

# FCC PART 15 SUBPART B

# MEASUREMENT AND TEST REPORT

For

#### FINGERTEC WORLDWIDE SDN BHD

NO.6, 8 & 10, JALAN BK 3/2, BANDAR KINRARA, 47180 PUCHONG, SELANGOR, MALAYSIA

MODEL: OFIS-Y

September 17, 2012

This Report Concerns: **Equipment Type:**  □ Original Report Fingerprint Reader Test By: Yang yang **Report Number:** BCT12HR-1524E Test Date: September 12~17, 2012 Kevin Chi/ KeVM Reviewed By: Approved By: Kendy Wang/ Shenzhen Bontek Compliance Testing LaboratoryCo., Ltd. Prepared By: 1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China Tel: +86-755-86337020 Fax: +86-755-86337028

Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior written consent of Shenzhen Bontek Compliance Testing Laboratory Co., Ltd.



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#### 1 - GENERAL INFORMATION

#### 1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:

FINGERTEC WORLDWIDE SDN BHD

Address of applicant:

NO.6, 8 & 10, JALAN BK 3/2, BANDAR KINRARA, 47180

PUCHONG, SELANGOR, MALAYSIA

Manufacturer:

FINGERTEC WORLDWIDE SDN BHD

Address of manufacturer:

NO.6, 8 & 10, JALAN BK 3/2, BANDAR KINRARA, 47180

PUCHONG, SELANGOR, MALAYSIA

General Description of E.U.T

**EUT Description:** 

Fingerprint Reader

Trade Mark:

FING@RTEC.

Model No.:

**OFIS-Y** 

Power Rating:

Input: USB DC5V

Remark: \* The test data gathered are from the production sample provided by the manufacturer.

#### 1.2 Test Standards

The following Declaration of Conformity report of EUT is prepared in accordance with FCC Rules and Regulations Part 15 Subpart B 2007

The objective of the manufacturer is to demonstrate compliance with the described above standards.

#### 1.3 Test Summary

For the EUT described above. The standards used were FCC Part 15 Subpart B for Emissions

Table 1: Tests Carried Out Under FCC Part 15 Subpart B

Standard	Test Items	Status
FCC Part 15 Subpart B	Conduction Emission, 0.15MHz to 30MHz	<b>√</b>
FCC Part 15 Subpart B	Radiation Emission, 30MHz to 1000MHz	<b>√</b>

 $\sqrt{\phantom{a}}$  Indicates that the test is applicable

× Indicates that the test is not applicable



#### 1.4 Test Methodology

All measurements contained in this report were conducted with CISPR 16-1: 2002, radio disturbance and immunity measuring apparatus, and CISPR16-2: 2002, Method of measurement of disturbances and immunity.

All measurement required was performed at Shenzhen Bontek Compliance Testing LaboratoryCo., Ltd. at 1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China

#### 1.5 Test Facility

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

#### FCC - Registration No.: 338263

Shenzhen Bontek Compliance Testing Laboratory Co., Ltd., 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 our files. Registration 338263, March, 2011.

#### IC Registration No.: 7631A

The 3m alternate test site of Shenzhen Bontek Compliance Testing Laboratory Co., Ltd. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 7631A on January 2011.

The facility also complies with the radiated and AC line conducted test site criteria set forth in ANS.

The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

#### CNAS - Registration No.: L3923

Shenzhen Bontek Compliance Testing Laboratory Co., Ltd. to ISO/IEC 17025:25 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

The acceptance letter from the CNAS is maintained in our files: Registration: L3923, March, 2012.

#### TUV - Registration No.: UA 50203122-0001

Shenzhen Bontek Compliance Testing Laboratory Co., Ltd. An assessment of the laboratory was conducted according to the "Procedures and Conditions for EMC Test Laboratories" with reference to EN ISO/IEC 17025 by a TUV Rheinland auditor. Audit Report NO. 17010783-002



# 1.6 Test Equipment List and Details

Test equipments list of Shenzhen Bontek Compliance Testing Laboratory Co., Ltd.

No.	Instrument no.	Equipment	Manufacturer	Model No.	S/N	Calculator date	Calculator due date
1	BCT-EMC001	EMI Test Receiver	R&S	ESCI	100687	2012-4-6	2013-4-5
2	BCT-EMC002	EMI Test Receiver	R&S	ESPI	100097	2012-7-24	2013-7-23
3	BCT-EMC003	Amplifier	HP	8447D	1937A02492	2012-4-6	2013-4-5
4	BCT-EMC004	Single Power Conductor Module	FCC	FCC-LISN-5- 50-1-01- CISPR25	07101	2012-4-6	2013-4-5
5	BCT-EMC005	Single Power Conductor Module	FCC	FCC-LISN-5- 50-1-01- CISPR25	07102	2012-4-6	2013-4-5
6	BCT-EMC006	Power Clamp	SCHWARZBECK	MDS-21	3812	2012-4-6	2013-4-5
7	BCT-EMC007	Positioning Controller	C&C	CC-C-1F	MF7802113	N/A	N/A
8	BCT-EMC008	`Electrostatic Discharge Simulator	TESEQ	NSG437	125	2012-4-6	2013-4-5
9	BCT-EMC009	Fast Transient Burst Generator	SCHAFFNER	MODULA6150	34572	2012-4-6	2013-4-5
10	BCT-EMC010	Fast Transient Noise Simulator	Noiseken	FNS-105AX	10501	2012-5-06	2013-5-05
11	BCT-EMC011	Color TV Pattern Genenator	PHILIPS	PM5418	TM209947	N/A	N/A
12	BCT-EMC012	Power Frequency Magnetic Field Generator	EVERFINE	EMS61000-8K	608002	2012-4-6	2013-4-5
14	BCT-EMC014	Capacitive Coupling Clamp	TESEQ	CDN8014	25096	2012-4-6	2013-4-5
15	BCT-EMC015	High Field Biconical Antenna	ELECTRO- METRICS	EM-6913	166	2011-11-28	2012-11-27
16	BCT-EMC016	Log Periodic Antenna	ELECTRO- METRICS	EM-6950	811	2011-11-28	2012-11-27
17	BCT-EMC017	Remote Active Vertical Antenna	ELECTRO- METRICS	EM-6892	304	2011-11-28	2012-11-27
18	BCT-EMC018	TRILOG Broadband Test- Antenna	SCHWARZBECK	VULB9163	9163-324	2012-04-11	2013-04-10
19	BCT-EMC019	Horn Antenna	SCHWARZBECK	BBHA9120A	0499	2011-11-28	2012-11-27



20	BCT-EMC020	Teo Line Single Phase Module	SCHWARZBECK	NSLK8128	8128247	2011-10-24	2012-10-23
21	BCT-EMC021	Triple-Loop Antenna	EVERFINE	LLA-2	711002	2012-4-6	2013-4-5
22	BCT-EMC022	Electric bridge	Jhai	JK2812C	803024	N/A	N/A
23	BCT-EMC026	RF POWER AMPLIFIER	FRANKONIA	FLL-75	1020A1109	2012-4-6	2013-4-5
24	BCT-EMC027	CDN	FRANKONIA	CDN M2+M3	A3027019	2012-4-6	2013-4-5
25	BCT-EMC029	6DB Attenuator	FRANKONIA	N/A	1001698	2012-4-6	2013-4-5
26	BCT-EMC030	EM Injection clamp	FCC	F-203I-23mm	091536	2012-4-6	2013-4-5
27	BCT-EMC031	9kHz-2.4GHz signal generator 2024	MARCONI	10S/6625-99- 457-8730	112260/042	2012-4-6	2013-4-5
28	BCT-EMC032	10dB attenuator	ELECTRO- METRICS	EM-7600	836	2012-4-6	2013-4-5
29	BCT-EMC033	ISN	TESEQ	ISN-T800	30301	2012-6-05	2013-6-04
30	BCT-EMC034	10KV surge generator	SANKI	SKS-0510M	048110003E 321	2011-11-14	2012-11-13
31	BCT-EMC035	HRMONICS&FLI CKRE ANALYSER	VOLTECH	PM6000	200006700433	2012-6-05	2013-6-04
32	BCT-EMC036	Spectrum Analyzer	R&S	FSP	100397	2011-11-2	2012-11-1
33	BCT-EMC037	Broadband preamplifier	SCH WARZBECK	BBV9718	9718-182	2012-4-6	2013-4-5

Bontek Compliance Testing



### 2 - SYSTEM TEST CONFIGURATION

#### 2.1 Justification

The system was configured for testing in a typical fashion (as only used by a typical user).

#### 2.2 EUT Exercise Software

The EUT exercising program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. The software offered by manufacture, can let the EUT being Connect to PC.

#### 2.3 Special Accessories

As shown in section 2.5, interface cable used for compliance testing is shielded as normally supplied by **FINGERTEC WORLDWIDE SDN BHD** and its respective support equipment manufacturers.

#### 2.4 Equipment Modifications

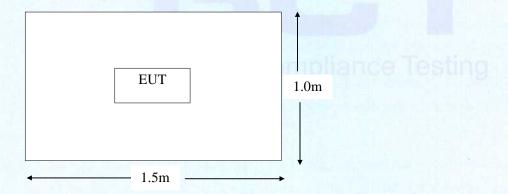
The EUT tested was not modified by BCT.

#### 2.5 Configuration of Test System



**EUT** 

#### 2.6 Test Setup Diagram





### 3 - DISTURBANCE VOLTAGE AT THE MAINS TERMINALS

#### 3.1 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is 3.4 dB.

#### 3.2 Limit of Disturbance Voltage at The Mains Terminals

Fraguency Pange (MUz)	Limits ( dBuV)				
Frequency Range (MHz)	Quasi-Peak	Average			
0.150~0.500	66~56	56~46			
0.500~5.000	56	46			
5.000~30.00	60	50			

Note: (1)The tighter limit shall apply at the edge between two frequency bands.

#### 3.3 EUT Setup

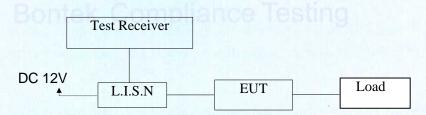
The setup of EUT is according with ANSI C63.4-2009 measurement procedure. The specification used was the FCC Rules and Regulations Part 15 Subpart B limits.

The EUT was placed center and the back edge of the test table.

The AV cables were draped along the test table and bundled to 30-40cm in the middle.

The spacing between the peripherals was 10 cm.

Maximum emission emitted from EUT was determined by manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation and the levels in the final result of the test were recorded with the EUT running in the operating mode that maximum emission was emitted.



#### 3.4 Instrument Setup

The test receiver was set with the following configurations:

Test Receiver Setting:

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#### 3.5 Test Procedure

During the conducted emission test, the EUT power cord was connected to the auxiliary outlet of the first Artificial Mains.

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance using all installation combination.

All data was recorded in the peak detection mode. Quasi-peak and Average readings were only performed when an emission was found to be marginal (within -10 dB $_{\mu}$ V of specification limits). Quasi-peak readings are distinguished with a "**QP**". Average readings are distinguished with a "**AV**".

#### 3.6 Summary of Test Results

According to the data in section 3.6, the EUT <u>complied with the FCC Part 15 B</u> Conducted margin, with the *worst* margin reading of:

#### 3.7 Disturbance Voltage Test Data

Temperature ( °C )	22~25			
Humidity ( %RH )	50~55			
Barometric Pressure ( mbar )	950~1000			
EUT	Fingerprint Reader			
M/N	OFIS-Y			
Operating Mode	Connect to PC			

Test data see following pages

Remark: (1) When PK reading is less than relevant limit 20dB, the QP reading and AV reading will not be recorded.

(2) Where QP reading is less than relevant AV limit, the AV reading will not be measured

#### 3.8 Test Result

**PASS** 



#### **Conducted Emission Test Data**

EUT: Fingerprint Reader

**OFIS-Y** M/N:

**Operating Condition:** Connect to PC Test Site: Shielded Room

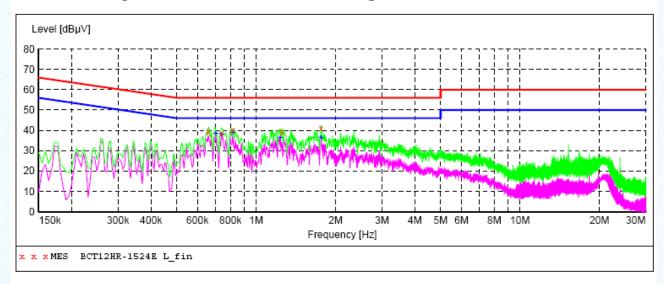
Operator: Yang

**Test Specification:** AC 230V/50Hz for PC

L Line Comment:

Start of Test: 9/17/2012/ 14:36 Tem:24℃ Hum:55%

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



#### MEASUREMENT RESULT: "BCT12HR-1524E L fin"

9/17/2012 14:36	
-----------------	--

9/1/	/2012 14:	36						
F	requency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.658500	39.50	10.2	56	16.5	QP	L1	GND
	0.739500	38.70	10.2	56	17.3	QP	L1	GND
	0.816000	40.00	10.1	56	16.0	QP	L1	GND
	1.252500	39.30	10.1	56	16.7	QP	L1	GND
	1.761000	40.80	10.1	56	15.2	QP	L1	GND

#### MEASUREMENT RESULT: "BCT12HR-1524E L fin2"

9/	/17/2012 14:	36						
	Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.703500	38.30	10.2	46	7.7	AV	$_{L1}$	GND
	0.739500	38.20	10.2	46	7.8	AV	L1	GND
	0.816000	38.80	10.1	46	7.2	AV	L1	GND
	1.234500	36.40	10.1	46	9.6	AV	L1	GND
	1.761000	36.50	10.1	46	9.5	AV	L1	GND

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#### **Conducted Emission Test Data**

EUT: Fingerprint Reader

**OFIS-Y** M/N:

**Operating Condition:** Connect to PC Test Site: Shielded Room

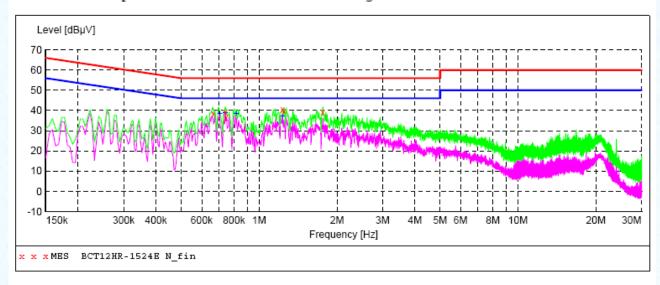
Operator: Yang

**Test Specification:** AC 230V/50Hz for PC

N Line Comment:

Start of Test: 9/17/2012/ 14:33 Tem:24℃ Hum:55%

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



#### MEASUREMENT RESULT: "BCT12HR-1524E N fin"

9/17/2012 14:33

1:33						
Level	Transd	Limit	Margin	Detector	Line	PE
dPnW						
ασμν	аь	ασμν	аь			
38.60	10.2	56	17.4	OP	N	GND
50.00			1,.1	×-		OIID
39.40	10.2	56	16.6	QP	N	GND
26 40	10.2	E C	10 6	OB	NT	GND
36.40	10.2	50	19.6	QP	1/4	GND
40 50	10 1	56	15 5	OP	M	GND
40.50	10.1		13.3	×-	14	OHL
39.80	10.1	56	16.2	OP	N	GND
				~		
39.20	10.1	56	16.8	QP	N	GND
	Level dBµV 38.60 39.40 36.40 40.50	Level Transd dBμV dB  38.60 10.2 39.40 10.2 36.40 10.2 40.50 10.1 39.80 10.1	Level Transd Limit dBμV dB dBμV  38.60 10.2 56 39.40 10.2 56 36.40 10.2 56 40.50 10.1 56 39.80 10.1 56	Level dBμV     Transd dB dBμV     Limit dBμV     Margin dB       38.60     10.2     56     17.4       39.40     10.2     56     16.6       36.40     10.2     56     19.6       40.50     10.1     56     15.5       39.80     10.1     56     16.2	Level dBμV     Transd dB dBμV     Limit dB dBμV     Margin dB     Detector dB       38.60     10.2     56     17.4     QP       39.40     10.2     56     16.6     QP       36.40     10.2     56     19.6     QP       40.50     10.1     56     15.5     QP       39.80     10.1     56     16.2     QP	Level dBμV         Transd dB dBμV         Limit dB dB         Margin dB         Detector Line dB           38.60         10.2         56         17.4         QP         N           39.40         10.2         56         16.6         QP         N           36.40         10.2         56         19.6         QP         N           40.50         10.1         56         15.5         QP         N           39.80         10.1         56         16.2         QP         N

#### MEASUREMENT RESULT: "BCT12HR-1524E N fin2"

9/17/2012 14:33

Frequency MHz		Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.703500 0.739500 0.816000 1.230000	38.40 39.00 38.50 37.20	10.2 10.2 10.1 10.1	46 46 46 46	7.6 7.0 7.5 8.8	AV AV	N N N	GND GND GND GND

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#### 4 - RADIATED DISTURBANCES

#### 4.1 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement is 4.0 dB.

#### 4.2 Limit of Radiated Disturbances

Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dBμV/m)
30 ~ 88	3	40
88~216	3	43.5
216 ~ 960	3	46
960 ~ 1000	3	54

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

(2) Distance refers to the distance in meters between the test instrument antenna and the closest point of any part of the E.U.T.

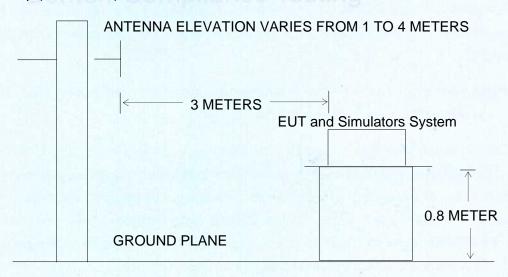
#### 4.3 EUT Setup

The radiated emission tests were performed in the in the 3-meter anechoic chamber, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC Part 15 Subpart B limits.

The EUT was placed on the center of the test table.

Maximum emission emitted from EUT was determined by manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation and the levels in the final result of the test were recorded with the EUT running in the operating mode that maximum emission was emitted.

Block diagram of test setup (In chamber)



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#### 4.4 Test Receiver Setup

According to FCC Part 15 rule, the frequency was investigated from 30 to 1000 MHz. During the radiated emission test, the test receiver was set with the following configurations:

#### Test Receiver Setting:

Detector.....Peak & Quasi-Peak

IF Band Width......120KHz

Antenna Position:

Height......1m to 4m

Polarity......Horizontal and Vertical

#### 4.5 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the peak detection mode. Quasi-peak readings performed only when an emission was found to be marginal (within -10 dB $_{\mu}$ V of specification limits), and are distinguished with a "**QP**" in the data table.

#### 4.6 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB $\mu$ V means the emission is 7dB $\mu$ V below the maximum limit for Subpart B. The equation for margin calculation is as follows:

Margin = Limit - Corr. Ampl.

#### 4.7 Radiated Emissions Test Result

Temperature ( °C )	22~25
Humidity ( %RH )	50~54
Barometric Pressure ( mbar )	950~1000
EUT	Fingerprint Reader
M/N	OFIS-Y
Operating Mode	Connect to PC

Test data see following pages

**Remark**: (1) When PK reading is less than relevant limit 20dB, the QP reading and AV reading will not be recorded.

(2) Where QP reading is less than relevant AV limit, the AV reading will not be measured

#### 4.8 Test Result

**PASS** 

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#### **Radiated Emission Test Data:**

EUT: Fingerprint Reader

M/N: **OFIS-Y** 

Connect to PC Operating Condition: Test Site: 3m CHAMBER

Operator: Chen

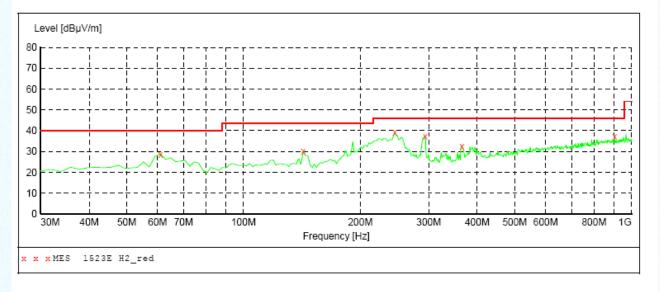
AC 230V/50Hz for PC **Test Specification:** Polarization: Horizontal Comment:

Start of Test: 9/17/2012/ 20:52 Tem:25°C Hum:50%

SWEEP TABLE: "test (30M-1G)"
Short Description: Fi Field Strength

ΙF Transducer Start Stop Detector Meas.

Time Frequency Frequency Bandw. 30.0 MHz 1.0 GHz MaxPeak Coupled 100 kHz VULB9163 NEW



#### MEASUREMENT RESULT: "1523E H2 red"

9/17/2012 20: Frequency		Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBµV/m	dB	dBµV/m	dB		cm	deg	
61.040000	28.80	14.2	40.0	11.2	QP	300.0	0.00	HORIZONTAL
142.520000	30.00	12.3	43.5	13.5	QP	100.0	0.00	HORIZONTAL
245.340000	39.10	17.1	46.0	6.9	QP	100.0	0.00	HORIZONTAL
293.840000	37.40	18.6	46.0	8.6	QP	100.0	0.00	HORIZONTAL
365.620000	32.50	20.7	46.0	13.5	QP	100.0	0.00	HORIZONTAL
904.940000	37.20	29.2	46.0	8.8	QP	300.0	0.00	HORIZONTAL



#### **Radiated Emission Test Data:**

EUT: Fingerprint Reader

M/N: **OFIS-Y** 

Connect to PC Operating Condition: Test Site: 3m CHAMBER

Operator: Chen

AC 230V/50Hz for PC **Test Specification:** Polarization: Vertical Comment:

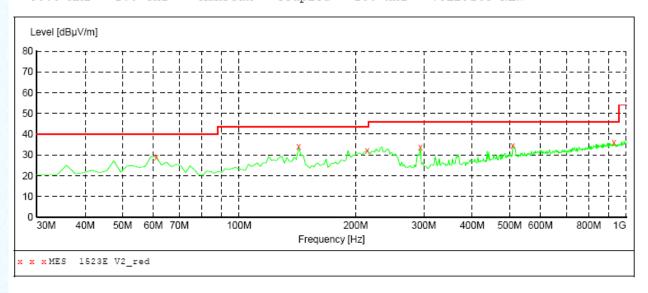
Start of Test: Tem:25°C Hum:50% 9/17/2012/ 20:48

SWEEP TABLE: "test (30M-1G)"
Short Description: Fig. Field Strength

Start Stop Detector Meas. ΙF Transducer

Frequency Frequency Time Bandw.

1.0 GHz 30.0 MHz 100 kHz VULB9163 NEW MaxPeak Coupled



#### MEASUREMENT RESULT: "1523E V2 red"

9/17/2012 20:48

	Level dBµV/m		Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
61.040000 142.520000 214.300000	29.10 34.00 32.30	14.2 12.3 15.2	40.0 43.5 43.5	10.9 9.5 11.2	QР	100.0 100.0 100.0		VERTICAL VERTICAL VERTICAL
293.840000 509.180000 930.160000	33.60 34.60 36.20	18.6 24.1 29.4	46.0 46.0 46.0	12.4 11.4 9.8	~	100.0 100.0 100.0		VERTICAL VERTICAL VERTICAL



# **APPENDIX A - EUT PHOTOGRAPHS**

#### **EUT - Front View**



#### **EUT - Back View**



#### **EUT -Side View**



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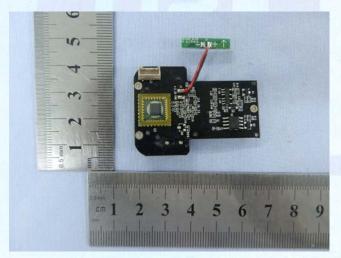
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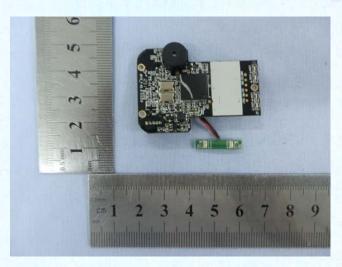
# **EUT –Open View**



#### **EUT-PCB View**

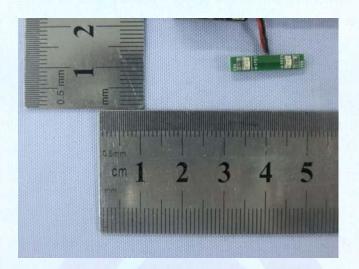


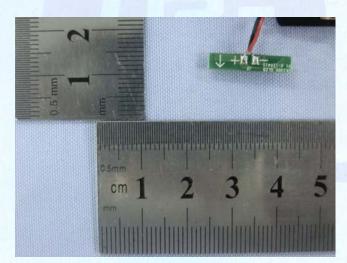
# Bontek Compliance Testing





#### **EUT -PCB View**





**Bontek Compliance Testing** 



# **APPENDIX B - TEST SETUP PHOTOGRAPHS**

#### **Conducted Emission**

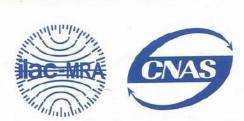


#### **Radiated Emission**





## **APPENDIX C - BONTEK ACCREDITATION CERTIFICATES**



China National Accreditation Service for Conformity Assessment

# LABORATORY ACCREDITATION CERTIFICATE

(Registration No. CNAS L3923)

Shenzhen Bontek Compliance Testing Laboratory Co., Ltd.

1/F., Block East H-3, OCT Eastern Ind. Zone, the 1st Road,

Xiangshan East Street, Nanshan District, Shenzhen, Guangdong, China

is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence of testing.

The scope of accreditation is detailed in the attached appendices bearing the same registration number as above. The appendices form an integral part of this certificate.

Date of Issue: 2012-03-22 Date of Expiry: 2015-03-21

Date of Initial Accreditation: 2009-02-27

Date of Update: 2012-03-22



Signed on behalf of China National Accreditation Service for Conformity Assessment

China National Accreditation Service for Conformity Assessment (CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation schemes for conformity assessment. CNAS is the signatory to International Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (ILAC MRA) and Asia Pacific Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (APLAC MRA).

No.CNASAL2

0003595





# Certificate

of

# Appointment

No. UA 50203122-0001

The Applicant

**Bontek Compliance Testing** Laboratory Ltd
1/F, Block East H-3, OCT Eastern
Industrial Zone, Qiaocheng East Rd.
Nanshan, Shenzhen, Guangdong
P.R. China

has been authorized to carry out EMC tests by order and under supervision of TÜV Rheinland according to

EN55011,EN55012,EN55013,EN55014-1,EN55014-2,EN55015,EN55020 CISPR11,CISPR12,CISPR13,CISPR14-1,CISPR14-2,CISPR15,EN55022 EN55024, EN55025, CISPR20, CISPR22, CISPR24, CISPR25 EN/IEC61000-3-2/-3,EN/IEC61000-4-2/-4/-5/-6/-8/-11 EN/IEC61547,EN/IEC62040-2,EN/IEC61000-6-1 EN/IEC61000-6-2,EN/IEC61000-6-3,EN/IEC61000-6-4 EN/IEC60601-1-2, EN/IEC61326-1, EN/IEC61326-x(x=2,3,4, or 5)

An assessment of the laboratory was conducted according to the "Procedures and Conditions for Appointments of EMC Test Laboratories" with reference to EN ÎSO/IEC 17025 by a TÜV Rheinland auditor.

Audit Report No. 17010783-002 This certificate is valid until the next scheduled audit or up to 18 months, at the discretion of TÜV Rheinland.

Date of issue: 06.05.2011

TÜV Rheinland/CCIC (Qingdao) Co., Ltd. 18 Hong Kong Middle Road, Qingdao 266071, P.R.China

Tel: +86-532-8578-1778

Fax.:+86-532-8578-1079 http://www.chn.tuv.com

Certification Body Shawn Peng

Report No.:BCT12HR-1524E

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#### FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division 7435 Oakland Mills Road Columbia, MD 21046

March 03, 2011

Registration Number: 338263

Bontek Compliance Testing Laboratory Ltd 1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China

Attention:

Tony Wu, General Manager

Re:

Measurement facility located at Hua Qiao Cheng East Ind. Area, Shenzhen, China

Anechoic chamber (3 meter)

Date of Renewal: March 03, 2011

Dear Sir or Madam:

Your request for renewal of the registration of the subject measurement facility has been received. The information submitted has been placed in your file and the registration has been renewed. The name of your organization will remain on the list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that the file must be updated for any changes made to the facility and the registration must be renewed at least every three years.

Measurement facilities that have indicated that they are available to the public to perform measurement services on a fee basis may be found on the FCC website <a href="www.fcc.gov">www.fcc.gov</a> under E-Filing, OET Equipment Authorization Electronic Filing, Test Firms.

Sincerely

Phyllis Parrish

Industry Analyst