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ISO/IEC17025 Accredited Lab.

## FCC ID TEST REPORT

for

OTT

MODEL: FREEOTT

Trade Mark: N/A

FCC ID: 2AACAFREEOTT

Test Report Number: 1304001374

Issued Date: May 16, 2013

Issued for

Syabas Technology Hong Kong, Limited

FLAT/RM 316A 3/F , ENTERPRISE PLACE PHASE ONE HONG KONG SCIENCE  
PARK PAK SHEK KOK TAI PO NT

Issued By:

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# 1 TEST CERTIFICATION

|                              |   |
|------------------------------|---|
| <b>Product:</b>              | OTT   |
| <b>Model:</b>                | FREEOTT   |
| <b>Trade Mark</b>            | N/A   |
| <b>Applicant:</b>            | <b>Syabas Technology Hong Kong, Limited</b><br>FLAT/RM 316A 3/F , ENTERPRISE PLACE PHASE ONE HONG KONG<br>SCIENCE PARK PAK SHEK KOK TAI PO NT |
| <b>Manufacturer:</b>         | <b>Syabas Technology Hong Kong, Limited</b><br>FLAT/RM 316A 3/F , ENTERPRISE PLACE PHASE ONE HONG KONG<br>SCIENCE PARK PAK SHEK KOK TAI PO NT |
| <b>Tested:</b>               | April 14, 2013 ~ April 26, 2013   |
| <b>Test Voltage:</b>         | DC 5V (Adapter Input AC 120V/60Hz)  |
| <b>Applicable Standards:</b> | OET Bulletin 65<br>ANSI C63.4:2003  |

The above equipment has been tested by SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO., LTD. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

*Brown Lu*  
**Tested By:**

**Date:** 2013-06-11

(Brown Lu)

*Terry Tang*  
**Check By:**

**Date:** 2013-06-11

(Terry Tang)

*Jack Chung*  
**Approved By:**

**Date:** 2013-06-11

(Jack Chung)

## 2 EUT DESCRIPTION

|                                     |   |
|-------------------------------------|---|
| <b>Product</b>                      | OTT   |
| <b>Trade Mark</b>                   | N/A   |
| <b>Model</b>                        | FREEOTT   |
| <b>Applicant</b>                    | Syabas Technology Hong Kong, Limited  |
| <b>EUT Type</b>                     | <input checked="" type="checkbox"/> Engineering Sample. <input type="checkbox"/> Product Sample,<br><input type="checkbox"/> Mass Product Sample. |
| <b>Serial Number</b>                | N/A   |
| <b>Antenna Type</b>                 | PCB Antenna   |
| <b>Antenna Gain</b>                 | 0dBi  |
| <b>EUT Power Rating</b>             | DC 5V<br>Adapter: RG05U-CE<br>Input: AC 100-240V 50/60Hz 0.2A<br>Output: DC 5.0V 1A   |
| <b>Temperature Range(Operating)</b> | -10~50 °C   |
| <b>Operating Frequency (WIFI)</b>   | 802.11b/g/n-HT20: 2412MHz - 2462MHz   |
| <b>Type of Modulation</b>           | CCK, DQPSK, DBPSK for DSSS<br>BPSK, QPSK, 16QAM and 64QAM for OFDM  |
| <b>Number of Channels</b>           | 802.11b/g/n-HT20: 11 channels   |
| <b>Data rate</b>                    | 802.11b: 1-11Mbps<br>802.11g: 6-54Mbps<br>802.11n-20M: 6.5-72.2Mbps   |

*Note: N/A stand for no applicable.*

### 3. Maximum permissible exposure

#### 3.1 applicable standard

Systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

(A) Limits for Occupational/Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|--|---|
| 0.3-3.0               | 614                               | 1.63                              | (100)*                                   | 6   |
| 3.0-30                | 1842 / f                          | 4.89 / f                          | (900 / f)*                               | 6   |
| 30-300                | 61.4                              | 0.163                             | 1.0                                      | 6   |
| 300-1500              | -                                 | -                                 | F/300                                    | 6   |
| 1500-100,000          | -                                 | -                                 | 5  | 6   |

(B) Limits for General Population / Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|--|---|
| 0.3-1.34              | 614                               | 1.63                              | (100)*                                   | 30  |
| 1.34-30               | 824/f                             | 2.19/f                            | (180/f)*                                 | 30  |
| 30-300                | 27.5                              | 0.073                             | 0.2                                      | 30  |
| 300-1500              | -                                 | -                                 | F/1500                                   | 30  |
| 1500-100,000          | -                                 | -                                 | 1.0                                      | 30  |

Note: f = frequency in MHz ; \*Plane-wave equivalent power density

### 3.2 MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d}$$

$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

**E** = Electric field (V/m)

**P** = Average RF output power (W)

**G** = EUT Antenna numeric gain (numeric)

**d** = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

### 3.3 Calculated Result and Limit

Antenna Type: PCB Antenna

Antenna Gain: 0dBi(

Max conducted output power: 16.78dBm (refer to Page 45 of Report:**1304001374**)

| Antenna Gain (numeric) | Peak Output Power(dBm) | Peak Output Power (mW) | Power Density(s) (mW/cm <sup>2</sup> ) | Limit of Power Density(s) (mW/cm <sup>2</sup> ) | Test Result |
|------------------------|------------------------|------------------------|--|---|-------------|
| 1                      | 16.78                  | 47.64                  | 0.1                                    | 1.0   | Compliance  |