TEST REPORT

Reference No.	:	WTS18S09122875-4W
FCC ID.....	:	2AQ7Q-DB0355
Applicant	:	DTEN Inc.
Address	:	97 E. Brokaw Road, Suite 300, San Jose, California 95112, United States
Manufacturer	:	DTEN Inc.
Address	:	97 E. Brokaw Road, Suite 300, San Jose, California 95112, United States
Factory	:	JIANGSU ECHOM SCIENCE&TECHNOLOGY CO.,LTD.
Address	:	No.168, Qianjin East Road, Kunshan City, Suzhou City, Jiangsu Province, China.
Product	:	DTEN Board D7
Model(s).....	:	DB0355
Standards	:	FCC CFR47 Part 1 Section 1.1037:2018 FCC CFR47 Part 2 Section 2.1091:2018
Date of Receipt sample....	:	2018-09-04
Date of Test	:	2018-09-05 to 2018-11-19
Date of Issue	:	2018-11-20
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Tested by: Frank Yin

Frank Yin / Test Engineer

Approved by: Philo Zhong

Philo Zhong / Manager

2 Laboratories Introduction

Waltek Services (Shenzhen) Co., Ltd is a professional third-party testing and certification laboratory with multi-year product testing and certification experience, established strictly in accordance with ISO/IEC 17025 requirements, and accredited by ILAC (International Laboratory Accreditation Cooperation) member. A2LA (American Association for Laboratory Accreditation, the certification number is 4243.01) of USA, CNAS (China National Accreditation Service for Conformity Assessment, the registration number is L3110) of China.Meanwhile, Waltek has got recognition as registration and accreditation laboratory from EMSD (Electrical and Mechanical Services Department), and American Energy star, FCC(The Federal Communications Commission), CEC(California energy efficiency), ISED Canada (Innovation, Science and Economic Development Canada). It's the strategic partner and data recognition laboratory of international authoritative organizations, such as Intertek(ETL-SEMKO), TÜV Rheinland, TÜV SÜD, etc.

Waltek Services (Shenzhen) Co., Ltd is one of the largest and the most comprehensive third party testing laboratory in China. Our test capability covered four large fields: safety test. ElectroMagnetic Compatibility(EMC), and energy performance, wireless radio. As a professional, comprehensive, justice international test organization, we still keep the scientific and rigorous work attitude to help each client satisfy the international standards and assist their product enter into globe market smoothly.

2.1 Test Facility

A. Accreditations for Conformity Assessment (International)

Country/Region	Scope Covered By	Scope	Note
USA	ISO/IEC 17025	FCC ID \ SDoC(VOC/DOC)	1
Canada		IC ID \ VOC	2
Japan		MIC-T \ MIC-R	-
Europe		EMCD \ RED	-
Taiwan		NCC	-
Hong Kong		OFCA	-
Australia		RCM	-
India		WPC	-
Thailand		NTC	-
Singapore		IDA	-

Note:

1. FCC Designation No.: CN1201. Test Firm Registration No.: 523476.
2. ISED Canada Registration No.: 7760A

B.TCBs and Notify Bodies Recognized Testing Laboratory.

Recognized Testing Laboratory of …	Notify body number
TUV Rheinland	Optional.
Intertek	
TUV SUD	
SGS	
Phoenix Testlab GmbH	0700
Element Materials Technology Warwick Ltd.	0891
Timco Engineering, Inc.	1177
Eurofins Product Service GmbH	0681

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4 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTS18S09122875-4W	2018-09-04	2018-09-05 to 2018-11-19	2018-11-20	original	-	Valid

5 General Information

5.1 General Description of E.U.T

Product	: DTEN Board D7
Model(s)	: DB0355

6 RF Exposure

Test Requirement: FCC Part 1.1307

Test Method: FCC Part 2.1091

6.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures 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 0.2 m 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^2)	Averaging Time $\|E\|^2$,$\|H\|^2$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^2)	Averaging Time $\|E\|^2$,$\|H\|^2$ 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

6.2 Evaluation Result

E (V/m) $= \frac{\sqrt{30 \times P \times G}}{d}$ Power Density: *Pd* (W/m²) $= \frac{E^2}{377}$

E = Electric field (V/m)
P = 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

Module 1					
Mode:			BT or BLE		
Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Output Power (mW)	Power Density (mW/cm2)	Limit of Power Density (mW/cm2)
2	1.585	0.62	1.15	0.0004	1
Mode:			2.4G WiFi		
Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Output Power (mW)	Power Density (mW/cm2)	Limit of Power Density (mW/cm2)
2	1.585	16.84	48.31	0.0152	1
Mode:			5G WiFi		
Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Output Power (mW)	Power Density (mW/cm2)	Limit of Power Density (mW/cm2)
2	1.585	19.71	93.54	0.0295	1

Module 2					
Mode:			2.4G WiFi		
Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Output Power (mW)	Power Density (mW/cm2)	Limit of Power Density (mW/cm2)
2	1.585	16.90	48.98	0.0154	1
Mode:			5G WiFi		
Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Output Power (mW)	Power Density (mW/cm2)	Limit of Power Density (mW/cm2)
2	1.585	15.85	38.46	0.0121	1

The EUT has two module and support simultaneously transmitting.
Simultaneously transmitting:
Module 1(BT/BLE +2.4G WiFi+5G WiFi)=0.0004+0.0152+0.0295=0.0451<1
Module 2(2.4G WiFi+5G WiFi)=0.0154+0.0121=0.0275<1
Module 1+Module 2=0.0451+0.0275=0.0726<1
Result: Compliance
No SAR measurement is required.

======End of Report======