

Android Factory Testing App Operation Guide



Contents

I.	Testing preparation3
1.	Purpose
2.	Hardware device preparation
II.	Testing operation4
1.	Application entry
2.	Unit test
2.1	ICC card reader6
2.2	MSR
2.3	BT
2.4	WIFI
2.5	WNET
2.6	Printer
2.7	Kev
2.8	Mouse
2.0	Audio
2.10	LED 12
2.10	Picc 12
2.11	GPS 12
2.12	Sensor 12
2.13 2.14	I CD
2.14	ТР 14
2.15	Camera 15
2.10	Scanner
2.1/	RTC 16
2.10	Reen 17
2.19	
2.20	, Log
2.21	ΝΠCΙΟ ΒΔΤ 18
2.22	
2.23	ΓLD
2.24	Momory
2.25	S Reso
2.20	
2.27	21 DI AN
2.20	DLAIN
2.29	22 DCOM
2.30	23 DCUIVI
2.31	Edfinic
2.32	DITIOUSE
2.33	24 Linka
2.3 4	Lignts25
1	PAX Technology Limited Company



2.35	Adjust	25
2.36	Couple	26
2.37	Proximity	26
2.38	GUOMI	
2.39	Vibrate	
2.40	Finger	
2.41	HDMI	
2.42	Cashbox	29
3. Al	ll test	30
4. Bi	urn test	30
5. Co	onfig info	
III.R	evision history	



I. Testing preparation

1.1 Purpose

Android testing app is inbuilt on Android terminal and will be updated at the same time if Android OS is updated, maintenance engineers can test hardware modules after terminals are repaired by Android testing app.

1.2 Hardware device preparation

Please prepare for the following hardware devices in advance when you are ready to test some different modules.

Number	Hardware	Quantity	Instruction
1.	PC	ıpcs	
2.	Android America handset	ıpcs	
3.	RF card	1 set	PAX A/B/M/felica card
4.	TF card	ıpcs	
5.	SIM card	ipcs or more	
6.	USB mouse	ıpcs	
7.	Wireless router	ıpcs	
8.	Visible booth device	ıpcs	
9.	USB-HOST device	ıpcs	
10.	Micro USB to Type A cable	ıpcs	U-disking test
11.	LAN device	ıpcs	
12.	SP20 serial cable	ıpcs	Test LAN
13.	POS router	ıpcs	
14.	PAX magnetic card	1 pcs	
15.	SP20V4	ıpcs	Test LAN
16.	S80	ıpcs	Test LAN



II. Testing operation

1. Application entry

Step one: Please find the calculator at first. Engineers should operate the following actions if the Android terminals has been installed merchants application.

Operations:

- a) Firstly, please press left volume key for four times
- b) Secondly, please press right volume key for four times.
- c) Then, please press left volume key for one time.
- d) Lastly, please press right volume key for one time.

The calculator would be shown on the interface.



Picture one



Step two: Please input "!4444=" from calculator and enter into Android factory testing app.



Picture two

Please enter into "Unit test" to test different hardware modules.



Picture three



Please choose "Base test" if you want to test Android terminal base.



Picture four

2. Unit test

2.1 ICC card reader

Please insert IC card and the SLOT o would be shown "PASS" which means that IC card function is well.

	♥ •□• ≥ Ē	87% 09:12
icc	中文	SETTINGS
back	0.te	st as all
>>>>> icc		
😒 lccTest begin 0		
😒 Init slot0		
់ Data Exchange		
SLOTO PASS		
Init slot2		
😒 SLOT2 FAIL = 51		
≫Init slot3		
SLOT3 FAIL = 51		
🗙 test fail		
់ start btn to retest,back bt	n to return	
star	t	
0	<	1





2.2 MSR

Please swipe magnetic head from the top head of the front housing or insert from the bottom part. Please use PAX factory testing cards to test.



Picture six

2.3 BT





2.4 WIFI

Please connect local hotspot to do the WIFI test.



Picture eight

2.5 WNET Please insert SIM card to test.



Picture nine



2.6 Printer

Please install thermal paper at first and check the code on the paper when it is printed out.



Picture ten



2.7 Key

Please click left firstly and then right secondly.



Picture eleven

2.8 Mouse

Please insert U-disk downloading cable to insert terminal Micro-USB port, and type A port connects mouse, Please drag arrow into the green zone after logging in Mouse test.



Picture twelve



Android Factory Testing App



Picture thirteen

2.9 Audio

Terminals would automatically play some part audio after logging in and test the result.





2.10LED

Blue/yellow/green/red light will turn on one by one.

		<u>\$</u> 3% 09:04
두 led	中文	SETTINGS
>>>>> led		
LedTest->execute(1,0)		
🗢 test as all		
🗢 blue light		
🗢 yellow light		
🗢 green light		
🗢 red light		
SALL LEDS ON		
blue/yellow/green/red		
🗢 wait for user comfirm res	ult	
✓ test success		
🗢 start btn to retest,back bt	n to return	1



2.11 Picc

Picc can help test RF card type A/B/M/Felica card.

■ <u>1</u>	? 💲 🕱 🕱 🗵 6% 09:09	🖬 <u>1</u>	🕈 🖹 🖹 🗗 6% 09:09
두 picc	中文 SETTINGS	< picc	中文 SETTINGS
>>>>> picc		>>>>> picc	
PiccTest->execute(1,2))	Sector Secto	
😒 AB cycle		😒 M1 cycle	
😒 please swipe rf card Al	В	⇒ please swipe rf card M	
😒 detect A card		😒 detect M card	
SWAB=0X6700		V M test success	
🗸 test success		★ total=1	
total=1 success=1	test as all	success=1	
▹ please swipe rf card A	M1 cvcle	😒 detect M card	
Solution detect A card		V M test success	
SWAB=0X6700	AB cycle	★ total=2	
✓ test success		success=2	
Success=2	felica single	✤ please swipe rf card M	
≫please swipe rf card A	felica cycle		
	hardware test		
CANCEL	picc15693 test	CANCEL	M1 cycle 👻
		<	

Picture sixteen



2.12 GPS

Please choose "single test" and will see the longitude, latitude, altitude messages which will be shown unlimitedly.

<u> </u>	♥ ≯	🏰 🚊 09:27	<u> </u>			♥ ≯	46 🗋 09:27
< gps	中文	SETTINGS	-	gps		中文	SETTINGS
>>>>> gps			₩ ****	******* 6 ***	******	ł	
SpsTest->execute(1,1)		😒 time::	2020-05-11 0	9:01:17		
😒 single test			😒 longit	tude:113.944	76972		
★************************************	******		Satitude	de:22.55364	489		
់ time:2020-05-11 09:0	1:17		😒 altitud	de:48.07348	5328125		
Solution >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	72		[01]=(00 [02]=00 [0	3]=00 [04]=1	14 [05]	=00 [06]=00
Solution State			[07]=2	25 [08]=00 [0	9]=00 [10]=0	00 [11]	=17 [12]=00
➡ altitude:48.07348632	8125		[13]=(00 [14]=00 [1	5]=00 [16]=0	00 [17]	=00 [18]=00
[01]=00 [02]=00 [03]=([07]=23 [08]=00 [09]=([13]=00 [14]=00 [15]=([19]=15 [20]=12 [21]=([25]=00 [26]=00 [27]=([31]=00 [32]=00 [33]=()0 [04]=00 [05])0 [10]=00 [11])0 [16]=00 [17])0 [22]=15 [23])0 [28]=00 [29])0 [34]=00 [35]	=00 [06]=00 =23 [12]=00 =00 [18]=00 =00 [24]=00 =00 [30]=00 =00	[25]=([31]=(≫ all: 3 ≫ 25sni	00 [26]=00 [2 00 [32]=00 [3 35 r: 1	7]=00 [28]=(3]=00 [34]=(00 [29] 00 [35]	=00 [30]=00 =00
≫all: 35			⇒ time:	2020-05-11 0	9:01:17		
≫25snr: 0			Songit	tude:113.944	76972		
★************************************	******		Satitud	de:22.55364	489		
😒 time:2020-05-11 09:0	1:17		😒 altitud	de:48.07348	5328125		
Solution >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	72		[01]=0	00 [02]=00 [0	3]=00 [04]=1	14 [05]	=00 [06]=00
Solution </td <th></th> <th></th> <td>[07]=2</td> <td>25 [08]=00 [0</td> <td>9]=00 [10]=0</td> <td>00 [11]</td> <td>=17 [12]=00</td>			[07]=2	25 [08]=00 [0	9]=00 [10]=0	00 [11]	=17 [12]=00
Solution State	8125		[13]=(00 [14]=00 [1	5]=00 [16]=(00 [17]	=00 [18]=00
	<u>10 [04]=00 [05]</u>	1=00 [06]=00	[19]=	19 [20]=11 [2	1]=00 [22]=	14 [23]	=00 [24]=00
START	single test		C	ANCEL	single	test	•

Picture seventeen

2.13 Sensor

Sensor is used to test whether terminals can be put horizontally, vertically and uprightly.

		· · ·		0.07 am
-	sensor		中文	SETTINGS
\$>>>>:	> sensor			
Sens	orTest->exec	ute(1,0)		
🤝 tes	t as all			
Se Ol left m	K if can detec neasurement	t the mac	hine fla	t, vertical,
😒 flat				
≫ x=-1. y=5.1 z=9.7	541866 61899 '68343			
≫ x=-0. y=5.7 z=8.3	11492168 55661 79706			
🤝 vertic	al			
≫ x=-5.0 y=9.0 z=11.	094861 11775 415554			
😒 left				
≫ x=-9. y=-1.1 z=3.5	548077 2354081 242648			
🗸 test s	uccess			
😒 start	btn to retest,	back btn t	o return	í
		(0	DEBUG only
S	START	test	as all	ia ja commercial. •
		0	<	1

Picture eighteen



2.14LCD

LCD function is judged whether the screen would show red, blue and green.



Picture miner

2.15 TP

Please touch the screen from left to right on the green zone for three times and then from head to bottom for three time on green zone.



Picture twenty



2.16Camera

Please click "Camera o" and "Camera 1" to change the camera function and see if terminals can take photo.



Picture twenty-one

2.17 Scanner

Please use PAX special-designed code to scan.



Code 128 15mil



0012345678950PAXSZ

QR Code 40mil

Picture twenty-two



Android Factory Testing App

<u>t</u>		♥ ≯	🏰 🖥 10:15	<u>1</u>		♥ ≯	46 🛛 🖉 10:14
	scanner	中文	SETTINGS	-	scanner	中文	SETTINGS
\$>>>>>	scanner			⇒>>>>:	> scanner		
Scan ⁻	<pre>Fest->execute(1,0)</pre>			Scan	Test->execute(1,0)		
🤝 tes	t as all			🤝 tes	t as all		
\$				\$			
😒 setSc	annerType=true			SetSc	annerType=true		
😒 scan T	⁻ype=3			≫ scan	Type=3		
😒 scans	Start			Scans	Start		
Scan	Use Time = 6440(ms)			Scan	Use Time = 9409(n	ns)	
Sector Secto	0012345678950PAXS2	2		i⇒ data=	0012345678950PA	XSZ	
😒 scan	complete			b⇒ scan	complete		
🗸 test s	uccess			✓ test s	uccess		
😒 start l	otn to retest,back btn to	o return	i .	😒 start	btn to retest,back b	tn to return	

START	test as all	•	START	test as all	•

Picture twenty-three

2.18RTC

RTC is used to test whether terminals can read out time or not.



Picture twenty-four



2.19Beep

Buzzer is used to test different frequency voices and engineers would hear the different sound after logging in this item.



Picture twenty-five

2.20 Log

All different log files can be uploaded into terminals to refer to.



Picture twenty-six



2.21 MIC

The Microphone is used to test whether terminals can record voices or not.



Picture twenty-seven

2.22BAT

Battery is used to test whether it can be charged, removed external power.



Picture twenty-eight



2.23PED

Please input password "1234" to test keypad function.

<i></i>	J I		
1 <u>1</u>	(***	14% 10:28
< ped		中文	SETTINGS
😒 >>>> ped			
▹ PedTest->execu	te(1,0)		
😒 test as all			
😒 Init PinPad			
😒 please input key	:1234		
😒 Input Event 2a			
😒 Input Event 2a			
់ Input Event 2a			
😒 Input Event 2a			
😒 Input Event 0d			
≫获取的PinBlock	为:83F15	3CEEBE46	5B44
⇒ 计算输入密码为:	长度=40	內容:1234	
🗸 test success			
😒 start btn to retes	st,back b	tn to returr	า
START	t	est as all	*
\bigtriangledown	0		

Picture twenty-nine

2.24 COM

Please download the following app into SP2oV4 and test COM, then use serial cable to connect RJ45 and SP20.



1 🖬	💡 🔰 🖆 📋 10):48
< com	中文 SETTIN	GS
>>>>> com		
SomTest->execute(1,	0)	
😒 read PP20 VER		
▹ portname = USBDEV		
begin to read pp20's	ver	
Sexception = -255		
exception = -255		
CANCEL	read PP20 VER	•

Picture thirty



2.25 Memory

Memory is used to test memory function, engineers can select this four items including sd single test, sd cycle test, u disk single test and u disk cycle test.



Picture thirty-one

2.25Base

Please put terminals onto base to test charge.



Picture thirty-two



2.26 LAN

You can use TestSock to test LAN function if terminal has only one LAN port.



Picture thirty-three

Or please download the following app into S80 which can work as LAN server.

bcm_server_20200401_V2.2_SIG.binx

Picture thirty-four

By the way, please note that IP server is in default on setting and you can change it based on your own needs.



Picture thirty-five





Picture thirteen-six

2.27 blan

BLAN testing is used to base LAN function after it is put together with terminals and testing methods are the same as LAN.

2.28 busb

Busb testing method is used to test USB storage state.



Picture thirteen-seven



2.29 bcom

Bcom testing method is the same as COM testing method.

2.30 Earmic

Earmic is used to test earset function.

🖬 <u>1</u>		• * G	🆆 🗎 14:54					
-	earmic	中文	SETTINGS					
💙 tes	st as all							
🌣 please input earset								
☆ mHeadSetOn=true								
🗢 earse	et is connected							
😒 start	play music							
⇒ pull c the c	out the headset on firm dialog	or press cance	el to show					
🤝 mHea	adSetOn=false							
😒 wait f	for user comfirn	n result						
Sonn 🗢	Sonnect earset and record quick							
🤝 mHea	adSetOn=true							
🤝 earse	et is connected							
🤝 begir	record 2s							
🤝 mHea	adSetOn=false							
😒 mHea	adSetOn=true							
Second Secon	d end,delay 2s							
🤝 begir	n play							
😒 play e	end							
😒 wait f	for user comfirn	n result						
🗸 test s	✓ test success							
😒 start	btn to retest,ba	ck btn to returr	ı					
S	START	test as all	.*					
Pi	cture thi	rteen-ei	ght					

2.31 bmouse

Bmouse testing method is the same as Mouse testing method.



Picture thirteen-nine



24

2.32 BTprint(Take A6o as an example)Step one: Please enter into base test and connect BT.





2.33 lightS

Terminals will test its own light sensing and only need to detect dark and bright light, then it will pass successfully.



Picture fortieth-one

2.34 Adjust

This item is used to check whether wireless module has been adjusted successfully and just need to see persist.radio.f value whether it is 1 or not, if the value is 1, it means that wireless module has been adjusted successfully.

🖬 <u>1</u>		♥ 🕸 🖬 🚆 📕 14:54						
-	adjust	中文	SETTINGS					
>>>>>:<	> adjust							
SAdjustTest->execute(1,0)								
😒 tes	st as all							
🍤 persi:	st.radio.ft = 1							
Swirele 😒	ess adjust and ch	neck success						
🤝 start	btn to retest,back	k btn to return						
S	START	test as all	•					
Picture fortieth-two								

i letare fortieth two



2.35 Couple

This testing item is only tested in PAX factory to test whether the wireless module has been coupled successfully or not and just need to see persist.radio.coupling value is 1 or not. If value is 1 so it has been coupled well.



Picture fortieth-three

2.36 Proximity

This item is used to whether terminals can test near and far states.



Picture fortieth-four



2.37 GUOMI

This item is only tested for Chinese market.

🖬 <u>1</u>		♥ ≭ 😡	4 🖬 🗋 14:54				
-	guomi	中文	SETTINGS				
\$>>>>>	guomi						
Sm2Test->execute(1,0)							
🤝 tes	t as all						
🗸 test s	uccess						
😒 start l	otn to retest,back	k btn to return					
S	TART	test as all	•				

Picture fortieth-five

2.38 Vibrate

Vibration is used to test whether terminals can vibrate normally.



Picture fortieth-six



2.39 Finger

This item is used to test fingerprint function.

-	finger			中文	SETTINGS
≫>>>>>	• finger				
់ Finge	rTest->execute(1,0)				
🤝 tes	t as all —				
≫m0K	= true				
🗸 test s	uccess				
់ start	btn to retest,back btn to return				
	START		test as all		•
		\triangleleft	0		

Picture fortieth-seven

2.40 HDMI

Exxx terminals will display one small video to test HDMI function.

-	hdmi				中文	SETTINGS
≫>>>>	> hdmi					
🏷 Hdm	iTest->execute(1,0)					
🤝 tes	st as all —					
🏷 OPE	N HDMI(off)					
SCT0 🚓	SE HDMI					
🤝 wait	for user comfirm result					
🗹 test :	success					
🤝 start	btn to retest,back btn to return					
	START		test as all			•
		Q	0			

Picture fortieth-eight



2.41 Cashbox

Please insert 24V power adapter and thermal paper in paper house in advance, it will pass if you can hear buzzer sound.

🖕 ca	shbox			中文	SETTINGS
🤝 >>>>> cas	hbox				
🏷 CashBoxT	est->execute(1,0)				
🤝 — test as	all —				
눡 see cashb	oox status				
눡 press can	cel key to next				
🗢 wait for u	ser comfirm result				
✓ test succe	288				
់ start btn t	o retest,back btn to return				
	START		test as all		•
		\Diamond	0		

Picture fortieth-nine



3. ALL test

This item is used to test all different modules on terminals one by one and is only applicable in PAX factory.



Picture fifty

4. Burn test

Burn test is the pressure test for terminals in factory in order to find out terminals problems very quickly, this item is only applicable in PAX factory.





5. Config info

Configuration information is an option that you can get all information that factory testing apps have received accordingly mainly including hardware information.

	♥ 🖇 🗢 🔞 1	9% 🖬 5:13 pm	<u>1</u>		♥ * ⊖ ⊮	🐧 15% 📕 5:29 pn
🧢 config info	中文	SETTINGS	-	config info	中	文 SETTINGS
APP=FTEST_V1.8.37 2 VersionName=FTEST_V VersionCode=15 .Module.type=28 .Pos.name=A77 .Brazil=false Brazil=false IS_TAMPERED=0 .G_SENSOR=true Exsn=NULL Sn= DDR=0.98 GB FLASH=7.82 GB SD=5.77 GB .DDR.MATCH=1.0 GB .FLASH.MATCH=8.0 GB SD.MATCH=6.0 GB	019/08/13 0 /1.8.37	9:04:29	gittariu: .ro.fac.(.pax.so .ro.proc .ro.proc .ro.pax. .persist .ro.fac.(persis .persist .nersis .Neptur .Neptur 23	s_modem_V02.2 cfg.SOC=null c.TYPE=null duct.name=s1854 luct.device=s1855 target=null .radio.ft=0 ram.printer.versi .show.exdev.rea cfg.ROUTER=nul t.radio.coupling= .radio.coupling= t.radio.cou	nCode=33 nName=V3	go_osea .go .05.00_20190
.F_IC_CARD=00 .F_LCD=87 .F_TOUCH_SCREEN=87 .F_MAG_CARD=00 .F_SAM_NUM=02 .F_RF_1356M=02 .F_RF_PARA_1=000007F .F_RF_PARA_2=8484686 .F_RF_PARA_2=8484686 .F_RF_PARA_3=0000000 .F_MAIN_BOARD=V02 .F_PORT_BOARD=V02 .F_ANT_BOARD=V02 .F_BAR_CODE=15	F3F3F0D840 8683F00000 0000000000000000000000000000000	DD00 0000 DEBUG only Neife COMMERCIAL	WNET WIFI.n BT.ma LAN.m ANDR .OS=An .is5GHz .WIFI_5 .API_SE cuted= .scan.la	meid= .imei=86740002 nac=40:45:da:cf: c=40:45:DA:C9: nac= OID.id=3e00de3(droid 8.1.0 zBandSupported G=false DK=V1.18 =false skala=false	0316612 75:97 45:59 e5876390d =false	DEBUG on. Nas for COMMERCE
	C C	\bigtriangledown			0	\bigtriangledown

Picture fifty-two

III. Revision history

Date	Version	Author	Remark
20200515	Voi	Ethan	Updated version