

# EMSD



**The Government of the Hong Kong Special Administrative Region  
Electrical and Mechanical Services Department  
Electrical Products (Safety) Regulation (Cap. 406 Sub. Leg.)**

## **Certificate of Recognized Certification Body**

*I hereby certify that*

**Co., Ltd.**

*is registered as a Recognized Certification Body and has been included in the register of recognized certification body maintained by this Department under the Electrical Products (Safety) Regulation (Cap. 406 Sub. Leg.).*

Registration Number

**ARCB0092**

  
( W.Y. HO )

*for Director of Electrical and Mechanical Services*

Date 16 September 2013

**B 000128**

**PHOENIX TESTLAB GmbH**

Königswinkel 10, D-32825 Blomberg, Germany  
[www.phoenix-testlab.de](http://www.phoenix-testlab.de)

recognised as Notified Body (EU-Identification Number 0700) and as Conformity Assessment Body in the sector EMC concerning the conclusion of the Mutual Recognition Agreement between the EU and the USA

# CERTIFICATE OF ACCEPTANCE

Number: 702695\_05

PHOENIX TESTLAB GmbH as the Notified Body  
performing the review of Technical Construction Files (TCF)  
in compliance with Council Directive 2014/53/EU on radio equipment (RED)  
and the mutual recognition of their conformity  
certifies to accept the test data of the laboratory

Shenzhen CHINA

in the following scopes

**SAFETY**  
&  
**EMC**  
&  
**EFFECTIVE AND EFFICIENT USE OF RADIO SPECTRUM**

This Certificate is valid for one year from date of issue.

Blomberg, 08 August 2018

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Signed by B. Selck  
Conformity Assessment Body



## CERTIFICATE *of* ACCEPTANCE

THIS CERTIFICATE OF ACCEPTANCE IS PRESENTED TO

, Shenzhen, People's Republic of China

MiCOM Labs Inc., an accredited ISO/IEC 17065 certification facility, acknowledges Shenzhen Huatongwei International Inspection Co. Ltd. as a laboratory that has attained ISO/IEC 17025 accreditation status: **General Requirements for the Competence of Testing**

Having met the requirements for accreditation Shenzhen Huatongwei International Inspection Co. Ltd. has been accepted by MiCOM Labs to participate in its certification program.

As a prerequisite for continued recognition Shenzhen Huatongwei International Inspection Co. Ltd. must maintain ISO/IEC 17025 accreditation.



Gordon Hurst  
Chairman and CEO, MiCOM Labs

Certificate date: 1 February 2018  
This certificate is valid for 2 years

## Certificate Technical Support Center Co., Ltd.

Designated by the Ministry of Internal Affairs and Communications (MIC) to act as a Certification Body

### CERTIFICATE OF ACCEPTANCE

Registration No # CSACR017

Certificate Technical Support Center Co., Ltd. acting as a Registered Certification Body for Japan radio Law hereby certifies that test reports for terminal equipment prepared by the following test laboratory shall be accepted to demonstrate compliance with MPT Ordinance No.37, 1981 (Ordinance concerning the Technical Regulations Conformity Certification of Specific Radio Equipment)

**Co., Ltd.**

**Shenzhen, China**

A reassessment of the documentation is performed annually.

The scope covers the following items of Article 2, Paragraph 1 of the Ordinance:

- Item 19: 2.4GHz wide band Low-Power data communication system
- Item 19-2: 2.4GHz Low-Power data communication system
- Item 19-2-2: 2.4GHz Low-Power data communication system
- Item 19-2-3: 2.4GHz Low-Power data communication system
- Item 19-3: 5GHz band Low-Power data communication system  
(5.2GHz band, 5.3GHz band (Slave Device))
- Item 19-3-2: 5GHz Band Low-Power data communication system  
(5.6GHz band (Slave Device))
- Item 11-3: WCDMA cellular phone  
(except land mobile station which relays portable radio communication)
- Item 11-7: DS-CDMA(HSDPA) cellular phone  
(except land mobile station which relays portable radio communication)
- Item 11-19: LTE cellular phone

This Certification is valid until 2019-09-17

Issue Date: 2018-09-18



Yulan Chang





SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Shenzhen, People's Republic of China

ELECTRICAL (EMC)

Valid to: December 31, 2020

Certificate Number: 3902.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory at the location listed above to perform the following electromagnetic compatibility tests:

**Test Technology:**

**Test Method(s)<sup>1</sup>:**

***Emissions – Unintentional Radiators***

Conducted and Radiated  
(3m semi-anechoic chamber)

CFR 47 FCC Part 15B (using ANSI C63.4:2014);  
FCC Part 18 (using FCC OST/MP-5-1986);  
CISPR 11; EN 55011; AS/NZS CISPR 11;  
CISPR 15; EN 55015;  
CISPR 32; EN 55032;  
VCCI V-3 (up to 6 GHz); GB 19286;  
ICES-003; ICES-005;  
IEC/EN 61000-6-3; IEC/EN 61000-6-4

Harmonics

IEC/EN 61000-3-2; GB/T 17625.1

Flickers

IEC/EN 61000-3-3; GB/T 17625.2

***Immunity***

Electrostatic Discharge (ESD)

IEC/EN 61000-4-2; GB/T 17626.2

Radiated Immunity

IEC/EN 61000-4-3; GB/T 17626.3

Electrical Fast Transient/Burst (EFT)

IEC/EN 61000-4-4; GB/T 17626.4

Surge

IEC/EN 61000-4-5; GB/T 17626.5; YD/T 993

Conducted Immunity

IEC/EN 61000-4-6; GB/T 17626.6

Power Frequency Magnetic Field

IEC/EN 61000-4-8; GB/T 17626.8

Voltage Dips, Short Interruptions  
Line Voltage Variations

IEC/EN 61000-4-11; GB/T 17626.11;  
IEC 61000-4-29; GB/T 17626.29; EN 61000-4-29

***Generic Standards***

IEC/EN 61000-6-1; IEC/EN 61000-6-2

**Test Technology:**

***Product Family Standards and Industry Standards***

**Test Method(s)¹:**

CISPR 24; EN 55024; CISPR 35; EN 55035;  
IEC/EN 61547; EN 61326; EN 55103-2;  
EN 300 386; CISPR 14-2; EN 55014-2;  
IEC/EN 60601-1-2; IEC/EN 61326-2-6;  
EN 300 132; ETSI ES 201 468;  
EN 50130-4; GB 7260.2; IEC 62040-2;  
EN 62040-2; YD/T 1095; EN 61204-3; EN 50121-4;  
EN 50121-3-2; GB/T 19287; YD/T968; YD/T983;  
IEC 62493; EN 62493; GB 12668.3; IEC 61800-3;  
EN 61800-3;  
ETSI EN 301 489-1 (*excluding section 9.6*);  
ETSI EN 301 489-3; ETSI EN 301 489-4;  
ETSI EN 301 489-5; ETSI EN 301 489-6;  
ETSI EN 301 489-9; ETSI EN 301 489-13;  
ETSI EN 301 489-15; ETSI EN 301 489-17;  
ETSI EN 301 489-19; ETSI EN 301 489-27;  
ETSI EN 301 489-29; ETSI EN 301 489-31;  
ETSI EN 301 489-34; ETSI EN 301 489-35;  
ETSI EN 301 489-50; ETSI EN 301 489-52;  
ETSI EN 301 843-1; ETSI EN 301 843-2;  
ETSI EN 301 843-3; ETSI EN 301 843-4;  
ETSI EN 301 843-5; ETSI EN 301 843-6

***Emissions – Intentional Radiators***

Conducted and Radiated

(*up to 40 GHz*)

Unlicensed Radio - FCC

CFR47 FCC Part 2;  
CFR 47 FCC Part 15C (using ANSI C63.10:2013);  
CFR47 FCC Part 15D (using ANSI C63.17:2013);  
CFR47 FCC Part 15E (using ANSI C63.10 :2013 and  
FCC KDB905462 D02 (v02));  
CFR47 FCC Part 15F  
CFR47 FCC Part 20;  
CFR 47 FCC Part 22E, 22F, 22H;  
CFR47 FCC Part 24D, 24E;  
CFR47 FCC Part 25;  
CFR47 FCC Part 27L, 27M, 27H, 27C;  
CFR47 FCC Part 30;  
CFR47 FCC Part 73;  
CFR47 FCC Part 74;  
CFR47 FCC Part 80;  
CFR47 FCC Part 87;  
CFR47 FCC Part 90I, 90K, 90T, 90M, 90S, 90Y,  
90 DSRC;  
CFR47 FCC Part 95;  
CFR47 FCC Part 96;  
CFR47 FCC Part 97;  
CFR47 FCC Part 101 (*using ANSI/TIA-603-E: 2016,  
TIA-102.CAAA-E, ANSI/C 63.26: 2015*)

Licensed Radio - FCC



**Test Technology:**

Canada

European Union (EU)

**Test Method(s)¹:**

RSS-GEN; RSS-210; RSS-310; RSS-247;  
RSS-123; RSS-137; RSS-216;  
RSS-236; RSS-119; RSS-182;  
RSS-125; RSS-127;  
RSS-132; RSS-133; RSS-139; RSS-199;  
RSS-130; RSS-131; SPR-002

ETSI EN 300 220-1; ETSI EN 300 220-2;  
ETSI EN 300 220-3-1; ETSI EN 300 220-3-2;  
ETSI EN 300 220-4; ETSI EN 300 330;  
ETSI EN 300 440; ETSI EN 300 328;  
ETSI EN 301 893; ETSI EN 302 502;  
ETSI EN 303 258; ETSI EN 302 208;  
ETSI EN 301 357; ETSI EN 300 422-1;  
ETSI EN 300 422-2; ETSI EN 300 422-3;  
ETSI EN 300 422-4; ETSI EN 300 487;  
ETSI EN 303 417; ETSI EN 303 345;  
ETSI EN 303 413; ETSI EN 301 839;  
ETSI EN 302 195; ETSI EN 302 537;  
ETSI EN 301 559; ETSI EN 303 203;  
ETSI EN 303 204; ETSI EN 300 086;  
ETSI EN 300 113;  
ETSI EN 300 219;-ETSI EN 300 296;  
ETSI EN 300 390; ETSI EN 300 341;  
ETSI EN 301 166; ETSI EN 302 561;  
ETSI EN 300 392-2; ETSI EN 300 394-1;  
ETSI EN 300 396-2; ETSI EN 300 433;  
ETSI EN 301 783; ETSI EN 303 405;  
ETSI EN 303 035-1; ETSI EN 303 035-2;  
ETSI EN 301 178; ETSI EN 301 929;  
ETSI EN 302 885; ETSI EN 300 720;  
ETSI EN 303 402; ETSI EN 301 025;  
ETSI EN 300 698;  
ETSI EN 300 373-1; ETSI EN 300 373-2;  
ETSI EN 300 373-3;  
ETSI EN 301 511; ETSI EN 301 502;  
ETSI EN 303 609;  
ETSI EN 301 908-1; ETSI EN 301 908-2;  
ETSI EN 301 908-3; ETSI EN 301 908-4;  
ETSI EN 301 908-5; ETSI EN 301 908-6;  
ETSI EN 301 908-7; ETSI EN 301 908-11;  
ETSI EN301908-13; ETSI EN 301 908-14;  
ETSI EN 301 908-15;  
ETSI EN 301 406



**Test Technology:**

Australia

**Test Method(s)<sup>1</sup>:**

AS/NZS 4268; AS/NZS 4355;  
AS/NZS 4771;  
AS/NZS 4365;  
AS/NZS 4295;  
AS/NZS 4768.1, AS/NZS 4768.2;  
AS/NZS 4280.1, AS/NZS 4280.2;  
AS/NZS 4415.1, AS/NZS 4415.2;  
AS/CA S042.1, AS/CA S042.3,  
AS/CA S042.4;

Japan

Article 2 Paragraph 1 Item 19  
Article 2 Paragraph 1 Item 19-2  
Article 2 Paragraph 1 Item 19-3  
Article 2 Paragraph 1 Item 19-3-2  
Article 2 Paragraph 1 Item 1-10  
Article 2 Paragraph 1 Item 1-11  
Article 2 Paragraph 1 Item (11)-3(XZ)  
Article 2 Paragraph 1 Item (11)-7(MW)  
Article 2 Paragraph 1 Item (11)-19

***Specific Absorption Rate (SAR)***

IEEE Std.1528:2013, IEEE Std. C95.1;  
IEC 62209-1, IEC 62209-2, IEC 62232, IEC 62311,  
IEC 62479;  
FCC OET Bulletin 65 Supplement C,  
CFR FCC Part2.1091, CFR FCC Part2.1093;  
RSS102;  
EN 50360, EN 50566, EN 62311, EN 62479,  
EN 50663, EN 50385, EN 50401, EN 50364,  
EN 62209-1, EN 62209-2, EN 62232, EN62369-1;  
Australian Communications Authority “Radio  
communications (Electromagnetic Radiation-Human  
Exposure) Standard”  
AS/NZS 2772.2, RPS3;  
GB21288, YD/T 1644.1, YD/T 1644.2, GB/T28446.1

<sup>1</sup> When the date, revision or edition of a test method standard is not identified on the scope of accreditation, the laboratory is required to be using the current version within one year of the date of publication, per part C., Section 1 of A2LA R101 - General Requirements- Accreditation of ISO-IEC 17025 Laboratories.

**On the following products or types of products:**

Information Technology Equipment (ITE), Industrial, Scientific and Medical Equipment (ISM);  
Household Appliances, Electric Tools and similar Apparatus; Electrical Lighting and similar Equipment;  
Unintentional Radiators; Intentional Radiators; Sound and Television Broadcast Receivers and associated  
Equipment.

Testing Activities Performed in Support of FCC Declaration of Conformity and Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1<sup>2</sup>:

<b>Rule Subpart/Technology</b>	<b>Test Method</b>	<b>Maximum Frequency (MHz)</b>
Unintentional Radiators Part 15B	ANSI C63.4:2014	18000
Industrial, Scientific, and Medical Equipment Part 18	FCC MP-5 (February 1986)	18000
Intentional Radiators Part 15C	ANSI C63.10:2013	40000
Unlicensed Personal Communication Systems Part 15D	ANSI C63.17:2013	40000
U-NII without DFS Intentional Radiators Part 15E	ANSI C63.10:2013	40000
U-NII with DFS Intentional Radiators Part 15E	FCC KDB 905462 D02 (v02)	40000
UWB Intentional Radiators Part 15F	ANSI C63.10:2013	40000
Commercial Mobile Services (FCC Licensed Radio Service Equipment) Parts 22 (cellular), 24, 25 (below 3 GHz), and 27	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	40000
General Mobile Radio Services (FCC Licensed Radio Service Equipment) Parts 22 (non-cellular), 90 (below 3 GHz), 95, 97 (below 3 GHz), and 101 (below 3 GHz)	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	40000
RF Exposure Devices Subject to SAR Requirements	IEEE Std 1528:2013	6000
Maritime and Aviation Radio Services Parts 80 and 87	ANSI/TIA-603-E; ANSI C63.26:2015	40000
<u>Microwave and Millimeter Bands Radio Services</u> Parts 25, 30, 74, 90 (M, DSRC, Y, Z), Part 95 (M and L), and 101	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	40000



Testing Activities Performed in Support of FCC Declaration of Conformity and Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1<sup>2</sup>:

<b>Rule Subpart/Technology</b>	<b>Test Method</b>	<b>Maximum Frequency (MHz)</b>
Broadcast Radio Services Parts 73 and 74 (below 3 GHz)	ANSI/TIA-603-E TIA-102.CAAA-E ANSI C63.26: 2015	40000
Signal Boosters Part 20 (Wideband Consumer Signal Boosters, Provider-specific Signal Boosters, and Industrial Signal Boosters), Section 90.219	ANSI C63.26: 2015	40000

<sup>2</sup> Accreditation does not imply acceptance to the FCC equipment authorization program. Please see the FCC website (<https://apps.fcc.gov/oetcf/eas/>) for a listing of FCC approved laboratories.





## *Accredited Laboratory*

A2LA has accredited

**CO., LTD.**

*Shenzhen, People's Republic of China*

for technical competence in the field of

**Electrical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system

*(refer to joint ISO-ILAC-IAF Communiqué dated April 2017).*



Presented this 3<sup>rd</sup> day of December 2018.

A handwritten signature in black ink, written over a horizontal line.

President and CEO  
For the Accreditation Council  
Certificate Number 3902.01  
Valid to December 31, 2020

*For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.*



The U.S.'s First NRTL  
FCC/TCB Approvals  
IC/FCB Approvals  
Notified Body 0980 for EU

## MET Laboratories, Inc.

914 WEST PATAPSCO AVENUE • BALTIMORE, MARYLAND 21230, U.S.

• PHONE (410) 354-3300 • FAX (410) 354-3313

[www.metlabs.com](http://www.metlabs.com)

### CERTIFICATE OF ACCEPTANCE

Co.,Ltd.

Shenzhen, Guangdong, China

For promoting MET certification and compliance service in China.

This certificate acknowledges that **Co.,Ltd.** has demonstrated a commitment to business development of MET product safety certification and wireless compliance services in accordance to FCC Rules and regulations, IC and EU standards, eg Bluetooth, Module, Mobile phone, Radio equipment etc. We also acknowledge this laboratory the capability of providing a high level of service to customers and a strong observance of MET management procedures.



Since 1959  
First NRTL

Effective Date: 1/June/2017

Expiration Date : 30/May/2019

Eric Zhang/张文迪

Manager of MET China

# Certificate of Appointment

The Applicant

has been authorized to carry out testing by the order  
and under supervision of TÜV Rheinland  
according to

EN 55011, CISPR 11, EN 55014-1, CISPR 14-1, EN 55015,  
CISPR 15, EN 50121-3-2, EN 55032, CISPR 32, EN 55035,  
CISPR 35, EN 55024, CISPR 24, EN 55020, CISPR 20, EN 55014-2,  
CISPR 14-2, EN 50121-4, ETSI EN 300 330, ETSI EN 300 220-1,  
ETSI EN 300 220-2, ETSI EN 300 220-3-1, ETSI EN 300 220-3-2,  
ETSI EN 300 220-4, ETSI EN 300 440, ETSI EN 300 328,  
Continued on page 0002

An audit of the laboratory was conducted according to ISO/IEC 17025  
by a TÜV Rheinland auditor.

Audit Report No. 17028427-003

This certificate is valid until the next scheduled audit or up to ,  
at the discretion of TÜV Rheinland.

Date of issue: 19.04.2018

TÜV Rheinland(China) Co., Ltd.

Unit 707, AVIC Building, No.10B, Central Road, East 3rd Ring Road,

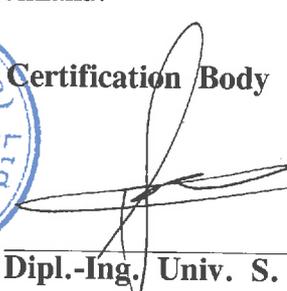
Chaoyang District, Beijing China

Tel: 4008831300

Fax.: +86 10 65666667 <http://www.chn.tuv.com>



Certification Body

  
Dipl.-Ing. Univ. S. O. Steinke

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The Applicant

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and under supervision of TÜV Rheinland  
according to

ETSI EN 301 893, ETSI EN 303 417, ETSI EN 303 345,  
ETSI EN 303 413, ETSI EN 301 511, ETSI EN 301 908-1,  
ETSI EN 301 908-2, ETSI EN 301908-13, ETSI EN 301 489-1,  
ETSI EN 301 489-3, ETSI EN 301 489-17, ETSI EN 301 489-52,  
FCC Part 18, FCC Part 90, FCC Part 95, FCC Part 22, FCC Part 15,  
FCC Part 80, FCC Part 2, FCC Part 27, FCC Part 24, FCC Part 74H  
Continued on page 0003

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according to

RSS-118, RSS-119, RSS-123, RSS-125, RSS-128, RSS-129,  
RSS-133, RSS-210, RSS-Gen, RSS-247, AS/NZS 4268, AS/NZS 4365,  
AS/NZS 4295, ICES-003, ANSI C63.10, ANSI C63.4,  
ANSI C63.26, TIA-603E, EN/IEC 61000-6-1, EN/IEC 61000-6-2,  
EN/IEC 61000-6-3, EN/IEC 61000-6-4, EN/IEC 61204-3,  
EN/IEC 61326-1, EN/IEC 61326-2-6, EN/IEC 60601-1-2,  
Continued on page 0004

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and under supervision of TÜV Rheinland  
according to

EN/IEC 61000-4-2, EN/IEC 61000-4-3, EN/IEC 61000-4-4,  
EN/IEC 61000-4-5, EN/IEC 61000-4-6, EN/IEC 61000-4-8,  
EN/IEC 61000-4-11, EN/IEC 61000-4-29, EN/IEC 61000-3-2,  
EN/IEC 61000-3-3, EN/IEC 61547, EN/IEC 61800-3

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