Sporton International Inc.

INITIAL CERTIFICATION TEST REPORT

Integrated Device

Test of:
Beijing Inhand Networks Technology Co., Ltd. – VG710

To:
Conformance Test Cases (NAPRD03 V5.33)

Test Report Serial No: PC010603
Test Report Version: Rev. 01
PTCRB Request No: 86245

Issue Date: 13 April 2020

Declaration by Test Laboratory

The 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
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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Revision History

Report Number	Revision	Description	Issue Date
PC010603	Rev. 01	Initial Version	13 April 2020

Table of Contents

1 Details of Test

1.1 Branding Manufacturer – 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: Applicant is the company applying for the certification and should be same as “manufacturer” on the GCF or PTCRB database.
Note 2: Applicant is considered as the owner of the test report if no other statement.

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 Location 2

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

1.4 Test Environment

Testing Start Date:	15 January 2020
Testing End Date:	10 April 2020

Environmental Data:	**Temperature (°C)**	**Humidity (%)**
Ambient Condition	15~35	25~75
Maximum Extreme	+55	N.A.
Minimum Extreme	-20	N.A.

Integrated Device Supply Voltage

Maximum Extreme Supply Voltage (V d.c.):	36.0
Normal Supply Voltage (V d.c.):	24.0
Minimum Extreme Supply Voltage (V d.c.):	9.0

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

Brand Name:	Inhand
Model Name:	VG710
Product type:	InVehicle Gateway
RAN (Radio Access Network):	GERAN / UTRA / E-UTRA FDD / E-UTRA FDD CA
Hardware Version:	v12
Software Version:	v1.0.0
SVN (Software Version Number):	01

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)	CA_2A-2A / CA_2A-5A / CA_2A-12A / CA_2A-29A / CA_4A-4A / CA_4A-5A / CA_4A-12A / CA_4A-13A / CA_4A-29A / CA_2C / CA_2A-13A
Hardware Version:	4.2
Software Version:	01.001
SVN (Software Version Number):	01

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	CA_2A-2A / CA_2A-5A / CA_2A-12A / CA_2A-29A / CA_4A-4A / CA_4A-5A / CA_4A-12A / CA_4A-13A / CA_4A-29A / CA_2C / CA_2A-13A
GPRS Multi-Slot Class	Y	12
EGPRS Multi-Slot Class	Y	12
HSDPA	Y	Supported
HSUPA	Y	Supported
SIM Application Toolkit	Y	Supported
USIM Application Toolkit	Y	Supported

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	353593090129922	Host: v12 Module: 4.2	Host: v1.0.0 Module: 01.001	15-Jan-20	—
02.01.01	353593090130441	Host: v12 Module: 4.2	Host: v1.0.0 Module: 01.001	26-Feb-20	—

Description of Sporton Reference sample number

E.g. 02.01.03

02 – Sample Identification	**01** - Hardware Version	**03** - Software Version

2.3 Description of Product

The DUT (Device Under Test) is a InVehicle 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

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

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	V3.55.1	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	V15.3.0	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	N	Universal Mobile Telecommunications System (UTRA); LTE; Electromagnetic compatibility (EMC) requirements for mobile terminals and ancillary equipment

Document	Version	Performed	Title
3GPP TS 36.521-1	V16.3.0	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	V16.3.0	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

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	41

	GERAN	UICC	UTRA	E-UTRA
PASS	2	28	0	11
FAIL	0	0	0	0
Total	2	28	0	11

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.

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 900	900	A	All	Pass	NA	—	1
3GPP TS 51.010-1	12.2.1	Radiated spurious emissions, MS allocated a channel 1800	1800	A	All	Pass	NA	—	1
3GPP TS 51.010-1	12.2.2	Radiated spurious emissions, MS in idle mode 900	900	A	All	Pass	02.01.01	2	—
3GPP TS 51.010-1	12.2.2	Radiated spurious emissions, MS in idle mode 1800	1800	A	All	Pass	02.01.01	2	—

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	A	Single	Pass	01.01.01	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)	A	Single	Pass	01.01.01	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)	A	Single	Pass	01.01.01	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)	A	Single	Pass	01.01.01	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)	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	1	—
ETSI TS 102 230	5.1.5.6	Reaction of a Terminals receiving no ATR	5.1.5.6; 1.8V-3V	A	Single	Pass	01.01.01	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)	A	Single	Pass	01.01.01	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)	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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	A	Single	Pass	01.01.01	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)	A	Single	Pass	01.01.01	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)	A	Single	Pass	01.01.01	1	—

Test of: Beijing Inhand Networks Technology Co., Ltd. – VG710
To: Conformance Test Cases (NAPRD03 V5.33)

SPEC	TCID	TITLE	BAND_CONDITION	CATEGORY	BAND	RESULT	EUT	LOC	NOTE
ETSI TS 102 230	5.2.4.2	Electrical tests on contact C3: 1,8 V - 3 V	5.2.4.2; b-1)	A	Single	Pass	01.01.01	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)	A	Single	Pass	01.01.01	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)	A	Single	Pass	01.01.01	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)	A	Single	Pass	01.01.01	1	—

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; FDD2, idle	A	All	NA	—	—	2
3GPP TS 34.124	8.2	Radiated Emission	8.2; FDD2, traffic	A	All	NA	—	—	2
3GPP TS 34.124	8.2	Radiated Emission	8.2; FDD4, idle	A	All	NA	—	—	2
3GPP TS 34.124	8.2	Radiated Emission	8.2; FDD4, traffic	A	All	NA	—	—	2
3GPP TS 34.124	8.2	Radiated Emission	8.2; FDD5, idle	A	All	NA	—	—	2
3GPP TS 34.124	8.2	Radiated Emission	8.2; FDD5, traffic	A	All	NA	—	—	2

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	Pass	02.01.01	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	Pass	02.01.01	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	Pass	02.01.01	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; 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 36.124	8.2	Radiated Emission	8.2; eFDD13, idle, TCB = 10 MHz	A	All	Pass	02.01.01	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 36.523-1	9.1.4.2	Identification procedure / IMEI / IMEISV requested	9.1.4.2; eFDD4, TCB = 5 MHz	A	Single	Pass	02.01.01	2	—

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	The test only performed on harmonic frequency ranges in traffic mode.
2	Radiated Spurious Emissions testing of a UE supporting multiple RATs shall be tested according to the RAT priority.

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.

6 People performing Accredited Testing

Alvin Lin
Andy Chen

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 UT³ Platform -		
Hardware Info	COMPRION UT³ v3.0			
	Equipment List			
Manufacturer	**Model Info**	**Description**	**Serial Number**	**Calibration Due Date**
COMPRION	UT³ Test System	Control PC	40305	NCR
COMPRION	UT³ Probe	UT³ APR v2.0	45177	01-Sep-20
Anritsu	MD8475A	Signaling Tester	6201357747	08-May-21

Software Version		
	UT³ Test System	**Operation System**
		Windows 7 Professional SP1
	Platform Software	**Version**
	Device Test Center	R7.5
	UT³ Test Platform	R7.0.0
	Network Simulation Controller	R7.0.0
	Software Modules	**Version**
	3GPP TS 31.121 (digital)	v7.0.0
	3GPP TS 31.121 (digital) Stage 3	v7.0.0
	3GPP TS 31.124 Stage 1	v7.0.0
	3GPP TS 31.124 Stage 2	v7.0.0
	3GPP TS 31.124 Stage 3	v7.0.0
	3GPP TS 51.010-1 (analog) Stage 1	V2.2
	3GPP TS 51.010-1 (digital) 850/1900	v7.0.0
	3GPP TS 51.010-1 (digital) 900/1800	v7.0.0
	3GPP TS 51.010-4 Stage 1 850/1900	v7.0.0
	3GPP TS 51.010-4 Stage 1 900/1800	v7.0.0
	3GPP TS 51.010-4 Stage 2 850/1900	v7.0.0
	3GPP TS 51.010-4 Stage 2 900/1800	v7.0.0
	ETSI TS 102 230 (analog) Stage 1	v2.4.0
	ETSI TS 102 230 (digital)	v7.0.0
	MD8475A	**Operation System**
		Windows 7 Professional SP1
	Signaling Tester Software	**Version**
	COMPRION MD8475A 3GPP TS 31.121 USIM USS Set 1	R7.0.0
	COMPRION MD8475A 3GPP TS 31.124 USAT USS Set 1	R7.0.0
	COMPRION MD8475A 3GPP TS 31.124 USAT USS Set 2	R7.0.0

	COMPRION MD8475A 3GPP TS 31.124 USAT USS Set 4	R7.0.0
	COMPRION MD8475A 3GPP TS 51.010-1 SIM SS Set 1	R7.0.0
	COMPRION MD8475A 3GPP TS 51.010-4 SAT SS Set 1	R7.0.0

1.2 TP119 Anritsu ME7834L LTE Protocol Test System (KunShan)

TestPlaform Info		ME7834 Mobile Device Test Platform		
Hardware Info	**System Calibration Due Date**		**25-Aug-20**	
	Devices		**Firmware Version**	
	MD8430A		5.30a,V5.40a,V6.10a_p1,V7.10a;V7.20a	
	MD8430A		5.30a, V5.40a,V6.10a_p1, V7.10a; V7.20a	
	(E-Composition)	MD8480C	V790p3_280a_Cipher	
		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	6201105526	**25-Aug-20**
Anritsu	MD8430A	Signalling Tester	6200950017	**25-Aug-20**
Anritsu	MD8430A	Signalling Tester	6200922842	**25-Aug-20**
Anritsu	MD8480C	W-CDMA Signalling Tester	6201006543	**25-Aug-20**
Dell	Optiplex XE2	Control PC	5L91052	NCR
Software Version	Optiplex XE2	**Operational System**		
		Windows 7 Professional		
	Platform Software		**Version**	
	Protocol Conformance Toolkit		MX785220A_D18wk44_v10_LTE_B_CIPHER	
	Software Modules		**Version**	
	MX785220A CAG/PVG Releases		MX785220A_CAG56B_PVG83A CIPHER	
	TP Configuration	iWD Releases	**Version**	
	C69.2		D16wk10 v20	
	C69.3		D16wk10 v30	
	C70.1		D16wk10 v40	
	C70.2		D16wk10 v50	
	C70.3		D16wk24 v10	
	C70.4		D16wk24 v20	
	C71.1		D16wk37 v10	
	C71.2		D16wk37 v11	
	C71.2		D16wk37 v20	
	C71.3		D16wk37 v30	
	C71.4		D16wk37 v40	
	C72.1		D16wk49 v10	
	C72.2		D16wk49 v20	

Software Version	C74.4	iWD Releases	D17wk23v30
	C75.1		D17wk37v10
	C75.2		D17wk37v11
	C75.3		D17wk37v20
	C75.4		D17wk37v30
	C75.5		D17wk37v40
	C76.1		D17wk51v10
	C76.2		D17wk51v20
	C76.3		D17wk51v21
	C76.4		D17wk51v30
	C76.5		D17wk51v40
	C77.1		D18wk12v10
	C77.2		D18wk12v20
	C77.3		D18wk12v21
	C77.4		D18wk12v30
	C77.5		D18wk12v40
	C77.6		D18wk12v41
	C78.1		D18wk24v10
	C78.2		D18wk24v20
	C78.3		D18wk24 v30
	C78.4		D18wk24 v40
	C79.1		D18wk37 v10
	C79.2		D18wk37 v11
	C79.3		D18wk37 v20
	C80.1		D18wk44 v10

1.3 RSE Radiated Spurious Emission (KUNSHAN)

No.	Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Due Date	Remark
1	EXA Spectrum Analyzer	Keysight	N9010A	MY55150207	10Hz-44G,MAX 30dB	Apr.15.2020	Radiation (05CH02-KS)
2	Log-periodic antenna	R&S	HL562	100446	30MHz-3GHz	Mar.22.2021	Radiation (05CH02-KS)
3	Horn Antenna	R&S	HF906	100485	1GHz~18GHz	Mar.22.2021	Radiation (05CH02-KS)
4	SHF-EHF Horn	Com-Power	AH-840	101070	18GHz~40GHz	Jan.4.2021	Radiation (05CH02-KS)
5	Amplifier	Agilent	8449B	3008A02384	1GHz-26.5GHz	Apr.14, 2020	Radiation (05CH01-KS)
6	Amplifier	SONOMA	310N	372171	9KHz-1GHz	Jan.13.2021	Radiation (05CH02-KS)
7	Amplifier	MITEQ	TTA1840-35-HG	2014749	18~40GHz	Jan.13.2021	Radiation (05CH01-KS)
8	Amplifier	MITEQ	AMF-7D-0010800-30-10P	2082395	100MHz-18GHz Gain 55dB	Dec.21.2020	Radiation (05CH02-KS)
9	Radio communication analyzer	Anritsu	MT8820C	6201432838	2G(GSM/GPRS/EGPRS) （850/900/1800/1900) 3G(WCDMA/HSUPA/HSDPA)(Band1-14,19.20,21,25,26) 4G(FDD Band 1-14 17-31 TDD Band 33-41)	Jan.13.2021	Radiation (05CH02-KS)
10	Radio communication analyzer	Anritsu	MT8821C	6261806798	2G/3G/LTEband 1-46 ,48,65-70	Apr.15.2020	Radiation (05CH02-KS)

Annex B – DUT Photographs

~ End of Report ~