



Reliability Laboratory

# TEST REPORT



Report No.: HC90045C/2017  
Page: 1 of 9  
Date: September 29, 2017

UNITECH ELECTRONICS CO., LTD.  
8F., NO. 118, LN. 235, BAOQIAO RD.,  
XINDIAN DIST., NEW TAIPEI CITY, TAIWAN, R.O.C.

The following merchandise was submitted and identified by the vendor as:

Product Description: Rugged Handheld Computer  
Style/ Item No.: PA730/ No.1~No.4  
Quantity: Total 4 pieces  
Testing Period: Sep. 11, 2017

We have tested the submitted sample(s) as requested and the following results were obtained:

Test Required:

Test for Degrees of Protection Provided by Enclosures (IEC 60529 Edition 2.2: 2013)

IP Code	IPX7
<b>First characteristic numeral</b>	Omitted
<b>Second characteristic numeral</b>	Degrees of protection against ingress of water

Test Results:

Conclusion
Submittals sample(s) comply with the requirement and acceptance conditions of IEC 60529 Edition 2.2: 2013 Degrees of Protection Provided by Enclosures -- IPX7 The detailed description of test result, please see attached sheet(s).

\*HC90045C/2017 is the first additional issued report with different title and style of HC90045A/2017, dated on September 15, 2017

Signed for and on behalf of  
SGS TAIWAN Ltd.

Hank Chiou  
Supervisor

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## Test for Degrees of Protection Provided by Enclosures:

### Test Equipment:

Name	Brand	Model	Serial No.
IPX7/IPX8 Immersion Tank	Self-made	SGS-ETR-030201	ETR000001

### Lab Environmental Conditions:

Ambient temperature:  $(25 \pm 3) ^\circ\text{C}$

Ambient humidity:  $(55 \pm 20) \% \text{RH}$

### Test Method/ Specification:

Test method: IEC 60529 Edition 2.2: 2013 --IPX7

Sample condition: Non-Operating

Test means: Completely immerse the specimen in water in its service position as specified by client.

Test condition: See below items marked “●”,

●	The lowest point of enclosures with a height less than 850 mm is located 1000 mm below the surface of the water
	The highest point of enclosures with a height equal to or greater than 850 mm is located 150 mm below the surface of the water

Test duration: 30 minutes

Test Device: As shown in photo 5, 6

- Examine the protection against ingress water of specimen and perform functional check after this test.
- Functional check: Turn on the power of the specimen then examine whether the designated function could be work normally or not.

Test Method/ Specification--Continued:

Functional check item as below:

Functional Check
SD card function
Camera function
Video function
Charging function
Headset function
Bluetooth function
Wi-Fi function
USB function
Barcode function
NFC function
Gyroscope sensor function
Suspend function
Record function
Key function
Vibration function
LCD touch function
Charging LED function
E-Compass function
USB Host function
Criteria: The function shall be work normally

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# TEST REPORT

**Specimen:**

Style/ Item No.: PA730/ No.1~No.4

Quantity: Total 4 pieces

**Test Result:**







Degree of protection against ingress of water (IPX7)

Test Result					
Check Item		Style/ Item No.			
		PA730/ No.1	PA730/ No.2	PA730/ No.3	PA730/ No.4
1	Does any water enter the enclosure?	No	No	No	No
2	(followed check item 1) If any water has entered, does the water accumulate near the cable end or live parts?	N/A	N/A	N/A	N/A
2.1	(followed check item 2) Does the water be sufficient to interfere with the correct operation of the equipment or impair safety?	N/A	N/A	N/A	N/A
2.2	(followed check item 2.1) Does the water deposit on insulation parts where it could lead to tracking along the creepage distances?	N/A	N/A	N/A	N/A
2.3	(followed check item 2.2) Does the water reach live parts or windings not designed to operate when wet?	N/A	N/A	N/A	N/A
3	Functional check	Normal	Normal	Normal	Normal

Note 1: N/A means "Not Applicable".






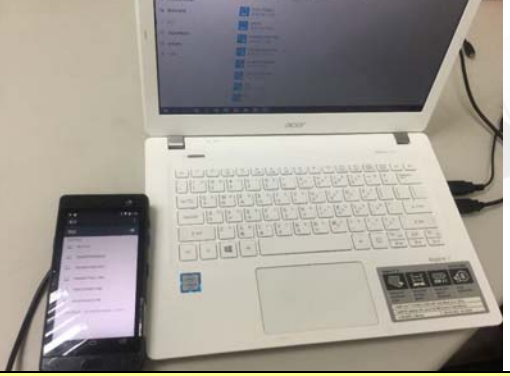
Note 2: The check items in this test report for inspecting the degree of protection provided by enclosures are reference to the requirements specified in IEC 60529 Edition 2.2: 2013 and in accordance with the acceptance conditions specified by client.

Test Photos:

	
<p>1. Appearance of specimen (PA730/ No.1, No.2)</p>	<p>2. Appearance of specimen (PA730/ No.1, No.2)</p>
	
<p>3. Appearance of specimen (PA730/ No.3, No.4)</p>	<p>4. Appearance of specimen (PA730/ No.3, No.4)</p>
	
<p>5. Test for protection against water</p>	<p>6. Test for protection against water</p>



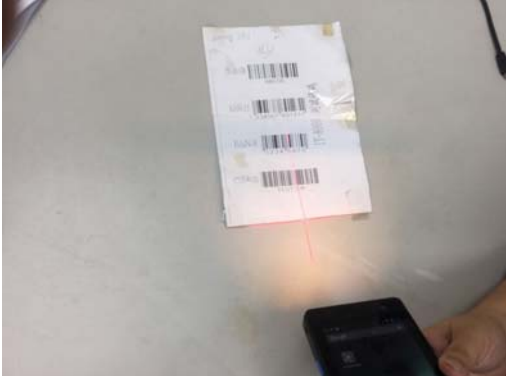



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Test Photos--Continued:

	
<p>7. Functional check(SD card function)</p>	<p>8. Functional check(Camera function)</p>
	
<p>9. Functional check(Video function)</p>	<p>10. Functional check(Charging function)</p>
	
<p>11. Functional check(Headset function)</p>	<p>12. Functional check(Bluetooth function)</p>







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Test Photos--Continued:

	
<p>13. Functional check(Wi-Fi function)</p>	<p>14. Functional check(USB function)</p>
	
<p>15. Functional check(Barcode function)</p>	<p>16. Functional check(NFC function)</p>
	
<p>17. Functional check (Gyroscope sensor function)</p>	<p>18. Functional check (Suspend function)</p>

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Test Photos--Continued:

	
<p>19. Functional check(Record function)</p>	<p>20. Functional check(Key function)</p>
	
<p>21. Functional check (Vibration function)</p>	<p>22. Functional check (LCD touch function)</p>
	
<p>23. Functional check (Charging LED function)</p>	<p>24. Functional check (E-Compass function)</p>

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Test Photos--Continued:



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