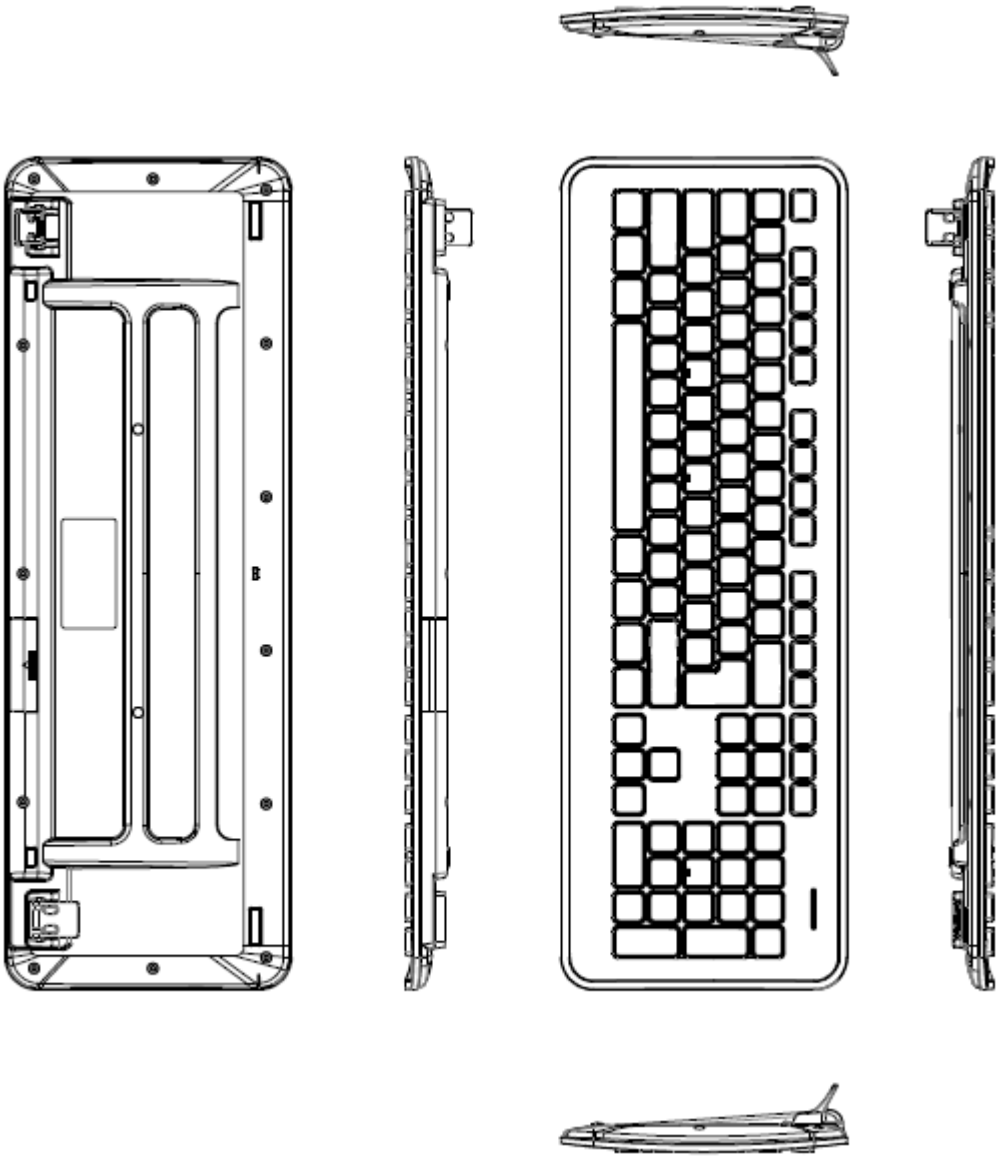
2.1 Membrane keyboard

2.2 Multimedia hot keys

2.3 USB, /PS2, or U+P Interface.

3.Physical Characteristics and Configuration:

Keyboard Dimension: 454.6mm(L)*156.4mm(W)*24mm(H)



3.1 Material Keyboard ABS(Top case) HIPS(Bottom case)

3.2 Multimedia button: Can have 12 Combine Multimedia keys .

3.3 Language English

3.4 Color Keyboard To be Defined by ID

3.5 Button 103/104/105/106/108/US/UK/KR/BR/J

3.6 Weight Keyboard 540g±10

3.7 Mechanical Performance

3.8.1 Keyboard Travel Force

	Standard key	**F key**
Total Travel	3.2± 0.4 mm	1.3±0.05mm
Peak Point	0.7 ± 0.2 mm	0.6 ± 0.2 mm
Peak Force	45-60 grams	120 ± 20 grams
Make Point	2.1 ± 0.3 mm	1.3 ± 0.2 mm
Return Force	18 ± 5 grams min	25 ± 5 grams min

3.8.2 Standard Key switch Travel Force Curve

Standard KEY

# 1 #	g	mm
FP	56.50	0.91
FC	20.90	2.27
CR	35.60	63.0%
FM	18.30	1.00
FR	15.30	2.34

# 2 #	g	mm
FP	58.10	0.95
FC	22.40	2.25
CR	35.70	61.4%
FM	48.20	0.99
FR	16.15	2.28

# 3 #	g	mm
FP	59.10	0.97
FC	22.10	2.30
CR	37.00	62.6%
FM	50.10	1.01
FR	15.60	2.33

# 4 #	g	mm
FP	56.80	0.92
FC	19.60	2.27
CR	37.20	65.5%
FM	47.20	0.92
FR	16.30	2.29

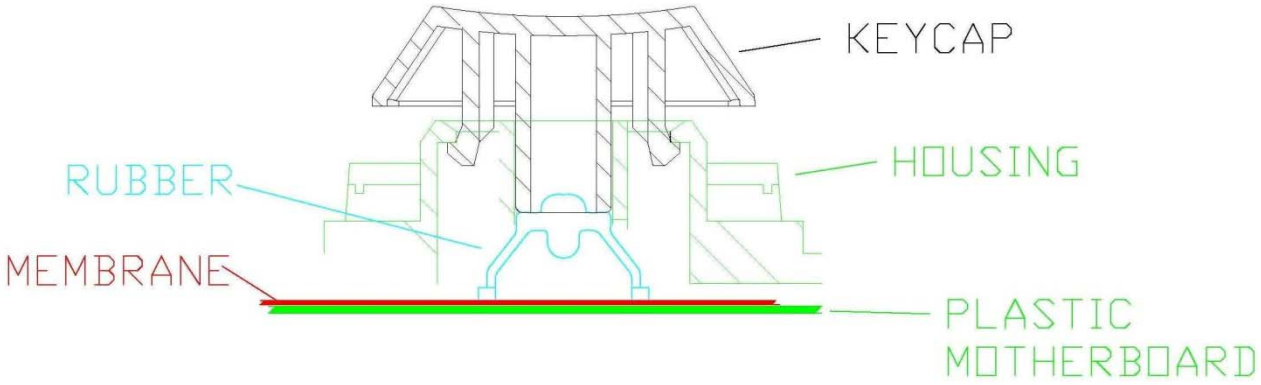
# 6 #	g	mm
FP	56.70	0.94
FC	20.35	2.26
CR	36.35	64.1%
FM	47.30	1.01
FR	14.40	2.26

# 7 #	g	mm
FP	60.65	0.94
FC	24.00	2.27
CR	36.65	60.4%
FM	52.20	0.96
FR	18.00	2.33

# 8 #	g	mm
FP	55.80	1.07
FC	20.80	2.34
CR	35.00	62.7%
FM	47.90	1.08
FR	15.50	2.37

# 9 #	g	mm
FP	56.30	0.95
FC	20.30	2.27
CR	36.00	63.9%
FM	47.50	0.90
FR	14.60	2.23

3.8.3 Standard Key switch Construction Drawing



4.Electrical Specification:

4.1 Compatibility

The USB mode shall work with operating system such as Windows 98/2000/ME/XP/NT/Vista/Win7

4.2Power Requirement

4.2.1 USB Mode

Operating voltage: 5VDC ± 5%

Operating current:100mA (max.)

4.2 Cable

The length (receiver to connector 1.6M) and color are defined by ID.

4.3 Keyboard Report Rate

The unit shall be capable of report rate 60 times/sec.

4.5 Data Transmission

The indicators of Number Lock, Caps Lock and Scroll Lock on the keyboard are three green LEDs.

5.Reliability Testing Specification:

Individual units must pass any and all of the following tests. The order of testing is subject to the tester. Passing the test is defined as functioning properly without significant damage; including but not limited to mechanical failure, electrical failure, chips or cracks in the housing or significant changes in the tactile feel.

5.1 Mean Time Between Failure (MTBF)

The unit shall have an expected MTBF under operating conditions of not less than 150,000 hours (on condition 6 hours per day operation, 250 days per year with 99% confidence level).

5.2 Drop Shock with Bare UnitK

Drop the unit from 60cm height onto 5 mm carpet, on the top, bottom and 3 sides without cable side of the unit (1 time for each side). The unit should be without damage. Damage is defined as failure of the unit to function properly, chips in the housing, or mechanical failure of any of the parts.

5.3 Drop Shock in Gift Box

Drop the unit in box from 91cm onto a concrete floor, on the 4 corners and 6 sides of the box (1 time for each side). Resulting damage should be minimal and shall not allow for contents to escape from packaging.

5.4 Drop Shock in Carton

Unit shall survive a drop test in the weight of product carton on 1 corner, 3 edges and 6 sides from the height onto a concrete floor (1 time for each side).

</= 9.5kg------91cm

</= 18.6kg------76.2cm

</= 27.6kg------61cm

</= 45.3kg------45.7cm

5.5 Temperature & Humidity Operating(Vcc=5v, 100mA max) Test

The unit is kept at the temperature of -10 to 65 degrees Celsius and relative humidity of 5% to 90% for 51 hours and then left at ambient room temperature for 2 hours.

5.6 Heat Cycle Test for Shipment Pattern

-10 degrees Celsius to 60 degrees Celsius under 5% to 90% relative humidity with total time of 50 hours, and then left at ambient room temperature for 2 hours.

5.7 Cable Bending Strength

The cable must withstand bending 60 degrees any direction from its centerline; the detail testing conditions as followed:

Load: 100 grams force

Angle: +/-60 degrees around 25.4mm diameter

Speed: 30 cycles/min

Criteria: Min 5,000 cycles, with no visible damage and no breakage in each wire.

5.8 Vibration

Unit shall survive a vibration within a frequency range of oscillation: 5~55Hz with amplitude 0.38mm(p-p) for X, Y and Z axis, each 30min. (Vibration acceleration:20 m/<s square> rms)

6.Reliability Performance:

After having been subjected to any and all of the reliability tests outlined in section 5.0, the unit shall meet the following performance specifications:

Button Actuation: All of the keys are with specially good feeling , And since when used, the finger touch the silicon , so it can have a special soft feeling .

7.Environmental Standards:

7.1 Operating temperature and humidity

Temperature: 0º C ~ 50º C

Humidity: 20% ~ 90% RH

7.2 Storage temperature and humidity

Temperature: - 20º C ~ 70º C

Humidity: 25% ~ 85% RH

8.Safety and Standards:

The keyboard is certified to comply with the limits for class B computing device pursuant, to subpart of part 15 of FCC rules and CE mark.

9.Language Version:

The specification is based on neutral version (English Version.). Will comply with customer’s requirement to provide the different language keyboard layout.