TÜVRheinland®

Produkte
Products

Prüfbericht - Nr.: 17023984 001

Test Report No.:

Auftraggeber: *Client:*	**Shenzhen AEE Technology CO., LTD.** **AEE Hi-Tech Park, Sun Industrial Area, Xili, Nanshan District, Shenzhen, China**
Gegenstand der Prüfung: *Test item:*	**G-EYE 1080**
Bezeichnung: *Identification:*	**8216201*** **(* - refer to below 'Other Aspects')**
Serien-Nr.: *Serial No.:*	**n.a.**
Wareneingangs-Nr.: *Receipt No.:*	**163088322**
Eingangsdatum: *Date of receipt:*	**2012-01-09**
Zustand des Prüfgegenstandes bei Anlieferung: *Condition of test item at delivery:*	Test samples received are sufficient for testing and not damaged.
Prüfort: *Testing location:*	**Waltek Services (Shenzhen) Co., Ltd.** **1/F, Fukangtai Building, West Baima Rd., Songgang Street, Baoan District,** **Shenzhen, Guangdong 518105, China** **FCC Registration No.: 880581**
Prüfgrundlage: *Test specification:*	**FCC Part 15 Subpart B** **(ANSI C63.4: 2003)**
Prüfergebnis: *Test Result:*	**Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).** *The test item passed the test specification(s).*
Prüflaboratorium: *Testing Laboratory:*	**TÜV Rheinland (Shenzhen) Co., Ltd.**

geprüft/ *tested by:*

Datum / *Date*	Name/Stellung / *Name/Position*	Unterschrift / *Signature*
2012-04-19	Owen Tian/Project Manager	

kontrolliert/ *reviewed by:*

Datum / *Date*	Name/Stellung / *Name/Position*	Unterschrift / *Signature*
2012-04-19	Shawn Peng/Technical Certifier	

Sonstiges/ *Other Aspects:*

Remark: * - the model name is 8216201, the trade mark is GEONAUTE.

Abkürzungen:				*Abbreviations:*			
	P(ass)	=	entspricht Prüfgrundlage		P(ass)	=	passed
	F(ail)	=	entspricht nicht Prüfgrundlage		F(ail)	=	failed
	N/A	=	nicht anwendbar		N/A	=	not applicable
	N/T	=	nicht getestet		N/T	=	not tested

TEST SUMMARY

5.1.1 CONDUCTED EMISSION
RESULT: Pass

5.2.1 RADIATED EMISSION
RESULT: Pass

Contents

1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix 1: Test Result

2. Test Sites

2.1 Test Facilities

Waltek Services (Shenzhen) Co., Ltd.

1/F, Fukangtai Building, West Baima Rd., Songgang Street, Baoan District, Shenzhen, Guangdong 518105, China

The tests at the test sites have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
Radiated Emission				
EMC Analyzer	Agilent	E7405A	MY45114943	2012-08-08
Trilog Broadband Antenne 30-3000 MHz	SCHWARZBECK MESS-ELEKTROM	VULB9163	336	2012-08-08
Broad-band Horn Antenna 1-18 GHz	SCHWARZBECK MESS-ELEKTROM	BBHA 9120 D	667	2012-08-08
Broadband Preamplifier 0.5-18 GHz	SCHWARZBECK MESS-ELEKTROM	BBV 9718	9718-148	2012-08-08
Positioning Controller	C&C LAB	CC-C-IF	MF7802108	2012-08-08
Conducted Emission				
Test Receiver	ROHDE&SCHWARZ	ESCI	101155	2012-08-08
Two-Line V-Network	ROHDE&SCHWARZ	ENV216	100115	2012-08-08

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.5 Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO/IEC 17025 are:

Table 2: Measurement Uncertainty

Items		Extended Uncertainty
Conducted Emission (0.15-30MHz)	Disturbance Voltage (dBuV)	U=±3.64dB, k=2, σ=95%
Radiated Emission (30-1000MHz)	Field strength (dBuV/m)	U=±5.03dB, k=2, σ=95%
Radiated Emission (1000-2000MHz)	Field strength (dBuV/m)	U=±5.43dB, k=2, σ=95%

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix1 of this report and delivered to the applicant. A copy has been retained in the TUV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

Waltek Services (Shenzhen) Co., Ltd. test facility located at 1/F, Fukangtai Building, West Baima Rd., Songgang Street, Baoan District, Shenzhen, Guangdong 518105, China' is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

2.8 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

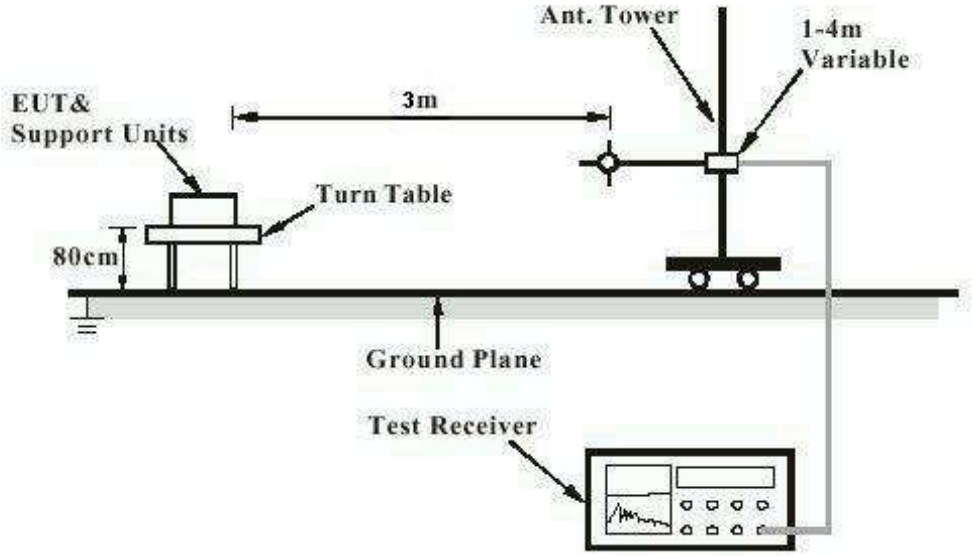
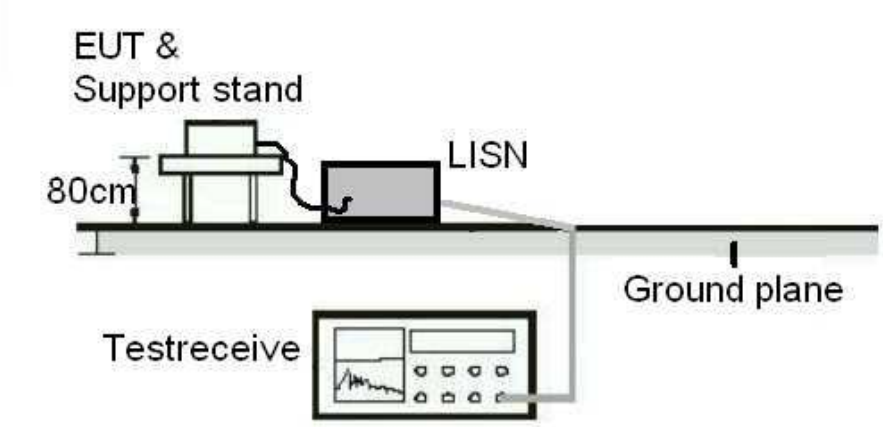


Diagram of Measurement Equipment Configuration for Conduction Measurement



3. General Product Information

3.1 Product Function and Intended Use

The **EUT** (**E**quipment **U**nder **T**est) is a camera which powered via battery and can connected to PC only for charging & transmitting data function, it can display the picture on the LCD panel (which can be installed or removed from the main body) or connect to display equipment via output port.
For details refer to the Circuit Diagram & Instruction Manual.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

Technical Specification	Value
Kind of Equipment	G-EYE 1080
Type Designation	8216201
Operating Frequency band	433.956MHz
Channel Bandwidth	120kHz
Modulation	AM
Operation Voltage	DC 3.7V (via built-in Li-ion battery)

3.3 Independent Operation Modes

The basic operation modes are:

A. On
1. Recording mode with and without LCD display (battery operated only)
2. Playing mode with and without LCD display (battery operated only)
3. AV output mode without LCD display (battery operated only)
4. HDMI mode without LCD display (battery operated only)
5. Connected to PC for transmitting data
6. Connected to PC for charging only
7. Wireless receiving mode (battery operated only)

B. Off

Note: for mode A.5 & A.6, it's only as verification according to customer's requirement, not for FCC DoC purpose.

3.4 Noise Generating and Noise Suppressing Parts

Integrated into to the circuit.

3.5 Submitted Documents

- Schematic Diagram
- Instruction Manual
- Marking Label
- PCB Layout
- Bill of Material (BOM)

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5.

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested together with the following accessories:

Item	Manufacturer	Model	S/N
Computer	Lenovo	T4900V	0100640332
LCD	View Sonic	VA521	922050101551
Keyboard	Shuangfeiyan	KB-3	-
Mouse	JEEJA	M-01	-

4.4 Countermeasures to achieve EMC Compliance

The test sample, which has been tested, contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

5. Test Results EMISSION

5.1 Emission in the Frequency Range up to 30 MHz

5.1.1 Conducted Emission

RESULT: **Pass**

Date of testing	:	2012-02-16
Test specification	:	FCC Part 15 Per Section 15.107(a)
Frequency range	:	0.15 - 30MHz
Classification	:	Class B
Test procedure	:	ANSI C63.4: 2003
Deviations from standard test procedure	:	None
Kind of test site	:	Shielded room

Test setup

Input Voltage	:	AC 120V, 60Hz (AC mains of PC)
Operation mode	:	A.5, A.6
Earthing	:	Connected

Note: final measurement was performed on the worst case from operation mode A.5 & A.6.

Test data refer to Appendix 1.

5.2 Emission in the Frequency Range above 30 MHz

5.2.1 Radiated Emission

RESULT: **Pass**

Date of testing	:	2012-02-01
Test standard	:	FCC Part 15 Subpart B
Test procedure	:	ANSI C63.4:2003
Deviations from standard test procedure	:	None
Frequency range	:	30 - 2000MHz*
Equipment Classification	:	Class B
Limits	:	Section 15.109(a)
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Input Voltage	:	AC 120V, 60Hz (AC mains of PC), DC 3.7V (via built-in Li-ion battery)
Operation mode	:	A
Earthing	:	Not connected

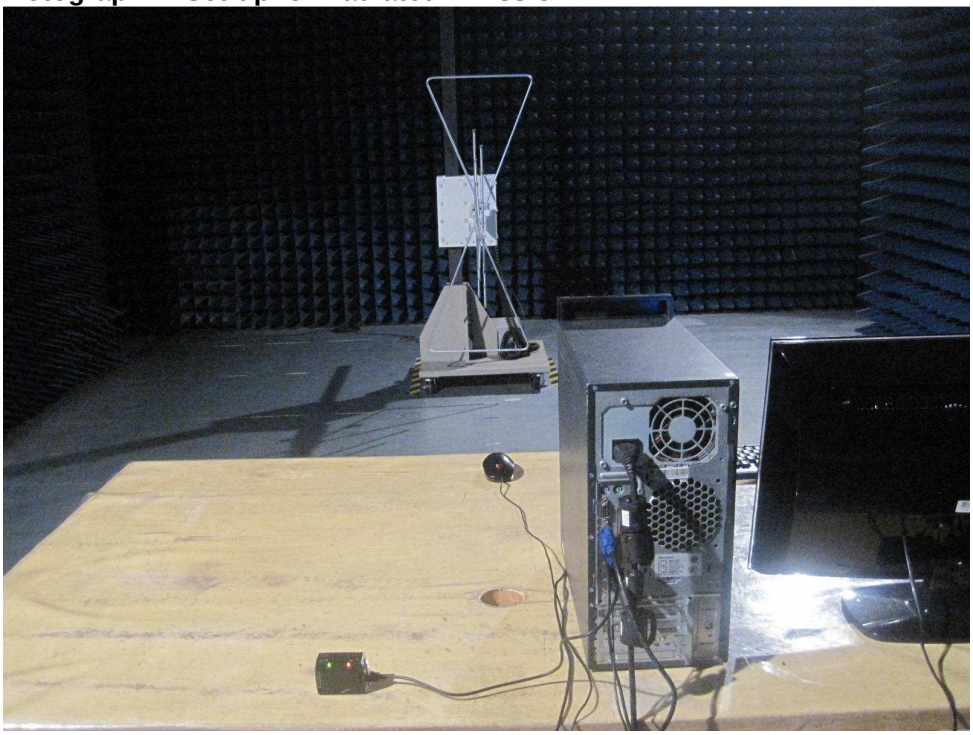
*- The EUT's highest frequency generated and used is 433.956MHz, hence the highest scan frequency is up to 2GHz only.

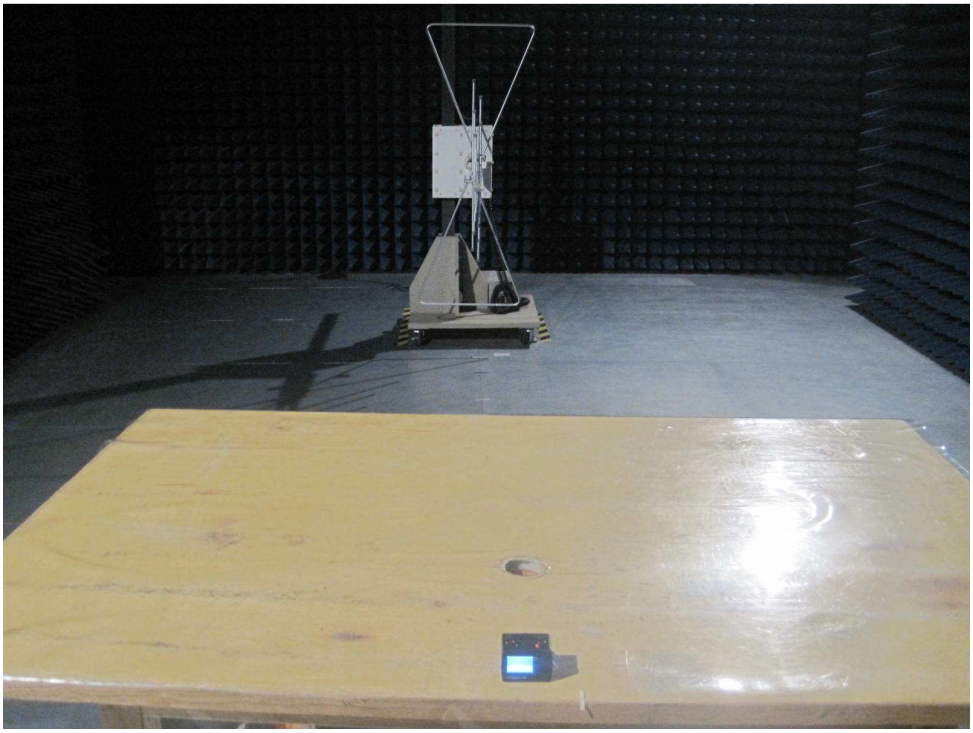
Test data refer to Appendix 1.

6. Photographs of the Test Set-Up

Photograph 1: Set-up for Conducted Emission

Photograph 2: Set-up for Radiated Emission





7. List of Tables

8. List of Photographs