

# Global United Technology Services Co., Ltd.

Report No.: GTS201808000194F06

# **TEST REPORT**

Quantum Creations LLC. Applicant:

**Address of Applicant:** 15705 NW 13th Ave, Miami Gardens, Miami Beach, Florida

33169, United States

MELE TECHNOLOGIES(SHENZHEN) CO.,LTD Manufacturer/Factory:

Address of 1F, Bldg#2, 28 Cuijing Road, Pingshan District, Shenzhen, PR

Manufacturer/Factory: China. **Equipment Under Test (EUT)** 

**Product Name:** Access 3

Model No.: A-1198-AA3, A-1198-AA3-1, A-1198-AA3-2, A-1198-AA3-3, A-

1198-AA3-4, A-1198-AA3-5, A-1198-AA3-6, A-1198-AA3-7, A-

1198-AA3-8, A-1198-AA3-9

Trade Mark: **AZULLE** 

FCC ID: 2AFJI20181198

Applicable standards: FCC CFR Title 47 Part 15 Subpart B

Date of sample receipt: August 28, 2018

August 28-September 07, 2018 Date of Test:

Date of report issued: September 07, 2018

Test Result: PASS \*

Authorized Signature:

**Robinson Lo Laboratory Manager** 

This 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.

<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.



# 2 Version

Version No.	Date	Description
00	September 07, 2018	Original

Prepared By:	Tjør Chen	Date:	September 07, 2018
	Project Engineer		
Check By:	Reviewer	Date:	September 07, 2018



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# 4 Test Summary

Test Item	Test Requirement	Test Method	Class / Severity	Result
Conducted Emission	FCC Part15.107	ANSI C63.4	Class B	PASS
Radiated Emissions #	FCC Part15.109	ANSI C63.4	Class B	PASS

#### Remark:

- 1. Pass: The EUT complies with the essential requirements in the standard.
- 2. # Refer to FCC Part 15.33 (b)(1) conditional testing procedure:

The highest frequency generated or used in the EUT	Test frequency range of Radiated emission
<108MHz	30MHz ~ 1GHz
108MHz ~ 500MHz	30MHz ~ 2GHz
500MHz ~ 1GHz	30MHz ~ 5GHz
>1GHz	30MHz ~ 5th harmonic of the highest frequency or 40 GHz, whichever is lower.



# **5** General Information

# 5.1 General Description of EUT

Product Name:	Access 3
Model No.:	A-1198-AA3, A-1198-AA3-1, A-1198-AA3-2, A-1198-AA3-3,
	A-1198-AA3-4, A-1198-AA3-5, A-1198-AA3-6, A-1198-AA3-7,
	A-1198-AA3-8, A-1198-AA3-9
Test Model No:	A-1198-AA3
Serial No.:	000001
Hardware version:	V1.1
Software version:	V1.1
Test sample(s) ID:	GTS201808000194-2
Sample(s) Status	Normal sample
Power supply:	SWITCHING ADAPTOR
	Model No.: FJ-SW0503000N
	Input: AC 100-240V, 50/60Hz, 0.6A Max
	Output: DC 5V, 3000mA

# 5.2 Test mode and Test voltage

Test n	node:		
Burnir	ng test mode	Keep the EUT in full load and burning test status.	
Test v	oltage		
AC120	OV 60Hz		



## 5.3 Description of Support Units

Manufacturer	Manufacturer Description		Serial Number
DELL	KEYBOARD SK-8115		GTS237-2
DELL	MOUSE	MOC5UO	GTS237-3
SanDisk	USB disk	16GB	N/A
PHILIPS	LCD monitor	19PFL3120/T3	AU1A1212002906

#### 5.4 Deviation from Standards

None.

#### 5.5 Abnormalities from Standard Conditions

None.

### 5.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• FCC —Registration No.: 381383

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383, January 08, 2018.

• Industry Canada (IC) —Registration No.: 9079A-2

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-2, August 15, 2016

#### 5.7 Test Location

The test was performed at:

Global United Technology Services Co., Ltd.

Address: No. 301-309, 3/F., Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road,

Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480 Fax: 0755-27798960



# 6 Test Instruments list

Rad	Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 03 2015	July. 02 2020	
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A	
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 27 2018	June. 26 2019	
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 27 2018	June. 26 2019	
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	June. 27 2018	June. 26 2019	
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 27 2018	June. 26 2019	
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	
8	Coaxial Cable	GTS	N/A	GTS213	June. 27 2018	June. 26 2019	
9	Coaxial Cable	GTS	N/A	GTS211	June. 27 2018	June. 26 2019	
10	Coaxial cable	GTS	N/A	GTS210	June. 27 2018	June. 26 2019	
11	Coaxial Cable	GTS	N/A	GTS212	June. 27 2018	June. 26 2019	
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 27 2018	June. 26 2019	
13	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	June. 27 2018	June. 26 2019	
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 27 2018	June. 26 2019	
15	Band filter	Amindeon	82346	GTS219	June. 27 2018	June. 26 2019	
16	Power Meter	Anritsu	ML2495A	GTS540	June. 27 2018	June. 26 2019	
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 27 2018	June. 26 2019	
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS588	June. 27 2018	June. 26 2019	
19	Splitter	Agilent	11636B	GTS237	June. 27 2018	June. 26 2019	
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June 28 2017	June 27 2018	



Conduc	Conducted Emission							
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)		
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.16 2014	May.15 2019		
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 27 2018	June. 26 2019		
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 27 2018	June. 26 2019		
4	Artificial Mains Network	SCHWARZBECK MESS	NSLK8127	GTS226	June. 27 2018	June. 26 2019		
5	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A		
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A		
7	Thermo meter	KTJ	TA328	GTS233	June. 27 2018	June. 26 2019		
8	Absorbing clamp	Elektronik- Feinmechanik	MDS21	GTS229	June. 27 2018	June. 26 2019		

Gei	General used equipment:							
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)		
1	Humidity/ Temperature Indicator	Shanghai	ZJ1-2B	GTS243	June. 27 2018	June. 26 2019		
2	Barometer	ChangChun	DYM3	GTS255	June. 27 2018	June. 26 2019		



## 7 Test Results and Measurement Data

## 7.1 Radiated Emission

Test Requirement:	FCC Part15 B Section 15.109						
Test Method:	ANSI C63.4:2014						
Test Frequency Range:	30MHz to 6GHz						
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)						
Receiver setup:	Frequency	Frequency Detector RBW VBW Remark					
·	30MHz- 1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value		
	Above 1GHz	Peak Peak	1MHz 1MHz	3MHz 10Hz	Peak Value Average Value		
Limit:	Freque	ency	Limit (dBuV/	/m @3m)	Remark		
	30MHz-8	8MHz	40.0	0	Quasi-peak Value		
	88MHz-2	16MHz	43.5	0	Quasi-peak Value		
	216MHz-9	216MHz-960MHz 46.00			Quasi-peak Value		
	960MHz-1GHz 54.00 54.00			0	Quasi-peak Value		
				0	Average Value		
	Above	Above 1GHz 74.00			Peak Value		
Test setup:	For radiated e	EUT	< 3m >↓  Test  < 1n  m Table  Receiver	Antenna  a 4m >v	ifier-		



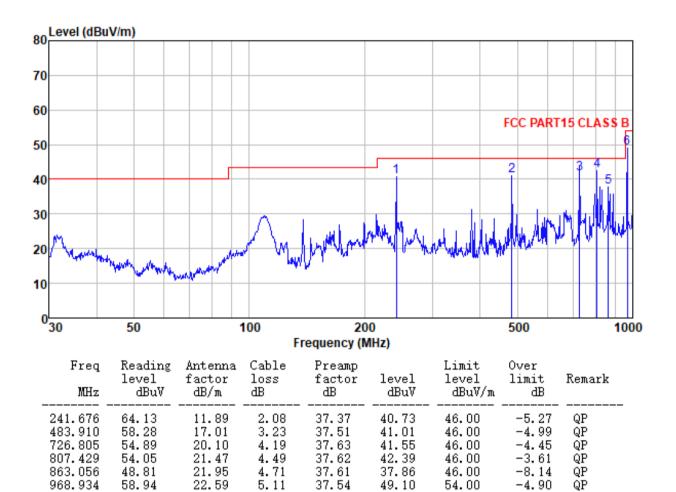
Report No.: GTS201808000194F06 Test Antenna-4m > EUT Turn Table <. 80 cm > Preamplifier-Receiver-The EUT was placed on the top of a rotating table 0.8 meters above Test Procedure: the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. Press.: Test environment: Temp.: 25 °C Humid.: 52% 1 012mbar Measurement Record: Uncertainty: ± 4.50dB Test Instruments: Refer to section 6 for details Test mode: Refer to section 5.2 for details. Test results: **Pass** 



#### **Measurement Data**

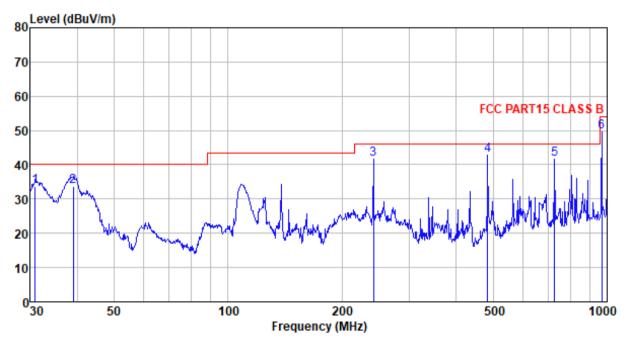
#### **Below 1GHz**

Test mode:	Burning test mode	Antenna Polarity:	Horizontal
	_		





Test mode: Burning test mode Antenna Polarity: Vertical



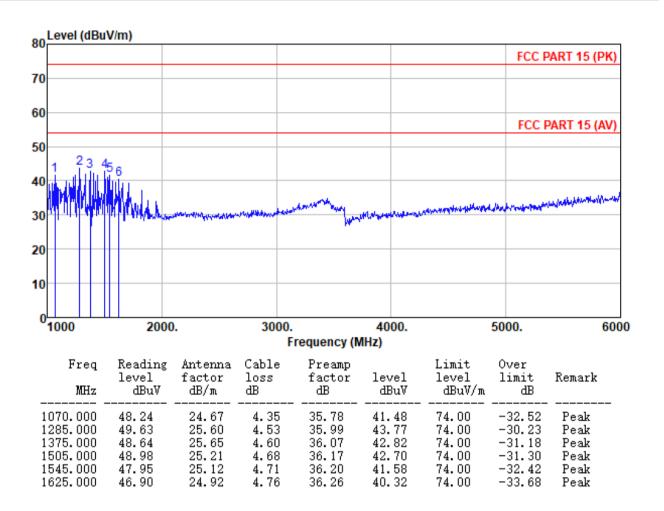
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
30.962	57.03	11. 22	0.56	35.07	33.74	40.00	-6. 26	QP
39.024	56.47	12. 04	0.65	35.61	33.55	40.00	-6. 45	QP
241.676	65.15	11. 89	2.08	37.37	41.75	46.00	-4. 25	QP
483.910	60.00	17. 01	3.23	37.51	42.73	46.00	-3. 27	QP
726.805	54.86	20. 10	4.19	37.63	41.52	46.00	-4. 48	QP
968.934	59.55	22. 59	5.11	37.54	49.71	54.00	-4. 29	QP



#### **Above 1GHz**

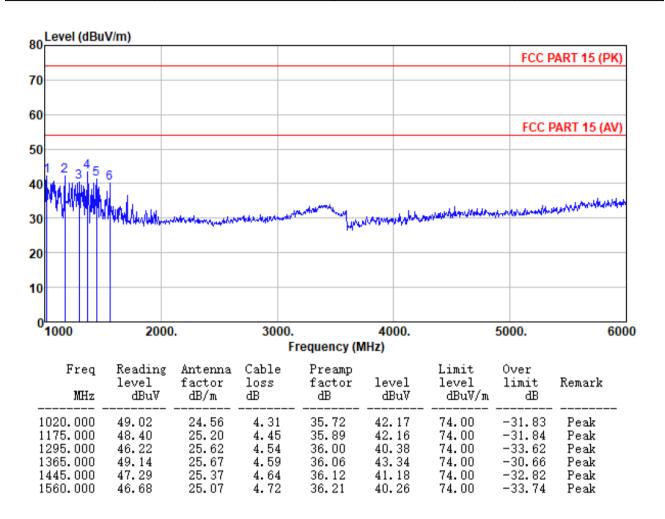
Report No.: GTS201808000194F06

Test mode: Burning test mode Antenna Polarity: Horizontal	Horizontal
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Test mode: Burning test mode Antenna Polarity: Vertical



#### Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

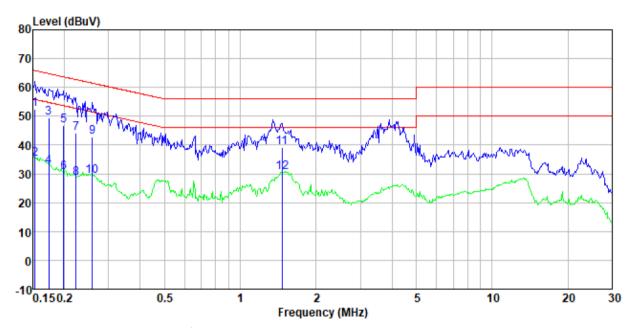


## 7.2 Conducted Emissions

Test Requirement:	FCC Part15 B Section 15.107		
Test Method:	ANSI C63.4:2014		
Test Frequency Range:	150kHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9kHz, VBW=30kHz		
Limit:		Limit (	dBuV)
	Frequency range (MHz)	Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
Took ookun.	0.5-30	60	50
Test setup:	Reference F	Plane	
	LISN	LISN	
	40cm 8	30cm	
	AUX	Filter –	— AC power
	Equipment E.U.T		
		EMI	
	Test table/Insulation plane	Receiver	
	rest table/msulation plane		
	Remark:	•	
	E.U.T: Equipment Under Test	and a	
	LISN: Line Impedence Stabilization Netwo Test table height=0.8m	OIK	
Test procedure	1. The E.U.T and simulators	are connected to the	main power through
	a line impedance stabiliza		
	50ohm/50uH coupling imp		
	2. The peripheral devices ar		
	through a LISN that provious with 50ohm termination. (		
	test setup and photograpl		lock diagram of the
	3. Both sides of A.C. line are	•	ım conducted
	interference. In order to fi		
	positions of equipment ar		
	changed according to AN	SI C63.4: 2014 on co	nducted
	measurement.		:
Test environment:	Temp.: 25 °C Humid	d.: 52% Pre	ess.: 1 012mbar
Test Instruments:	Refer to section 6 for details		
Test mode:	Refer to section 5.2 for details	•	
Test results:	Pass		



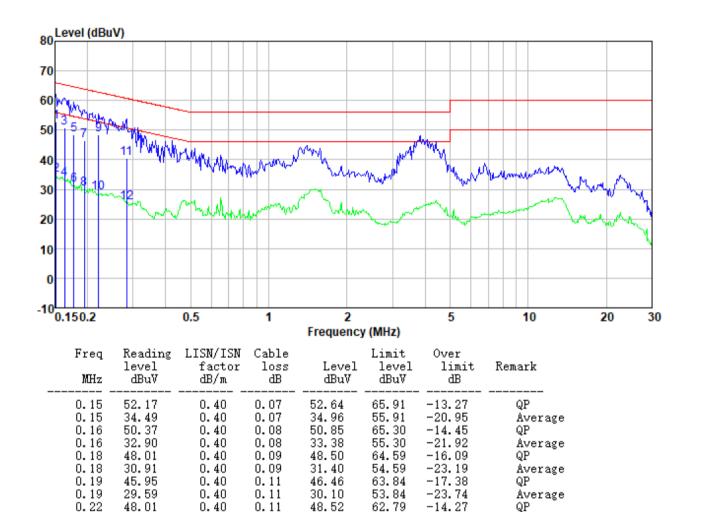
## Measurement Data



Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	51.81	0.40	0.07	52.28	65.82	-13.54	QP
0.15	34.64	0.40	0.07	35.11	55.82	-20.71	Average
0.17	48.84	0.40	0.09	49.33	64.77	-15.44	QP -
0.17	32.04	0.40	0.09	32.53	54.77	-22.24	Average
0.20	46.27	0.40	0.11	46.78	63.67	-16.89	QP -
0.20	29.96	0.40	0.11	30.47	53.67	-23.20	Average
0.22	43.49	0.40	0.11	44.00	62.70	-18.70	QP
0.22	28.06	0.40	0.11	28.57	52.70	-24.13	Average
0.26	42.20	0.40	0.10	42.70	61.47	-18.77	QP
0.26	28.72	0.40	0.10	29.22	51.47	-22.25	Äverage
1.46	38.73	0.20	0.16	39.09	56.00	-16.91	QP
1.46	30.22	0.20	0.16	30.58	46.00	-15.42	Äverage



Test mode: Burning test mode Phase Polarity: Neutral
--



#### Notes:

0.22

0.28

0.28

28.20

39.86

25.12

1. The following Quasi-Peak and Average measurements were performed on the EUT:

0.11

0.10

0.10

28.71

40.36

25.62

-24.08

-20.36

-25.10

Average

Average

QΡ

52.79

60.72

50.72

2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

0.40

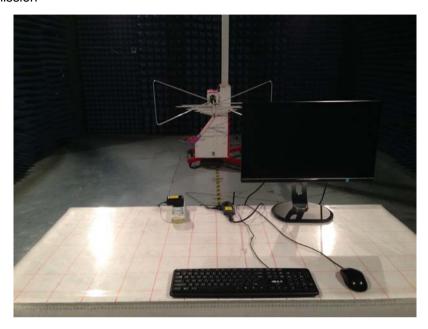
0.40

0.40



# 8 Test Setup Photo

Radiated Emission







Conducted Emission



# 9 EUT Constructional Details

Reference to the test report No.: GTS201808000194F01

-----End-----