Certificate of Compliance

for the FCC Declaration of Conformity Procedure from the

Conformity Assessment Body

Hong Kong Standards and Testing Centre

Designation Number: HK0001

on the basis of Asia-Pacific Economic Cooperation (APEC) economies' Mutual Recognition Arrangement for Conformity Assessment of Telecommunications Equipment (APEC Tel MRA) scheme sanctioned by the Federal Communications Commission of the United States Government.

Certificate Number:	FCC001892
Test Laboratory:	The Hong Kong Standards and Testing Centre Ltd.
Test Report / Issued date:	MH185727 / 15 November, 2011
Applicant:	Darveen Technology Ltd.
Manufacturer:	Darveen Technology Ltd.
Type of Equipment:	Industrial Mobile Computer
Brand Name:	Darveen
Model Number:	VT-635

Rules and Regulations

United States CFR 47 FCC Part 15 Subpart B (Unintentional Radiators).

Standards

ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz.

Remark

This certificate shall be used in conjunction with the above mentioned test report.

Signed by Dr. LEE Kam Chuen

ElectroMagnetic Compatibility Department

For and on behalf of

Date: 2011-11-15

The Hong Kong Standards and Testing Centre Ltd.

(Conformity Assessment Body CAB under the APEC Tel MRA)

10 Dai Wang St., Tai Po Industrial Estate, N.T., Hong Kong Tel.: (852)26661888 Fax: (852)26644353 http://www.hkstc.org

STC Test Report

Date: 2011-11-15
No.: MH185727

Applicant (DAT003): Darveen Technology Ltd.
Room 7F-B, West 210 Building, No.4 Tairan Road, Chegong Miao, Futian District, Shenzhen, China

Manufacturer: Darveen Technology Ltd.
Room 7F-B, West 210 Building, No.4 Tairan Road, Chegong Miao, Futian District, Shenzhen, China

Description of Sample(s): Submitted sample(s) said to be

Product:	Industrial Mobile Computer
Brand Name:	Darveen
Model Number:	VT-635

Date Sample(s) Received: 2011-09-07

Date Tested: 2011-10-21, 2011-11-11

Investigation Requested: FCC Part 15 Subpart B

Conclusion(s): The submitted product COMPLIED with the requirements of Federal Communications Commission [FCC] Rules and Regulations Part 15. The tests were performed in accordance with the standards described above and on Section 2.2 in this Test Report.

Remark(s): ---

Dr. LEE Kam Chuen
Authorized Signatory
ElectroMagnetic Compatibility Department
For and on behalf of
The Hong Kong Standards and Testing Centre Ltd.

STC Test Report

CONTENT:

1.0 General Details

1.1 Equipment Under Test [EUT]
Description of Sample(s)

Submitted sample(s) said to be

Product:	Industrial Mobile Computer
Manufacturer:	Darveen Technology Ltd. Room 7F-B, West 210 Building, No.4 Tairan Road, Chegong Miao, Futian District, Shenzhen, China
Brand Name:	Darveen
Model Number:	VT-635
Rating:	9-30VDC, 6A

1.2 Description of EUT Operation

The Equipment Under Test (EUT) is a Darveen Technology Ltd., Industrial Mobile Computer.

1.3 Date of Order

2011-09-07

1.4 Submitted Sample(s):

1 sample

1.5 Test Duration

2011-10-21, 2011-11-11

1.6 Country of Origin

China

2.0 Technical Details

2.1 Investigations Requested

Perform ElectroMagnetic Interference measurement in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15: 2010 and ANSI C63.4: 2009 for FCC DoC.

2.2 Test Standards and Results Summary Tables

EMISSION Results Summary					
Test Condition	Test Requirement	Test Method	Class / Severity	Test Result	
				Pass	Failed
Radiated Emissions	FCC 47CFR 15.109	ANSI C63.4:2009	Class B	☒	☐
Conducted Emissions on AC, 0.15MHz to 30MHz	FCC 47CFR 15.107	ANSI C63.4:2009	Class B	☒	☐

3.0 Test Results

3.1 Emission

3.1.1 Radiated Emissions

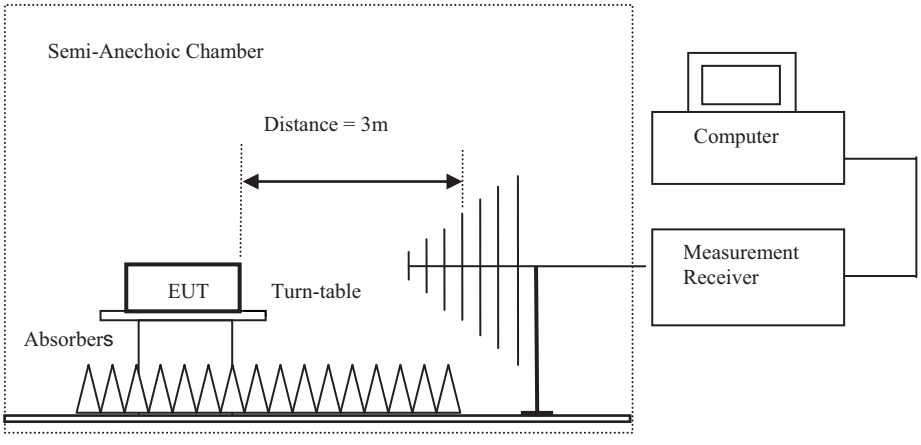
Test Requirement:	FCC 47CFR 15.109
Test Method:	ANSI C63.4:2009
Test Date:	2011-11-11
Mode of Operation:	On mode

Test Method:

The sample was placed 0.8m above the ground plane of Semi-Anechoic chamber*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

*: Semi-Anechoic chamber located on the G/F of The Hong Kong Standards and Testing Centre Ltd. with a metal ground plane filed with the FCC pursuant to section 2.948 of the FCC rules, with Registration Number: 607756.

Test Setup:



Ground Plane

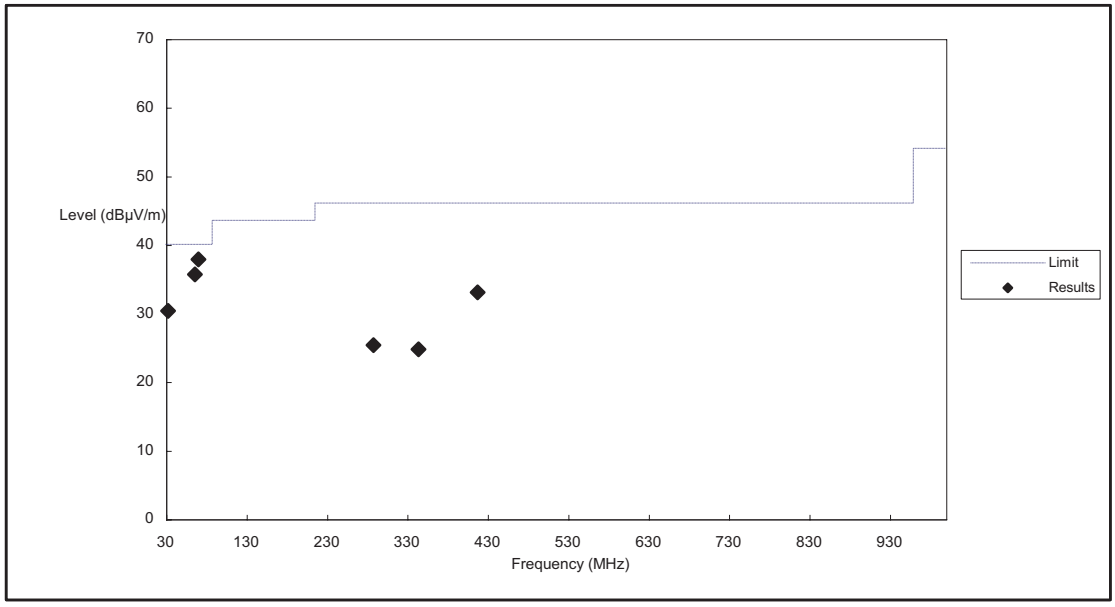
Absorbers placed on top of the ground plane are for measurements above 1000MHz only.

Limits for Radiated Emissions [FCC 47 CFR 15.109 Class B]:

Frequency Range [MHz]	Quasi-Peak Limits [μV/m]
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Results of On mode: PASS



Results of On mode: PASS

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dBμV/m	Limit @3m dBμV/m	Level @3m μV/m	Limit @3m μV/m
33.0	Vertical	30.3	40.0	32.7	100
66.6	Vertical	35.6	40.0	60.3	100
70.8	Horizontal	37.8	40.0	77.6	100
288.4	Horizontal	25.3	46.0	18.4	200
344.4	Horizontal	24.7	46.0	17.2	200
418.1	Horizontal	33.0	46.0	44.7	200

Remark:
Calculated measurement uncertainty: 30MHz to 1GHz 5.1dB

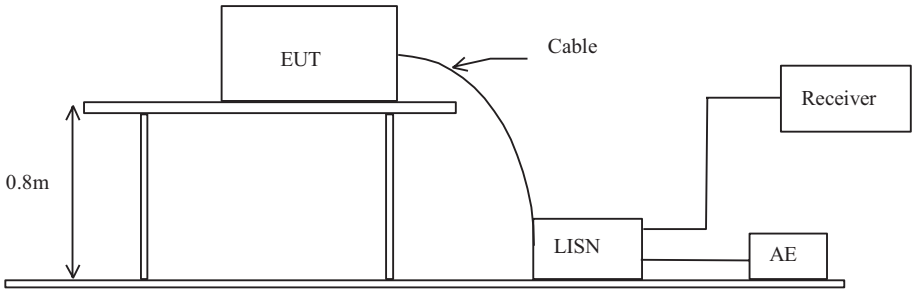
3.1.2 Conducted Emissions (0.15MHz to 30MHz)

Test Requirement:	FCC 47CFR 15.107
Test Method:	ANSI C63.4:2009
Test Date:	2011-10-21
Mode of Operation:	On mode

Test Method:

The test was performed in accordance with ANSI C63.4: 2009, with the following: an initial measurement was performed in peak and average detection mode on the live line, any emissions recorded within 30dB of the relevant limit line were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

Test Setup:



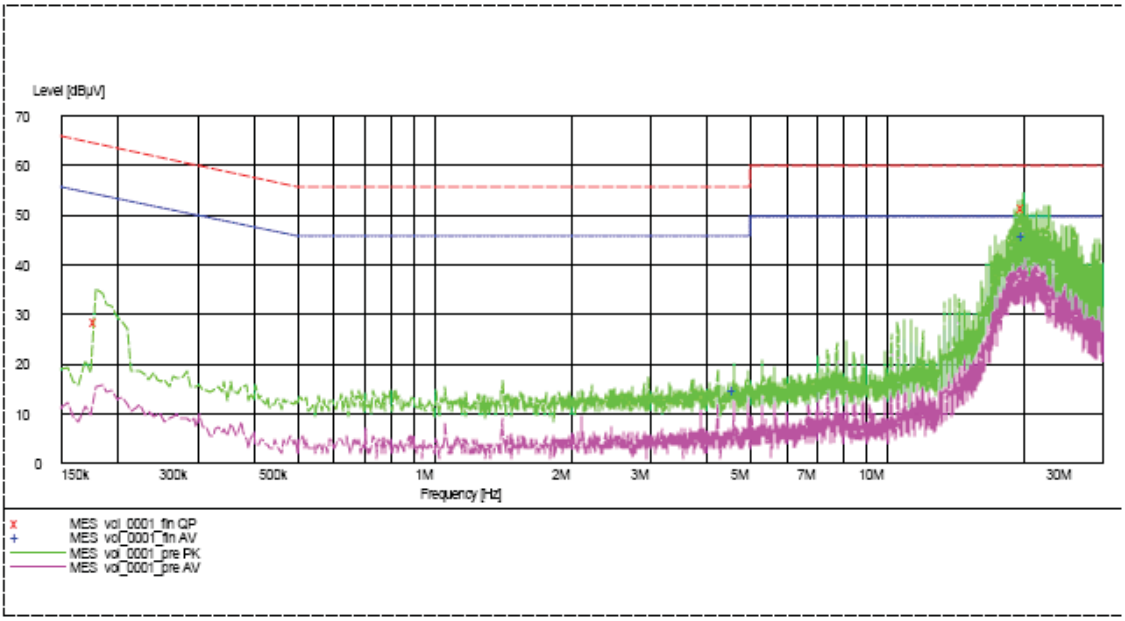
Limit for Conducted Emissions (FCC 47 CFR 15.107):

Frequency Range [MHz]	Quasi-Peak Limits [dBµV]	Average [dBµV]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

* Decreases with the logarithm of the frequency.

Limits for Conducted Emissions Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.

Results of On mode (L): PASS



Results of On mode (L): PASS

Conductor Live or Neutral	Frequency MHz	Quasi-peak		Average	
		Level dBμV	Limit dBμV	Level dBμV	Limit dBμV
Live	4.595	-*-	-*-	15.0	46.0
Live	20.140	-*-	-*-	44.0	50.0
Live	0.180	28.6	64.0	-*-	-*-
Live	20.145	51.6	60.0	-*-	-*-

Remarks:
Calculated measurement uncertainty : 3.97dB
-*- Emission(s) that is far below the corresponding limit line.

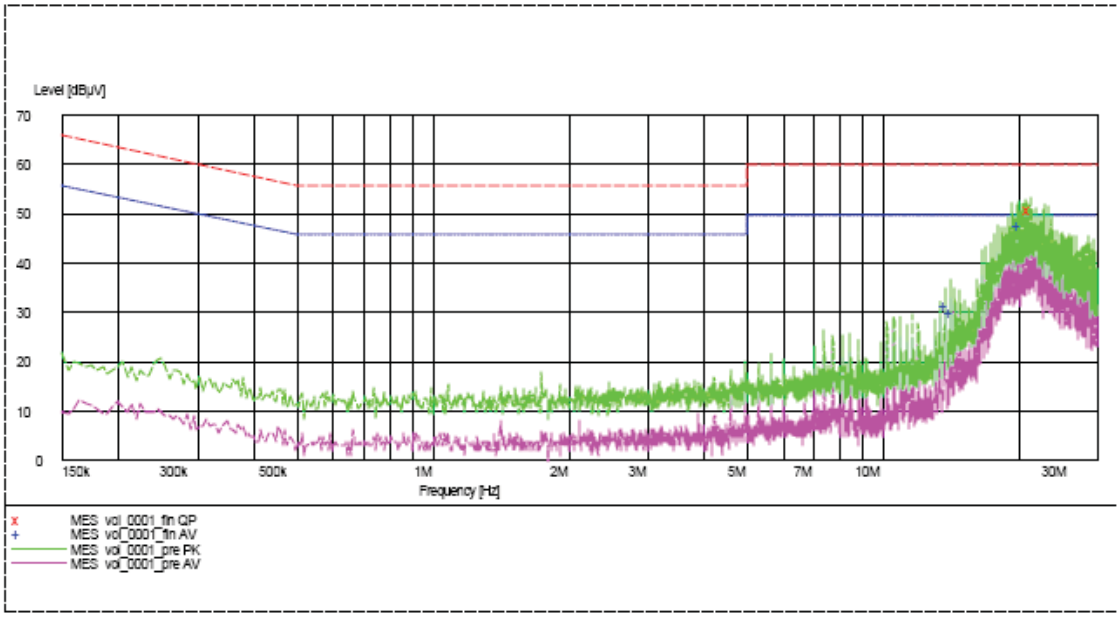
Limit for Conducted Emissions (FCC 47 CFR 15.107):

Frequency Range [MHz]	Quasi-Peak Limits [dBμV]	Average [dBμV]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

* Decreases with the logarithm of the frequency.

Limits for Conducted Emissions Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.

Results of On mode (N): PASS



Results of On mode (N): PASS

Conductor Live or Neutral	Frequency MHz	Quasi-peak		Average	
		Level dBμV	Limit dBμV	Level dBμV	Limit dBμV
Neutral	13.775	-*-	-*-	31.3	50.0
Neutral	14.130	-*-	-*-	30.0	50.0
Neutral	20.105	51.6	60.0	-*-	-*-
Neutral	21.235	50.9	60.0	-*-	-*-

Remarks:
Calculated measurement uncertainty : 3.97dB
-*- Emission(s) that is far below the corresponding limit line.

Appendix A

List of Measurement Equipment

Radiated Emission

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM215	MULTIDEVICE CONTROLLER	EMCO	2090	00024676	N/A	N/A
EM216	MINI MAST SYSTEM	EMCO	2075	00026842	N/A	N/A
EM217	ELECTRIC POWERED TURNTABLE	EMCO	2088	00029144	N/A	N/A
EM218	ANECHOIC CHAMBER	ETS-Linggren	FACT-3	--	2011/10/25	2012/10/25
EM174	BICONILOG ANTENNA	EMCO	3142B	1671	2010/02/09	2012/02/09
EM229	EMI Test Receiver	R&S	ESIB40	100248	2011/04/26	2012/04/26

Line Conducted

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM119	LISN	R & S	ESH3-Z5	846695/030	2011/01/07	2012/01/07
EM181	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB7	100072	2011/04/26	2012/04/26
EM154	SHIELDING ROOM	SIEMENS MATSUSHITA COMPONENTS	N/A	803-740-057-99A	2011/01/23	2012/01/23

Remarks:-
CM Corrective Maintenance
N/A Not Applicable or Not Available
TBD To Be Determined

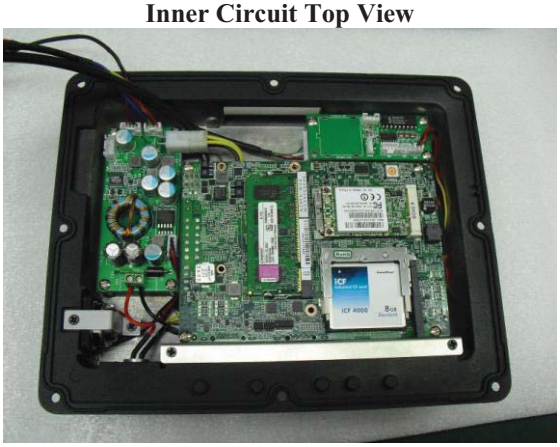
Appendix B

Photographs of EUT

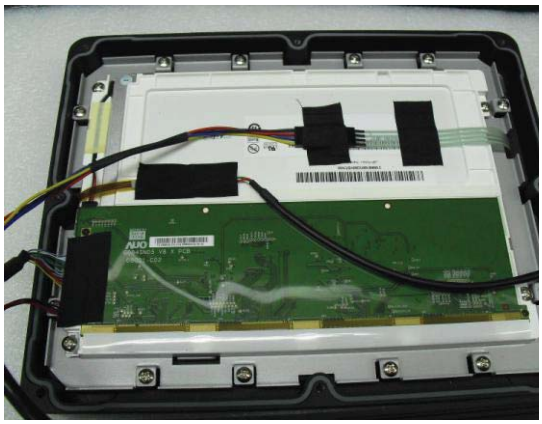
Front View of the product

Rear View of the product

Inner Circuit Top View

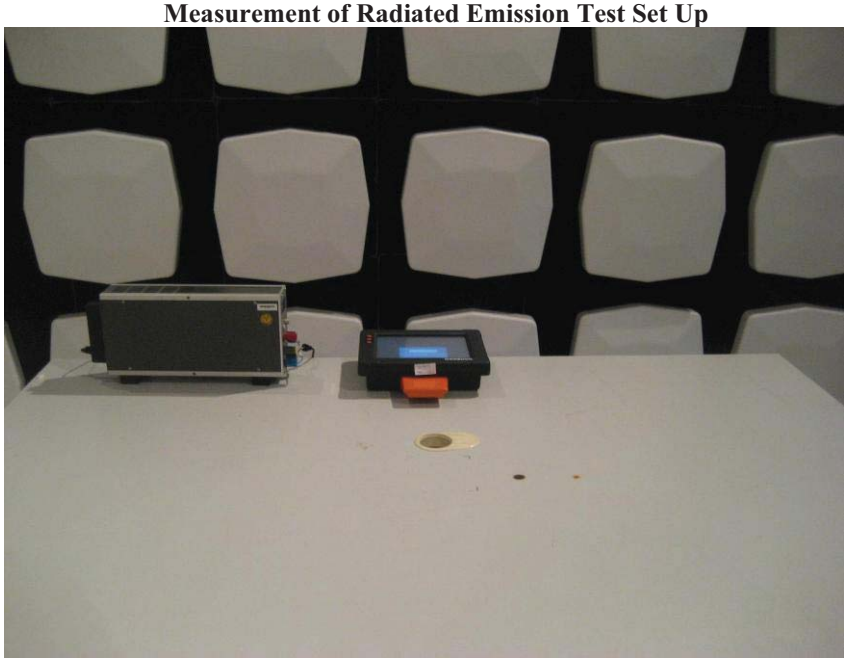


Inner Circuit Bottom View

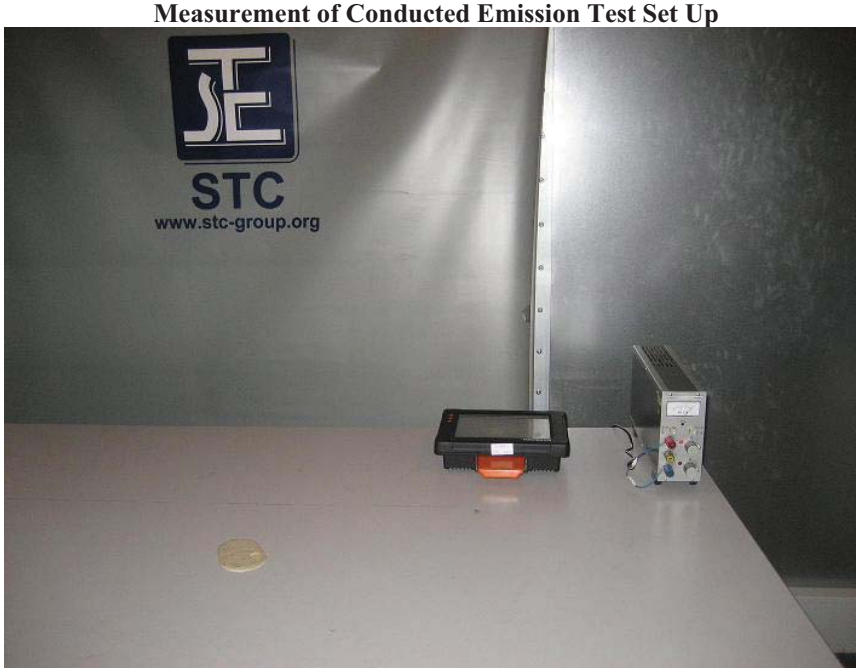


Photographs of EUT

Measurement of Radiated Emission Test Set Up



Measurement of Conducted Emission Test Set Up



******* End of Test Report *******