



Sporton International Inc.



INITIAL CERTIFICATION TEST REPORT

Integrated Device

Test of:
Beijing Inhand Networks Technology Co., Ltd. – IG902

To:
Conformance Test Cases (NAPRD03 V5.33)

Test Report Serial No: PC982301
Test Report Version: Rev. 01
PTCRB Request No: 84590

Issue Date: 21 July 2020

Declaration by Test Laboratory

The GERAN, UTRA and E-UTRA FDD testing performed and shown in this report by Sporton International Inc. Mobile Communications Laboratory was conducted as per the requirements of the PTCRB (PCS Type Certification Review board).

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Summer Zhang

Hendry Yang

Project Manager

Technical Manager

Declaration of Conformity: The test results with all measurement uncertainty excluded are in accordance with the standards from SDOs (Standard Development Organization). The test plan assessment was based on the manufacturer's declaration from PICS/PIXIT/ICS.

Comments and Explanations: The declared values of supply voltages (Normal, Maximum, Minimum) for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of the values. The declared values of PICS/PIXIT/ICS for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of the PICS/PIXIT/ICS.

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1 Details of Test

1.1 Branding Manufacturer – Client / Applicant

Address:	Beijing Inhand Networks Technology Co., Ltd. Room 501, floor 5, building 3, yard 18, ziyue road, chaoyang district, Beijing
Contact Name:	Jichi Gu +15281366255 gujc@inhand.com.cn

Note 1: Client is the company requesting testing service to Sporton International Inc. Mobile Communications Laboratory, cooperating with Sporton International Inc. Mobile Communications Laboratory to process the certification, and paying for the test service.

Note 2: Applicant is the company applying for the certification and should be same as “manufacturer” on the GCF or PTCRB database.

Note 3: Applicant is considered as the owner of the test report if no other statement.

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1.2 Test Lab of Report Issue

Address:	Sporton International Inc. Mobile Communications Laboratory No. 52, Hwaya 1st Rd., Hwaya Technology Park, Guishan Dist., Taoyuan City, Taiwan, R.O.C.
Contact Name:	Mr. Hendry Yang, Laboratory Manager
TAF Lab Code:	1533

1.3 Location of Test

1.3.1 Test Location 1

Address:	Sporton International Inc. Mobile Communications Laboratory No. 52, Hwaya 1st Rd., Hwaya Technology Park, Guishan Dist., Taoyuan City, Taiwan, R.O.C. No. 58, Aly. 75, Ln. 564, Wenhua 3rd Rd., Guishan Dist., Taoyuan City 333, Taiwan, R.O.C.
Contact Name:	Mr. Hendry Yang, Laboratory Manager
TAF Lab Code:	1533

1.3.2 Test Location2

Address:	Sporton International Inc. (Kunshan) Mobile Communications Laboratory No. 1098, Pengxi North Road, Kunshan Economic Development Zone, Jiangsu province, China
Contact Name:	Mr. Michael Lin, Laboratory Manager
TAF Lab Code:	2627

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1.4 Test Environment

Testing Start Date:	26 September 2019
Testing End Date:	14 July 2020

Environmental Data:	Temperature (°C)	Humidity (%)
Ambient Condition	15~35	25~75
Maximum Extreme	+55	N.A.
Minimum Extreme	-10	N.A.

Integrated Device Supply Voltage

Maximum Extreme Supply Voltage (V d.c.):	48.0
Normal Supply Voltage (V d.c.):	12.0
Minimum Extreme Supply Voltage (V d.c.):	12.0

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2 Details of Equipment under Test

2.1 Final Equipment Build Status

The following is the build status for which compliance has been demonstrated by test and declaration

2.1.1 Product Build Status

Model Name:	IG902
Marketing Name:	IG902 、 IG912 、 IG962 、 IG982 、 IG904 、 IG914 、 IG964 、 IG984
Product type:	Edge Computing Gateway
RAN (Radio Access Network):	GERAN / UTRA / E-UTRA FDD / E-UTRA FDD CA
Hardware Version:	V13
Software Version:	V1.0.0
SVN (Software Version Number):	01

Product Operation band(s) please reference to section Key Features Supported.

2.1.2 Module Build Status

Manufacturer Name:	THALES DIS AIS
Model Name:	PLAS9-X
RAN (Radio Access Network):	GERAN / UTRA / E-UTRA FDD / E-UTRA FDD CA
GERAN Operating Band(s)	E-GSM900 / DCS1800 / PCS1900 / GSM850
UTRA Operating Band(s)	FDDII / FDDIV / FDDV
E-UTRA Operating Band(s)	FDD2 / FDD4 / FDD5 / FDD12 / FDD13 / FDD29
E-UTRA CA Operating Band(s)	Reference to Section 2.1.4
Hardware Version:	4.2
Software Version:	01.001
SVN (Software Version Number):	01

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2.1.3 Key Features Supported

The following Table defines the key features supported in the device.

Feature	Supported	Release/Comments
RAN	Y	GERAN / UTRA / E-UTRA FDD / E-UTRA FDD CA
GERAN Operating Band(s)	Y	E-GSM900 / DCS1800 / PCS1900 / GSM850
UTRA Operating Band(s)	Y	FDDII / FDDIV / FDDV
E-UTRA Operating Band(s)	Y	FDD2 / FDD4 / FDD5 / FDD12 / FDD13 / FDD29
E-UTRA CA Operating Band(s)	Y	Reference to Section 2.1.4
GPRS Multi-Slot Class	Y	12
EGPRS Multi-Slot Class	Y	12
HSDPA Category	Y	Supported
HSUPA Category	Y	Supported
Multi-SIM Support	Y	Dual SIM Single Standby (DSSS)
SIM Application Toolkit	Y	Supported
USIM Application Toolkit	Y	Supported

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2.1.4 E-UTRA CA Operating Band(s)

Carrier Aggregation (CA) operating bands and configurations
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CA_2C
CA_2A-2A
CA_4A-4A
CA_2A-5A
CA_2A-12A
CA_2A-13A
CA_2A-29A
CA_4A-5A
CA_4A-12A
CA_4A-13A
CA_4A-29A

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2.2 Identification of Samples Tested

The following summary may be used to identify the samples referenced in the test summary and any declared hardware or software modifications. Where modifications have been made, conformance has been demonstrated by regression testing declared by the manufacturer.

Sample Reference	IMEI	Hardware Version	Software Version	Date of Receipt	Note
01.01.01	004401082343605	Host: V13 Module: 4.2	Host: V1.0.0 Module: 01.001	25-Sep-19	—
02.01.01	353593090128460	Host: V13 Module: 4.2	Host: V1.0.0 Module: 01.001	20-Jun-20	—

Description of Sporton Reference sample number

E.g. 02.01.03

02 – Sample Identification	01 - Hardware Version	03 - Software Version
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2.3 Description of Product

The DUT (Device Under Test) is a Edge Computing Gateway, operating in GERAN / UTRA / E-UTRA FDD / E-UTRA FDD CA bands listed in Section 2.1.3.

2.4 Generation of Conformance Test Plan

The following route has been chosen by the manufacturer to demonstrate compliance.

2.4.1 Module Integration Certification

Testing based on and according to the information supplied within the device integration information to:

NAPRD03 V5.33

GCF-CC V3.78.0

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2.5 Support Equipment

The following support equipment was used to exercise the EUT during testing.

Description	AC Charger
Manufacturer Name	None stated
Model Name or Number	None stated
Serial Number	None stated

Description	RF Cable
Manufacturer Name	None stated
Model Name or Number	None stated
Serial Number	None stated

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3 Reference Documents

Testing was performed according to the following reference documents and standards applicable to the DUT.

Document	Version	Performed	Title
NAPRD03	V5.33	Y	Overview of PCS Type certification review board (PTCRB) Mobile Equipment Type Certification and IMEI control
GCF-CC	V3.78.0	Y	Global Certification Forum - Certification Criteria
3GPP TS 51.010-1	V13.11.0	Y	3rd Generation Partnership Project; Technical Specification Group GERAN/EDGE Radio Access Network; Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification
3GPP TS 51.010-4	V15.2.0	N	3rd Generation Partnership Project; Technical Specification Group GERAN/EDGE Radio Access Network; Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 4: SIM Application Toolkit Conformance specification
3GPP TS 34.108	V15.2.0	N	3rd Generation Partnership Project; Technical Specification Group Terminals; Common test environments for User Equipment (UE); Conformance testing
3GPP TS 34.121-1	V16.2.0	N	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; User Equipment (UE) conformance specification; Radio transmission and reception (FDD); Part 1: Conformance specification
3GPP TS 34.123-1	V15.4.0	N	3rd Generation Partnership Project; Technical Specification Group Terminals; User Equipment (UE) conformance specification; Part 1: Protocol conformance specification
3GPP TS 34.124	V15.0.0	Y	Universal Mobile Telecommunications System (UTRA); LTE; Electromagnetic compatibility (EMC) requirements for mobile terminals and ancillary equipment

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Document	Version	Performed	Title
3GPP TS 36.521-1	V16.4.0	N	3rd Generation Partnership Project; LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Conformance testing
3GPP TS 36.523-1	V16.4.0	Y	3rd Generation Partnership Project; LTE; Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification; Part 1: Protocol conformance specification
3GPP TS 36.124	V16.1.0	Y	3rd Generation Partnership Project; Evolved Universal Terrestrial Radio Access (E-UTRA); Electromagnetic compatibility (EMC) requirements for mobile terminals and ancillary equipment
ETSI TS 102 230-1	V11.0.0	Y	Smart cards; UICC-Terminal interface; Physical, electrical and logical test specification Part 1: Terminal features

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4 Test Results

4.1 Result Summary

The following table summarises the test results obtained. A definition of the result categories may be found at the end of the result tables.

TOTAL RELEVANT TEST CASES PERFORMED	65
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	GERAN	UICC	UTRA	E-UTRA
PASS	2	56	0	7
FAIL	0	0	0	0
Total	2	56	0	7

4.2 Tests Performed

The following tables reflect the requirements of the relevant specification and show the tests performed. Result files verifying these verdicts are available for inspection at Sporton International Inc. Mobile Communications Laboratory.

Where subcontracting has been performed these results are not covered by Sporton International Inc. Mobile Communications Laboratory's accreditation.

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4.2.1 Test Results for GERAN

SPEC	TCID	TITLE	BAND_CONDITION	CATEGORY	Band	RESULT	EUT	LOC	NOTE
3GPP TS 51.010-1	12.2.1	Radiated spurious emissions, MS allocated a channel	Band = 1800, Temp = TN, Volt = VN	A	All	Pass	02.01.01	2	—
3GPP TS 51.010-1	12.2.1	Radiated spurious emissions, MS allocated a channel	Band = 1900, Temp = TN, Volt = VN	A	All	NA	—	—	1
3GPP TS 51.010-1	12.2.1	Radiated spurious emissions, MS allocated a channel	Band = 850, Temp = TN, Volt = VN	A	All	NA	—	—	1
3GPP TS 51.010-1	12.2.1	Radiated spurious emissions, MS allocated a channel	Band = 900, Temp = TN, Volt = VN	A	All	Pass	02.01.01	2	—
3GPP TS 51.010-1	12.2.2	Radiated spurious emissions, MS in idle mode	Band = 1800, Temp = TN, Volt = VN	A	All	NA	—	—	2
3GPP TS 51.010-1	12.2.2	Radiated spurious emissions, MS in idle mode	Band = 1900, Temp = TN, Volt = VN	A	All	NA	—	—	2
3GPP TS 51.010-1	12.2.2	Radiated spurious emissions, MS in idle mode	Band = 850, Temp = TN, Volt = VN	A	All	NA	—	—	2
3GPP TS 51.010-1	12.2.2	Radiated spurious emissions, MS in idle mode	Band = 900, Temp = TN, Volt = VN	A	All	NA	—	—	2

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4.2.2 Test Results for UICC

SPEC	TCID	TITLE	BAND_CONDITION	CATEGORY	Band	RESULT	EUT	LOC	NOTE
ETSI TS 102 230	5.1.1	Phase preceding Terminal power on	5.1.1; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.1	Phase preceding Terminal power on	5.1.1; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.2.2	Phase during UICC power on: 1,8 V - 3 V	5.1.2.2; b-1); SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.2.2	Phase during UICC power on: 1,8 V - 3 V	5.1.2.2; b-2); SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.2.2	Phase during UICC power on: 1,8 V - 3 V	5.1.2.2; b-1); SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.2.2	Phase during UICC power on: 1,8 V - 3 V	5.1.2.2; b-2); SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.3.2	Phase during Terminal power off: 1,8 V - 3 V	5.1.3.2; b-1); SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.3.2	Phase during Terminal power off: 1,8 V - 3 V	5.1.3.2; b-2); SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.3.2	Phase during Terminal power off: 1,8 V - 3 V	5.1.3.2; b-1); SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.3.2	Phase during Terminal power off: 1,8 V - 3 V	5.1.3.2; b-2); SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.5.3	Reaction of 1,8 V technology Terminals on type recognition of 1,8 V technology UICCs	5.1.5.3; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.5.3	Reaction of 1,8 V technology Terminals on type recognition of 1,8 V technology UICCs	5.1.5.3; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.5.4	Reaction of 1,8 V technology Terminals on type recognition of 3V technology UICCs	5.1.5.4; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.5.4	Reaction of 1,8 V technology Terminals on type recognition of 3V technology UICCs	5.1.5.4; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.5.6	Reaction of a Terminals receiving no ATR	5.1.5.6; 1.8V-3V; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.1.5.6	Reaction of a Terminals receiving no ATR	5.1.5.6; 1.8V-3V; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.3	Electrical tests on contact C1, Test 1: 1,8 V - 3 V	5.2.2.3; b-1); SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.3	Electrical tests on contact C1, Test 1: 1,8 V - 3 V	5.2.2.3; b-2); SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.3	Electrical tests on contact C1, Test 1: 1,8 V - 3 V	5.2.2.3; b-1); SIM2	A	Single	Pass	01.01.0 1	1	—

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SPEC	TCID	TITLE	BAND_CONDITION	CATEGORY	Band	RESULT	EUT	LOC	NOTE
ETSI TS 102 230	5.2.2.3	Electrical tests on contact C1, Test 1: 1,8 V - 3 V	5.2.2.3; b-2); SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-1), Proc1; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-1), Proc2; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-1), Proc3; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-1), Proc4; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-1), Proc5; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-1), Proc6; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-2), Proc1; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-2), Proc2; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-2), Proc3; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-2), Proc4; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-2), Proc5; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-2), Proc6; SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-1), Proc1; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-1), Proc2; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-1), Proc3; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-1), Proc4; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-1), Proc5; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-1), Proc6; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-2), Proc1; SIM2	A	Single	Pass	01.01.0 1	1	—

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SPEC	TCID	TITLE	BAND_CONDITION	CATEGORY	Band	RESULT	EUT	LOC	NOTE
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-2), Proc2; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-2), Proc3; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-2), Proc4; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-2), Proc5; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.2.4	Electrical tests on contact C1, Test 2: 1,8 V - 3 V	5.2.2.4; b-2), Proc6; SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.3.2	Electrical tests on contact C2: 1,8 V - 3 V	5.2.3.2; b-1); SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.3.2	Electrical tests on contact C2: 1,8 V - 3 V	5.2.3.2; b-2); SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.3.2	Electrical tests on contact C2: 1,8 V - 3 V	5.2.3.2; b-1); SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.3.2	Electrical tests on contact C2: 1,8 V - 3 V	5.2.3.2; b-2); SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.4.2	Electrical tests on contact C3: 1,8 V - 3 V	5.2.4.2; b-1); SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.4.2	Electrical tests on contact C3: 1,8 V - 3 V	5.2.4.2; b-2); SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.4.2	Electrical tests on contact C3: 1,8 V - 3 V	5.2.4.2; b-1); SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.4.2	Electrical tests on contact C3: 1,8 V - 3 V	5.2.4.2; b-2); SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.5.3	Electrical tests on contact C7, Test 1: 1,8 V - 3 V	5.2.5.3; b-1); SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.5.3	Electrical tests on contact C7, Test 1: 1,8 V - 3 V	5.2.5.3; b-2); SIM1	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.5.3	Electrical tests on contact C7, Test 1: 1,8 V - 3 V	5.2.5.3; b-1); SIM2	A	Single	Pass	01.01.0 1	1	—
ETSI TS 102 230	5.2.5.3	Electrical tests on contact C7, Test 1: 1,8 V - 3 V	5.2.5.3; b-2); SIM2	A	Single	Pass	01.01.0 1	1	—

Test of: Beijing Inhand Networks Technology Co., Ltd. – IG902
To: Conformance Test Cases (NAPRD03 V5.33)

4.2.3 Test Results for UTRA

SPEC	TCID	TITLE	BAND_CONDITION	CATEGORY	Band	RESULT	EUT	LOC	NOTE
3GPP TS 34.124	8.2	Radiated Emission	8.2; eFDD2, idle, TCB = 10 MHz	A	All	NA	—	—	1
3GPP TS 34.124	8.2	Radiated Emission	8.2; eFDD2, traffic, TCB = 10 MHz	A	All	NA	—	—	1
3GPP TS 34.124	8.2	Radiated Emission	8.2; eFDD5, idle, TCB = 10 MHz	A	All	NA	—	—	1
3GPP TS 34.124	8.2	Radiated Emission	8.2; eFDD5, traffic, TCB = 10 MHz	A	All	NA	—	—	1

Test of: Beijing Inhand Networks Technology Co., Ltd. – IG902
To: Conformance Test Cases (NAPRD03 V5.33)

4.2.4 Test Results for E-UTRA

SPEC	TCID	TITLE	BAND_CONDITION	CATEGORY	Band	RESULT	EUT	LOC	NOTE
3GPP TS 36.124	8.2	Radiated Emission	8.2; eFDD2, idle, TCB = 10 MHz	A	All	NA	—	—	2
3GPP TS 36.124	8.2	Radiated Emission	8.2; eFDD2, traffic, TCB = 10 MHz	A	All	Pass	02.01.01	2	—
3GPP TS 36.124	8.2	Radiated Emission	8.2; eFDD4, idle, TCB = 10 MHz	A	All	NA	—	—	2
3GPP TS 36.124	8.2	Radiated Emission	8.2; eFDD4, traffic, TCB = 10 MHz	A	All	Pass	02.01.01	2	—
3GPP TS 36.124	8.2	Radiated Emission	8.2; eFDD5, idle, TCB = 10 MHz	A	All	NA	—	—	2
3GPP TS 36.124	8.2	Radiated Emission	8.2; eFDD5, traffic, TCB = 10 MHz	A	All	Pass	02.01.01	2	—
3GPP TS 36.124	8.2	Radiated Emission	8.2; eFDD13, idle, TCB = 10 MHz	A	All	NA	—	—	2
3GPP TS 36.124	8.2	Radiated Emission	8.2; eFDD13, traffic, TCB = 10 MHz	A	All	Pass	02.01.01	2	—
3GPP TS 36.124	8.2	Radiated Emission	8.2; eFDD12, idle, TCB = 10 MHz	A	All	Pass	02.01.01	2	—
3GPP TS 36.124	8.2	Radiated Emission	8.2; eFDD12, traffic, TCB = 10 MHz	A	All	Pass	02.01.01	2	—
3GPP TS 36.523-1	9.1.4.2	Identification procedure / IMEI / IMEISV requested	9.1.4.2; eFDD4, TCB = 5 MHz	A	Single	Pass	02.01.01	2	—

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To: Conformance Test Cases (NAPRD03 V5.33)

4.3 Key to Result Codes

The following codes are used in the table of results.

Code	Meaning
PASS	Test result shows that the requirements of the relevant specification have been met.
FAIL	Test result shows that the requirements of the relevant specification have not been met.
NA	Test is either not required/not applicable in the specified frequency band or is not applicable according to the specific PICS/PIXIT for the equipment under test.

4.4 Key to Tested Bands Code

The following codes are used in the table of results.

Code	Meaning
Single	Test case is required to be completed in one of the supported frequency bands.
All	Test case is required to be completed in all supported frequency bands.
Network Independent	A test case which is validated without the use of a radio access bearer
Bearer Agnostic	A test case which is independent of the radio access bearer or frequency band used during the test
I-RAT Single	An InterRAT test case that should be tested in a single band combination.
multi	indicates that a band combination is required, e.g. GSM1900/850 MHz bands.
Blank	indicates that the test does not require a bearer

4.5 Key to Notes

The following table describes the special notes, which are relevant to each test.

Note	Meaning
1	Radiated Spurious Emissions testing of a Device supporting multiple RATs shall be tested according to the RAT priority below on a per band basis. RAT Priority (highest to lowest): 1. E-UTRA 2. UTRA 3. GERAN
2	The spurious of idle mode was only verified in E-UTRA FDD12 based on the similarity of performance.

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5 Test Equipment

Conformance testing was performed using test equipment calibrated in accordance with Taiwan Accreditation Foundation accreditation requirements. Calibration, configuration records and equipment details used for conformance testing are available in Annex A.

Test of: Beijing Inhand Networks Technology Co., Ltd. – IG902
To: Conformance Test Cases (NAPRD03 V5.33)

6 People performing Accredited Testing

Alvin Lin
Aron Chen
Owen zhu

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To: Conformance Test Cases (NAPRD03 V5.33)

Annex A – Test Equipment Configuration Information

The following information details the configuration of the test equipment used in assessing the conformance of this product.

1 Test Equipment

Conformance testing was performed using test equipment calibrated in accordance with TAF accreditation requirements. Calibration, configuration records and equipment details used for conformance testing are available for inspection at Sporton International Inc., if required.

1.1 TP118/151 - COMPRION UT³ Platform

Test Platform Info		TP118/TP151 - COMPRION UT ³ Platform -			
Hardware Info	COMPRION UT ³ v3.0				
	Equipment List				
Manufacturer	Model Info	Description	Serial Number	Calibration Due Date	
COMPRION	UT ³ Test System	Control PC	40305	NCR	
COMPRION	UT ³ Probe	UT ³ APR v2.0	45177	01-Sep-20	
Anritsu	MD8475A	Signaling Tester	6201357747	08-May-21	
Software Version	UT³ Test System	Operation System			
		Windows 10 Enterprise LTSC			
	Platform Software			Version	
	Device Test Center			R8.1	
	Network Simulation Controller			R8.1.0	
	Software Modules			Version	
	3GPP TS 31.121 (digital)			V2.6	
	3GPP TS 31.121 (digital) Stage 3			V2.6	
	3GPP TS 31.124 Stage 1			V2.6.1	
	3GPP TS 31.124 Stage 2			V2.6	
	3GPP TS 31.124 Stage 3			V2.6	
	3GPP TS 51.010-1 (analog) Stage 1			V2.3	
	3GPP TS 51.010-1 (digital) 850/1900			V2.6	
	3GPP TS 51.010-1 (digital) 900/1800			V2.6	
	3GPP TS 51.010-4 Stage 1 850/1900			V2.6	
	3GPP TS 51.010-4 Stage 1 900/1800			V2.6	
	3GPP TS 51.010-4 Stage 2 850/1900			V2.5	
	3GPP TS 51.010-4 Stage 2 900/1800			V2.6	
	ETSI TS 102 230 (analog) Stage 1			V2.6	
	ETSI TS 102 230 (digital)			V2.6	
	MD8475A		Operation System		
			Windows 7 Professional SP1		
	Signaling Tester Software			Version	
	COMPRION MD8475A 3GPP TS 31.121 USIM USS Set 1			R8.1.0	
	COMPRION MD8475A 3GPP TS 31.124 USAT USS Set 1			R8.1.0	
	COMPRION MD8475A 3GPP TS 31.124 USAT USS Set 2			R8.1.0	
	COMPRION MD8475A 3GPP TS 31.124 USAT USS Set 4			R8.1.0	

	COMPRION MD8475A 3GPP TS 51.010-1 SIM SS Set 1	R8.1.0
	COMPRION MD8475A 3GPP TS 51.010-4 SAT SS Set 1	R8.1.0

1.2 TP119 Anritsu ME7834L LTE Protocol Test System (KunShan)

TestPlatform Info		ME7834 Mobile Device Test Platform		
Hardware Info	System Calibration Due Date		11-Mar-21	
	Devices		Firmware Version	
	MD8430A		V4.02c_p1,V5.01a_p,V5.10b,V5.30a,V5.40a,V6.10a_p1,V7.10a,V7.20a	
	MD8430A		V4.02c_p1,V5.01a_p,V5.10b,V5.30a,V5.40a,V6.10a_p1,V7.10a,V7.20a	
	(E-Composition)	MD8480C	V790p3_280a_Cipher	
		MD8470A	4.1.9.214	
		Solt Unit Info	Module Version	
	FPGA	FPGA	v7.90_Cipher	
	TDMA	GSM/GPRS	v7.90_Cipher	
	TDMA2	GSM/GPRS2	v7.90_Cipher	
	ISDN	ISND/PPP	v7.90	
	ISDN2	ISND/CSD	v7.90	
Equipment List				
Manufacturer	Model Info	Description	Serial Number	Calibration Due Date
Anritsu	MN8141A	Combiner Unit	6201011037	11-Mar-21
Anritsu	MD8430A	Signalling Tester	6201456269	11-Mar-21
Anritsu	MD8430A	Signalling Tester	6200783463	11-Mar-21
Anritsu	MD8470A	Signalling Tester	6201191025	11-Mar-21
Anritsu	MD8480C	W-CDMA Signalling Tester	6201006510	11-Mar-21
Dell	Optiplex XE2	Control PC	GN5FR12	NCR
Software Version	Optiplex XE2	Operational System		
		Windows 7 Professional		
	Platform Software		Version	
	Protocol Conformance Toolkit		MX783420A_CAG61A_PVG88_D_CIPHER	
	Software Modules		Version	
	MX785220A CAG/PVG Releases		MX783420A_CAG61A_PVG88_D_CIPHER	
	TP Configuration		Version	
	C70.3	iWD Releases	D16wk24 v10	
	C70.4		D16wk24 v20	
	C71.1		D16wk37 v10	
	C71.2		D16wk37 v20	
	C71.4		D16wk37 v40	
	C72.2		D16wk49 v20	
	C72.3		D16wk49 v30	
C73.1	D17wk10 v10			
C73.2	D17wk10 v20			

	C73.3		D17wk10 v40		
	C74.2		D17wk23 v20		
	C74.4		D17wk23 v30		
	C75.1		D17wk37 v10		
Software Version	C75.2	iWD Releases	D17wk37 v11		
	C75.3		D17wk37 v20		
	C75.4		D17wk37 v30		
	C75.5		D17wk37 v40		
	C76.1		D17wk51 v10		
	C76.2		D17wk51 v20		
	C76.5		D17wk51 v40		
	C77.1		D18wk12 v10		
	C77.2		D18wk12 v20		
	C77.3		D18wk12 v21		
	C77.5		D18wk12 v40		
	C78.1		D18wk24 v10		
	C78.2		D18wk24 v20		
	C78.4		D18wk24 v40		
	C79.1		D18wk37 v10		
	C80.1		D18wk44 v10		
	C81.1		D18wk49 v10		
	C82.1		D19wk12 v10		
	C82.2		D19wk12 v20		
	C83.1		D19wk23 v10		
	C83.2		D19wk23 v20		
	C84.1		D19wk38 v10		
	C84.2		D19wk38 v20		
	C85.1		D19wk50 v10		

1.3 RSE Radiated Spurious Emission (KUNSHAN)

No.	Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
1	EXA Spectrum Analyzer	Keysight	N9010A	MY55370528	10Hz-44G,MAX 30dB	Oct.18.2019	Oct.17.2020	Radiation (05CH02-KS)
2	Log-periodic antenna	R&S	HL562	100446	30MHz-3GHz	Mar.23.2019	Mar.22.2021	Radiation (05CH02-KS)
3	Horn Antenna	R&S	HF906	100485	1GHz~18GHz	Mar.23.2019	Mar.22.2021	Radiation (05CH02-KS)
4	SHF-EHF Horn	Com-Power	AH-840	101093	18GHz~40GHz	Jan.8.2020	Jan.7.2021	Radiation (05CH02-KS)
5	Amplifier	Keysight	83017A	MY53270316	1GHz-26.5GHz	Oct.18.2020	Oct.17.2021	Radiation (05CH01-KS)
6	Amplifier	SONOMA	310N	372171	9KHz-1GHz	Jan.8.2020	Jan.7.2021	Radiation (05CH02-KS)
7	Amplifier	MITEQ	TTA1840-35-HG	2014749	18~40GHz	Jan.13.2020	Jan.12.2021	Radiation (05CH01-KS)
8	Amplifier	MITEQ	AMF-7D-0010800-30-10P	2012228	100MHz-18GHz Gain 55dB	Oct.18.2020	Oct.17.2021	Radiation (05CH02-KS)
9	Radio communication analyzer	Anritsu	MT8820C	6201432838	2G(GSM/GPRS/EGPRS) (850/900/1800/1900) 3G(WCDMA/HS UPA/HSDPA)(B and 1-14, 19, 20, 21, 25, 26) 4G(FDD Band 1-14 17-31 TDD Band 33-41)	Jan.8.2020	Jan.7.2021	Radiation (05CH02-KS)
10	Radio communication analyzer	Anritsu	MT8821C	6261806798	2G/3G/LTEband 1-46 ,48,65-70	Apr.14.2020	Apr.13.2021	Radiation (05CH02-KS)

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To: Conformance Test Cases (NAPRD03 V5.33)

Annex B – Product Equality Declaration

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Declaration letter

Beijing InHand Networks Technology Co., Ltd.

Dear Sir,

For our business issue and marketing requirement, we would like to list different models numbers on the certificates and reports, as following:

Test Model Name.: IG902

Series Market name: IG912、IG962、IG982、IG904、IG914、IG964、IG984

The eight models are the same in these:appearance,PCB layout and basic software function; The only difference is that the products are used in different markets.

Thank you!

Signature: 

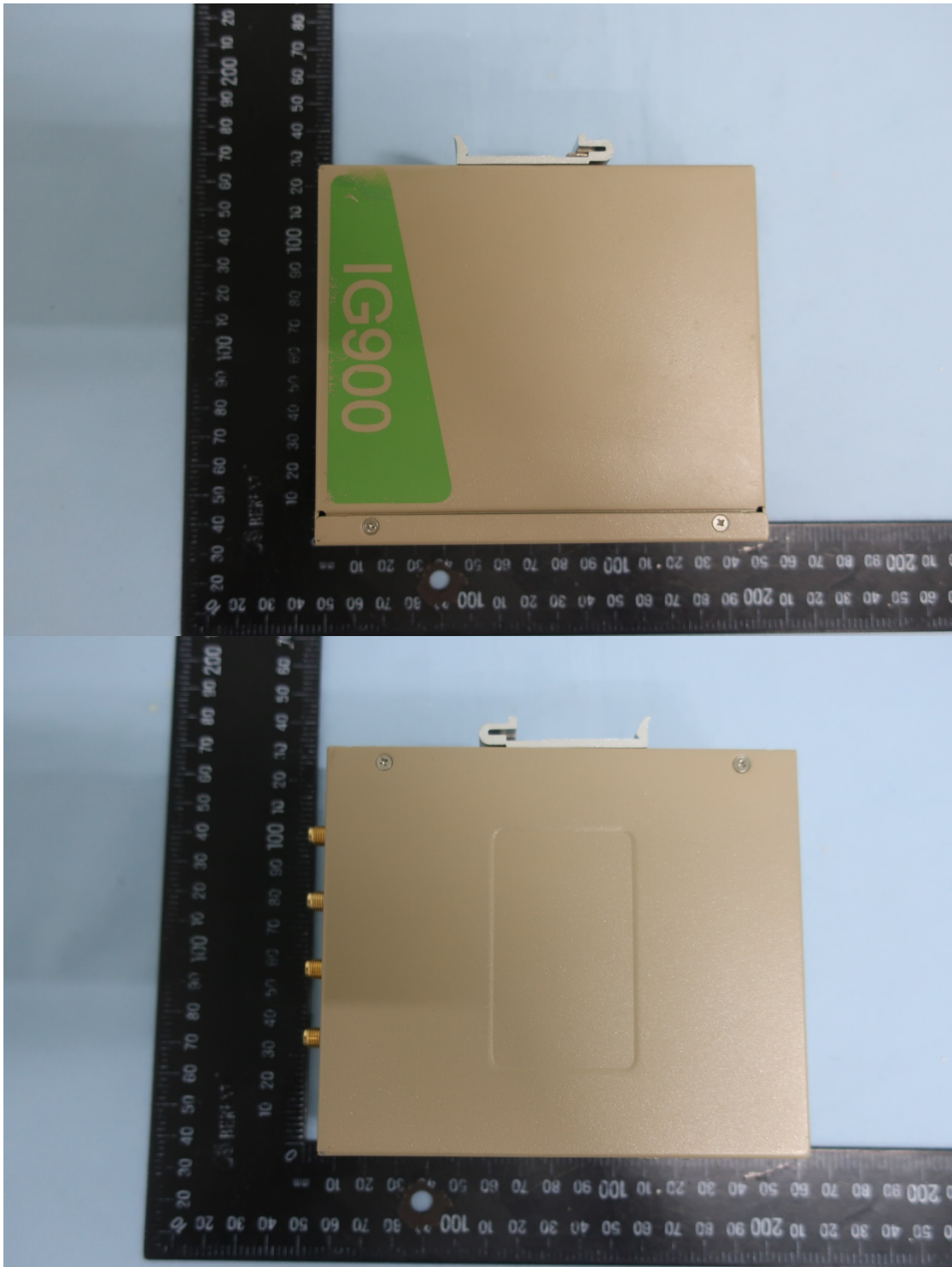
Printed name/title:Jichi Gu/ EMC engineer

Address: Room 501, floor 5, building 3, yard 18, ziyue road, chaoyang district,

Beijing

Test of: Beijing Inhand Networks Technology Co., Ltd. – IG902
To: Conformance Test Cases (NAPRD03 V5.33)

Annex C – DUT Photographs



~ End of Report ~