Test Report No.:	**TD170105C03**
Client	
Name :	**ELGENS CO., LTD**
Address :	**5F., No.221, Jian 8th Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)**
Test Item :	**12.1" Panel PC**
Identification :	**LPC-stuvwxyz (s, t, u, v, w, x, y, z could be A-Z, a-z, 0-9, hyphen, dash or blank for marketing purpose.)**
Testing laboratory	
Name :	**Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**
Address :	**No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist.,New Taipei City, Taiwan**
Test specification	
Standard :	**IEC60529 Edition 2.1 2001-02**
Test Item:	IP 65
Test Result :	The test item passed.
Prepared By :	Bill Lin / 2017-02-13 Signature / Date Bill Lin Senior Engineer
Approved By:	2017-02-13 Signature / Date Jazz Kuo Senior Engineer

This report should not be used by the client to claim product certification, approval, or endorsement by TAF, NVLAP, NIST or any government agencies.

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification

TEST REPORT

IEC60529 Edition 2.1 2001-02

Report Reference No..... :	TD170105C03
Compiled by ..... :	See cover sheet
Approved by ..... :	See cover sheet
Date of issue ..... :	2017-02-13
Total number of pages ..... :	7
Testing Laboratory. ..... :	
Name..... :	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Address. ..... :	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Testing location. ..... :	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Address ..... :	No. 19, Hwa Ya 2nd Rd, Kueishan Taoyuan, Taiwan
Applicant's name..... :	ELGENS CO., LTD
Address ..... :	5F., No.221, Jian 8th Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)
Test specification:	
Standard..... :	IEC60529 Edition 2.1 2001-02
Test item .....:	
Description ..... :	12.1" Panel PC
Trade Mark..... :	ELGENS
Manufacturer ..... :	ELGENS CO., LTD
Model/Type reference ..... :	LPC-stuvwxyz (s, t, u, v, w, x, y, z could be A-Z, a-z, 0-9, hyphen, dash or blank for marketing purpose.)
Rating(s) ..... :	N/A

Tests performed (name of test and test clause):

Test item ☒ To tick the box		
☒	12.2	Test for protection against **access to hazardous parts** by the first characteristic numeral **(1,2,3,4,5,6)** Test for protection against **access to hazardous parts** indicated by the additional letter **(A(1),B(2),C(3),D(4,5,6))**
☐	13.2	Test for protection against **solid foreign objects** indicated by the first characteristic numeral **(1,2,3,4)**
☐	13.5	Test for protection against **solid foreign objects** indicated by the first characteristic numeral **(5)**
☒	13.6	Test for protection against **solid foreign objects** indicated by the first characteristic numeral **(6)**
☐	14.2.1	Test for protection against **water** indicated by the second characteristic numeral **(1)**
☐	14.2.2	Test for protection against **water** indicated by the second characteristic numeral **(2)**
☐	14.2.3	Test for protection against **water** indicated by the second characteristic numeral **(3)**
☐	14.2.4	Test for protection against **water** indicated by the second characteristic numeral **(4)**
☒	14.2.5	Test for protection against **water** indicated by the second characteristic numeral **(5)**
☐	14.2.6	Test for protection against **water** indicated by the second characteristic numeral **(6)**
☐	14.2.7	Test for protection against **water** indicated by the second characteristic numeral **(7)**
☐	14.2.8	Test for protection against **water** indicated by the second characteristic numeral **(8)**

Testing .....:

Date of receipt of test item .....: 2017-01-05

Date (s) of performance of tests .....: 2017-02-06 to 2017-02-09

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

Throughout this report a point is used as the decimal separator.

General product information:

(1) The equipment is a 12.1" Panel PC.
(2) Dimension of EUT: 375 by 435 by 185 mm.
(3) Weight of EUT: 5 kg.

Test condition:
Temperature: 25℃
Relative humidity: 60%
Air pressure: 950 mbar

The test sample was a pre-production sample without serial number.

Test item: IEC 60529 Edition 2.1: 2001-02—IP6X

1. Test for protection against access to hazardous parts:

Test Method: **According to IEC 60529 Edition 2.1: 2001-02—IP6X**
The access probe (Test wire, 1.0mm diameter, and 100mm long) is pushed against or inserted through any openings of the enclosure with the force specified in Table 6 in IEC 60529 Edition 2.1: 2001-02.

Test force: 1N±10%

Test result:
☒ The access probe (Test wire, 1.0mm diameter, and 100mm long) does not penetrate and has adequate clearance from hazardous part.
☐ The access probe (Test wire, 1.0mm diameter, and 100mm long) was penetrates and does not has adequate clearance from hazardous part.

2. Test for protection against solid foreign objects:

Test Method: **According to IEC 60529 Edition 2.1: 2001-02—IP6X (Dust test)**

Enclosure category 1:

(1) Enclosures where the normal working cycle of the equipment causes reductions in air pressure within the enclosure below that of the surrounding air.
- The object of the test is to draw into the enclosure, by means of depression, a volume of air 80 times the volume of the sample enclosure tested without exceeding the extraction rate of 60 volumes per hour. In no event shall the depression exceed 2 kPa (20 mbar) on the manometer.
-

(2) The total duration of test:
☐ An extraction rate of 40 to 60 volumes per hour is obtained the duration of the test is 2h.
☒ With a maximum depression of 2 kPa (20 mbar), the extraction rate is less than 40 volumes per hour, the test is continued until 80 volumes have been drawn through, or a period of 8h has elapsed.

Test result: After testing in accordance with appropriate requirements of IEC60529 13.4 and 13.6, no ingress of dust was found inside the enclosure.

Test item: IEC 60529 Edition 2.1: 2001-02—IPX5

Test for protection against water

Test method: **According to IEC 60529 Edition 2.1: 2001-02--IPX5**

Spraying the enclosure from all practicable directions with a stream of water from a standard test nozzle as specified in test standard.

(1) Internal diameter of the nozzle: 6.3 mm.
(2) Delivery rate: 12.5 L/min ±5%.
(3) Core of the substantial stream: Core of the substantial stream: circle of approximately 40mm diameter at 2.5m distance of nozzle.
(4) Distance from nozzle to enclosure surface: Between 2.5 m and 3 m.
(5) The duration of test is 3 min.

Test result:

1) During the IPX5 test only evaluates the front side, base on customer requirements.
2) After testing in accordance with appropriate requirements of IEC60529 14.1 and 14.2.5, no ingress of water was found inside the enclosure.

Photos:
IP6X test:



IPX5 test:

