



# OTA TEST REPORT

**Applicant**      Espressif Systems  
**Product**        ESP-ANT A  
**Model**            ESP-ANT A  
**Report No.**      YXA1711-1424OTA01R1  
**Issue Date**      November 30, 2017

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **ANSI/IEEE Std 149-2008**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

*Jiang peng Lan*

Performed by: Jiangpeng Lan

*Kai Xu*

Approved by: Kai Xu

---

**TA Technology (Shanghai) Co., Ltd.**

No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000



## TABLE OF CONTENTS

1.	General Information .....	3
1.1.	Notes of the Test Report .....	3
1.2.	Test facility .....	3
1.3.	Testing laboratory .....	4
1.4.	Laboratory Environment .....	4
2.	General Description of Equipment under Test .....	5
2.1.	Applicant Information .....	5
2.2.	Manufacturer Information .....	5
2.3.	Information of EUT .....	5
2.4.	Test Date .....	5
2.5.	Applied Standards .....	6
3.	Test Conditions .....	7
3.1.	Test Configuration .....	7
3.2.	Test Measurement .....	7
4.	Test Results .....	8
4.1.	Gain and Efficiency .....	8
4.2.	Voltage Standing Wave Ratio (VSWR) .....	9
4.3.	Antenna S11 .....	9
5.	Test Equipment List .....	10
	APPENDIX A: 2-D Pattern Plots .....	11
	APPENDIX B: The EUT Appearance and Test Configuration .....	12
	B.1 EUT Appearance .....	12



## 1. General Information

### 1.1. Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of TA technology (shanghai) co., Ltd. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above. This report must not be used by the client to claim product certification, approval, or endorsement by any government agencies.

### 1.2. Test facility

#### **CNAS (accreditation number: L2264)**

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS).

#### **FCC (Designation number: CN1179, Test Firm Registration Number: 446626)**

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

#### **IC (recognition number is 8510A)**

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic emission measurement.

#### **A2LA (Certificate Number: 3857.01)**

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.



### 1.3. Testing laboratory

Company: TA Technology (Shanghai) Co., Ltd.  
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong  
City: Shanghai  
Post code: 201201  
Country: P. R. China  
Contact: Xu Kai  
Telephone: +86-021-50791141/2/3  
Fax: +86-021-50791141/2/3-8000  
Website: <http://www.ta-shanghai.com>  
E-mail: [xukai@ta-shanghai.com](mailto:xukai@ta-shanghai.com)

### 1.4. Laboratory Environment

Temperature	Min. =19°C , Max. = 25°C	
Relative humidity	Min. =40%, Max. =72%	
Shield effect	0.7-6GHz	> 100dB
Ground resistance	<0.5Ω	



## 2. General Description of Equipment under Test

### 2.1. Applicant Information

Company: Espressif Systems  
Address: #204, Block 2, 690 Bibo Road, Zhang Jiang High-Tech Park,  
Shanghai, P. R. China

### 2.2. Manufacturer Information

Company: Espressif Systems  
Address: #204, Block 2, 690 Bibo Road, Zhang Jiang High-Tech Park,  
Shanghai, P. R. China

### 2.3. Information of EUT

#### General information

EUT Description	
Product Name:	ESP-ANT A
Model	ESP-ANT A
HW Version:	/
SW Version:	/
Antenna Type:	Fixed Antenna
Antenna Manufacturer:	Espressif Systems
Test Frequency:	2400MHz ~ 2500MHz

Test lab. of the antenna gain and radiation pattern measurement: TA Technology (Shanghai) Co., Ltd.

### 2.4. Test Date

The test is performed on August 30, 2017 and November 22, 2017.



## 2.5. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test Method: **ANSI/IEEE Std 149-2008**

