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Diamond

Service Manual



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Rev. A05

HTC Corporation

Engineering Mobility

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REVISION CONTROL TABLE

REV	DATE	CONTENTS	DEPT	REVISED	STAGE
AX01	2008/04/14	Fist Draft	PSE	Steven Liu	CVT
A01	2008/5/9	 Modify product overview Add RF spec Add pre-load process 	PSE	Steven Liu	MV
A02	2008/5/29	 Modify the pre-load process in chapter 4 Modify ESPL material P/N Modify the idle current specification in the page no. 71 	PSE	Steven Liu	MP
A03	2008/6/9	Modify the pre-load process from page no. 53~56	PSE	Steven Liu	MP
A04	2008/6/14	 Modify the specification for G-sensor in the page no. 7 Remove the matrix table in the pre-load process 	PSE	Steven Liu	MP
A05	2008/6/21	 Modify the disassembly process in page no.23, 24 and 30 Modify the pre-load process from page no. 53~57 Modify the SPL list in Chapter 9.1 Modify main board current leakage test procedure in the chapter No.5 	PSE	Steven Liu	MP

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1. Introduction

- This manual provides the technical information to support the service activities of Diamond.
- This document contains highly confidential information, so any or all of this document should not be revealed to any third party.
 - Chapter 1: Introduction-This Chapter is about Products features and basic Product function. After reading this chapter, you will know what feature the product has and basic hardware operation. Also you will know how to perform soft-rest and hard-rest in this chapter.
 - Chapter 2: Device Dissembling and Assembling Procedure- After reading this chapter, you will learn how to disassemble and assemble the product. Also, you will know what tools to use and the torque. Please follow the instruction to dissemble the unit to prevent from damaging the unit.
 - Chapter 3: ROM Re-flash Procedure- After reading this chapter, you will learn how to perform the ROM image re-flesh by using RUU and SD-Card. Also you can find the steps of enter the boot loader mode.
 - Chapter 4: DIAGNOSTIC PROGRAM- After reading this chapter, you will learn
 - How to use the diagnostic program to perform unit function test
 - How to test some functions in Windows Mobile mode (ex. WLAN, Bluetooth, and USB etc...)
 - Chapter 5: Power measurement test- After reading this chapter, you will learn how to use MB leakage test procedure and battery run-down test (Battery Capacity Measurement).
 - Chapter 6: Cosmetic Inspection Criteria- After reading this chapter you will learn the appearance quality inspection criteria, ex. Display, bezel, and housing etc...
 - Chapter 7: Generic Troubleshooting- After reading this chapter, you will learn how to do generic trouble-shooting.
 - Chapter 8: Generic Labeling Plan- In this chapter, you will find generic labels for reference, ex. Regulation label, and battery label etc...
 - Chapter 9: Generic Spare Part List and Photos- In this chapter, you will find Spar parts reference list and photos for repairing, including unit and Board level.
 - Chapter 10: RF Antenna Specification- Reference Spec for RF test.

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1.1 Product Features					
Platform	DRHSUMT	S			
ra Islii m bar type PDA phone form factor	0: 82 4-849) MHz, 869-894 I	MHz (Band V)		
cr ds ioft Windows Mobile 6.1 professional	900: 880)-915 MHz, 925-	960 MHz (Band V	III)	
	0019850-1	910MHz, 1930-1	990MHz (Band II)		
Dimension	00211920-1	980MHz, 2110-2	170MHz (Band I)		
2 mm(L) x 51 mm(W) x 11.5 mm(T)	GSM/GF	PRS/EDGE Tri-b	and		
[W/ 900mAH battery]	0: 82 4-849), 869-894MHz			
	0: 98 0-915	, 925-960MHz			
Processor/Chipset	0018710-1	785, 1805-1880	MHz		
alo@mm MSM 7201A, 528 MHz	0019850-1910, 1930-1990MHz				
	DRHAS/UM	TS			
Memory	3GPP Rele	ease 5 compliant	t		
ROM: 256 MB (for programs and users' storage)	Up to 3.6/7.2Mbps peak rate				
NDNA4 GB	UP#S[Option, depends on carrier engagement]				
RAM: 196 MB DDR RAM (include 64MB memory in	Category 5, 2Mbps				
baseband)	Concurrer	nt: DL up to 3.6M	lbs and UL up to 2	2Mbps	
	ba Glo amin	g			
LCD Module	ndAsuviviatabair	ng			
2.8" VGA dots resolution	ovletica and cell selection between				
-codeKTFT LCD with LED back light	GSM/GPRS/EDGE and UMTS				
ucħ&creen	DTM				
	SAIC (ci	rcuit switch only)		
HSDPA/WCDMA/EDGE/GPRS/GSM Function	ali £e pu(HSI	OPA channels or	nly)		
Internal antenna	o cAcudatic: A	MR-NB, AMR-W	/B, EFR, FR, HR		
DP#SUMTS (2100/900 MHz for EU, Asia and	SMS (M	O, MT), concate	nated SMS (640		
Softbank, 850/1900 for US, Latin America SKU3,	characters)			
2100/850 for Telstra, Latin America SKU1&SKU2)	po€tulø/CC-	MNC-UC-ID as s	stated in 3GPP TS	5	
and GSM/GPRS/EDGE Tri-band	25.401 R9	9, section 6, for l	both RIL and radio)	
(900/1800/1900Mhz for EU, Asia, Softbank, E-Mobile,	ne Ge servi	ces:			
Telstra, Latin America SKU2 and 850/1800/1900 for	Call hold	ding/waiting/forw	arding		
US, Latin America SKU1&3)	Call bar	ring			
I					

ethNork selectionstateCell broadcaststateMulti-party conference callrt: CooSipconstateasB/b2+ unstructured supplementary service dataLethNork LockCHSC(Partial support)sitteEGPRS FunctionalityA-CEGPRS class BpoteMulti-slot standard class 10CPBCCHstatek Authaptation and Incremental RedundancyState	Issued Date Revised Date Page tic adition) Mattin Seconds, typical TT tic condition) Coldectands, typical TTFF tic condition) Jpdate rate: once/1sec (or GPS Accuracy		A05	
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ooSipconstatasPl2+ unstructured supplementary service dataUettNork LockCHSC(Partial support)sitteEGPRS FunctionalityA-CEGPRS class BpostMulti-slot standard class 10CPBCCHSk Autaptation and Incremental RedundancyS	tic condition) Jpdate rate: once/1sec (d	F (open sky &		
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etWork Lock (C HSC@artial support) sitte EGPRS Functionality A-C EGPRS class B pot Multi-slot standard class 10 C PBCCH S k Authaptation and Incremental Redundancy S				
HSC (Partial support) site city EGPRS Functionality A-C EGPRS class B poor Multi-slot standard class 10 C PBCCH Standard class 10 C PBCCH Standard standard class 10 C PBCCH Standard s	SPS Accuracy	default)		
CityEGPRS FunctionalityEGPRS class BMulti-slot standard class 10PBCCHK Addraptation and Incremental Redundancy				
EGPRS FunctionalityA-CEGPRS class BpoteMulti-slot standard class 10CPBCCHSk Addaptation and Incremental RedundancyS	30 : < 15 meters, 95% typ			
EGPRS class BpotMulti-slot standard class 10CPBCCHSk Addraptation and Incremental RedundancyS	tellc05 meter/sec steady			
Multi-slot standard class 10OPBCCHSk Autaptation and Incremental RedundancyS	SPS (Qualcomm Based	-		
PBCCH S k Autraptation and Incremental Redundancy S	po&dup/E-Based & UE-Assisted A-GPS			
k Autaptation and Incremental Redundancy	OMA SUPL v1.0 compliance (v2.0 if available)			
	SUPL-RRLP			
USIM/SIM V	SUPL-RRC (optional) (TBD)			
	VAP push initiated SUPL	L		
1.8/3V of UICC	Standard 3GPP A-GPS compliance			
USIM Application at least according to 3GPP TS 3	GPP TS 44.031 (RRLP	5.12)		
31.102 3	GPP TS 25.305 (GSM 8	& UMTS)		
SIM Application Tool Kit release 96 complete, 98 R 1	89 (Location API) suppo	ort		
class 3, and 99 partial rml	acte requirement			
r tlævAir (OTA) programming (95	%Fsfuccessful rate): < 20) seconds		
DNF DE	ocation Error (95% succ	cessful rate): < 10	0 m	
ADN sit	ien requirement			
cuStey Pin 1 & 2 control	GPS for one satellite: up	to -142dBm		
EAP-SIM C	GPS for remaining satellite: up to -147dBm			
Standalone GPS (Qualcomm based solution) 3	3GPP TS 25.171 compliance (Requirement for			
Internal GPS antenna sup	support of Assisted Global Positioning System)			
sit®ity : better than -150dBm for outdoor 3	GPP 34.171 (Terminal o	conformance		
usage spe	cification,			
postub/MEA 0183 version 3.0 or above Ass	sisted Global Positioning	J System)		
caDyyabloodiate para IIel channel GPS receiver 3	GPP TS 34.108 (Comm	ion test environme	ents fo	
siti ésc quine Use	er Equipment conforman	nce testing)		
Hot start: 8 seconds, typical TTFF (open sky & Mo	tion G-sensor			

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Tri-Axis Accelerometer	up Fexi l d			
	o s+aundipling rate			
Resolution: 1.22 milli-g	Recording (uplink): 8-bits or 16-bits with 8KHz,			
device	11KHz, 22KHz, 44KHz			
orientation change	ck Robow January 16-bits with 44KHz			
FM Radio	AMR-NB/AMRWB/			
ringurange: 87.5Mhz ~ 108Mhz	AAC/AAC+/eAAC+/WAV/WMA/MP3 codec			
enEyespace: 100Khz	o Patidi Routing			
to Albannel search	othBlueto			
Digital Camera	Receiver			
anlean (manufacture option)	Speaker			
gaogina camera auto focus	seHead			
d camera: (manufacture option)	Connectivity & Interface			
Color CMOS VGA camera	otiBlueto			
Keyboard/Button/Switch	Compliant with v2.0 with EDR			
weiton (Wake up key)	as62 transmit power			
Short Press: system on/off	po Bed profiles:			
ngLeress: power on/off	P (GAneric access profile)			
C havingator include	eri 3 PPo(tsprofile)			
-way navigator pad	bj@2Ppu(an profile)			
Home	GOEP (generic object exchange profile)			
acB/Clear	tives ync-Over-Bluetooth			
d /Sheamds-free	HSP (headset profile)			
gloress during the call: handsfree on/off	P (HEndsfree profile)			
End	DRAAdvanced Audio Distribution profile)			
e Woo/Doown button	AVRCP (Audio/Video Remote control Profile)			
Reset	D (Human interface device profile)			
Notification	ce SsNP Axtile			
Notification by sound, vibration, navigator LEDs or	ceSeiseiovery Application Profile			
status shown on the display	BPP (basic printing profile)			
Audio	FTP (file transfer profile)			
	PAN (personal area networking profile)			
Built-in Microphone				
Built-in Microphone Receiver	DUN (Dial-up profile)			

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Co-exist with WiFi	k t īnae : 1.3	~ 5.2 hours for	UMTS		
Fi [Mianufacture option]	o Tkädeephor	ny time: 77~109	minutes		
		bySitraned 219~329 hours for GSM			
Internal WLAN antenna	by Sitraned 19	95 ~ 379 hours fo	or UMTS		
Data rate auto fallback for extended range	da ato ra				
ELP mode	pu ACI00 ~	240V AC, 50/60	Hz		
cu Ste y 802.11i and AES	e dervice s	hall be able to de	etect the AC adapt	ter	
WPA2 authentication – WEP, WPA2, PSK,	complied v	vith China adapt	er standard.		
EAP-TLS, PEAP, LEAP, EAP-SIM			China shall comp	bly	
ali &igim terfaces between the terminal	with China	adapter standa	rd	-	
device and the servers: mutually authenticated	ut:1550/anmutop	ut:DSO/ autophana adapter eta hadra			
and encrypted utilizing TLS (RFC 2246) with	nt Aghlois er	nt Aghbis ensor			
RC4 encryption with SGA1 used as the	Stylus	Stylus			
message integrity check	ckløpe me	ckltppe mechanism with plug in /out detect and			
QoS	magnetic function				
2.80WME QoS	Lanyard Hole				
2.80e	A lanyard hole allow user to attach various stylis				
st 🗛 to AP handover	pendant to the phone.				
HTC ExtUSB 11-pin mini-USB	Accessor	ies			
USB 2.0 Client with High / Full Speed	ck Straint Guide [Inbox]				
o Jaudai	CD (Use	er manual & Syn	c. software) [Inbox	(]	
2VHsupport	n Bactee to	r [Inbox]			
ssNateorage support	[InStatopk]s				
1.8/3V USIM/SIM card slot	Travel C	harger [Inbox]			
onRector for testing	USB Sy	nc Cable (mini-L	ISB/USB) [Inbox]		
Power	Battery	with battery cove	er [Inbox]		
Battery	red/\Stereo	Headset [Inbox]]		
woTremovable and rechargeable Lithium ion	uc₽dlupox]			
battery sku, 900 mAH	in- 3 -stylus				
rgi 6ga ime: < 3 hours	3.5 mm	audio adaptor ca	able with earphone	e, HS	
Battery life – 900mAH	U110				
W Maayingours	redWRemot	e Controller with	Earphone, RC E1	100	
Playing WMA: 10 hours		oth Headset, BH	M200		
k tī rae : 2.95 ~ 5.2 hours for GSM	o Bitærteoot	h Headset, BH S	3100		

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Bluetooth Keyboard	geStarral Encryption, Device Lock				
-in41 multifunction audio cable	ro shdit : Office Mobile				
r Othærger	Word, Excel & PowerPoint Mobile				
HØder	crolsoft Windows Live!				
40th3AH extended battery	nd/d//ivs Live Messenger				
Compatibility Test :	ndowivs Live Mail (Push Mail)				
Below accessories are required to do the	nd/w/ws Live Contacts				
compatibility test	ndowis Live Search				
noMBduetooth Headset, BH M100	ndowivs Live Spaces				
e 111-Garbto 5pin + 6pin	ndows Smart Dialing				
e 1⁄1-φa bto 5pin + 3.5 mm Audio Jack	cr os oft Remote Desktop Mobile [optional]				
e M-Qabt o 5-pin + 2.5 mm Audio Jack	Value Added Applications				
sfreen@arkit : Parrot CK3400LS, Parrot	a / Cenner order				
MK6100,	ra ©/aorde				
Parrot Minikit, Audi, BMW & Mercedes incar solutions	coEtimg format: JPEG				
othBluettoference: Parrot Conference	Resolution: 2048x1536 (if camera is 3M),				
oth B&peea ker: Parrot Boombox	UXGA 1600x1200, SXGA 1280x960, VGA				
Microsoft Windows Mobile 6 Professional (PPC)	640x480, QVGA 320x240, QQVGA 160x120				
Applications	ghNMode				
ro stoiit Outlook Mobile	git D i Zooming: up to 8x				
ler Cla r, Contacts, Me ssaging (SMS/E-mail),	nd TDrate aStamp				
Tasks, & Voice Notes, Email Set Up Wizard	coCtamMode				
h M7aist	s entropy for QVGA resolution				
crowipt Internet Explorer Mobile	co Ein g format				
cr ðs ibft Media Player Mobile	63H:2AMR-NB				
ro stolit ActiveSync	MPEG4 + AMR-NB				
crosoft Windows Mobile Update	ngRine				
crossion crossion of the contract of the contr	MIDI				
Internet Sharing	oly 40 npnic & Standard MIDI format 0 and 1				
re Biðtideo	(SMF) / SP MIDI				
	MP3, AAC, AAC+, WMA, WAV and AMR-NB				
mesa					
	re@Show Filters for WMP - Audio				
mesa	re@Show Filters for WMP - Audio o Paglback format: AAC, AAC+, eAAC+, MP3,				

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DirectShow Filters for WMP - Video	o Maribaor				
Video Playback format: H.263, MPEG4, WMV,	o Madager ce\Doial & Command				
Motion JPEG (AVI), H. 264	ce\Roecorder (AMR only)				
Min. 30 fps decoding for H.263 & MPEG4 & H.	skTManager				
264@ QVGA resolution	ckBaa Tool				
o skialle up to VGA	ucħБLO Scrolling				
ne Cobitb Rate: 64Kbps (playback)	o Broundster				
re Eighancement for Pictures & Videos	Bluetooth FTP Profile/Explorer				
raphics: JPEG, GIF87a, GIF89a, PNG, WBMP	Bluetooth BPP				
o Wide nbnail Preview: H.263, MPEG4, and	Bluetooth SAP				
Motion JPEG (AVI)	rk Retgyion for file explore				
-324 Video Telephony	FM Radio application				
neRtanvas	ubYcdieTit				
Symbol Table SIP for PPC	mi 6trè adeo Player				
AIHUTO	eraDBrowser				
EZ SIP	rg e.a tart menu				
ZIP	ngLporess end key				
enMMS Cli	Startup animation engine				
coPreputizent to MMS 1.2 & MMS 1.3 (When	Manila				
available)	GHTTO				
Java virtual machine (J2ME, CLDC 1.1, MIDP 2.0)	Album				
R 18 5 JTWI	sidMu				
R JS PIM access	RSS Hub				
R J2 0 Wireless Messaging API	ce\spieed dial				
R JS 5 Mobile Media API	sh Fite 2.1 player				
nt D/cexwente PDF	shffittee 2.1 plug-in				
OMA DRM Engine: For all types of files (Pictures,	Carrier Specific Applications				
audio, application etc.), and also all types of delivery	HowhoaxSareen (Orange)				
method (MMS, email etc.)	bil ₩ ōV (Vodafone)				
OMA 1.0 / 2.0 when available	ck e toVideo Player (Orange)				
Multi-DRM support : MSFT & OMA DRM	dQânadlMobile				
SIM Manager	rk Niettinness Book (SynML)(O2DE)				
Comm. Manager	Visto Small Icon(Stub client) (Vodafone)				
STK	ce\booimmander (HTC Asia)				

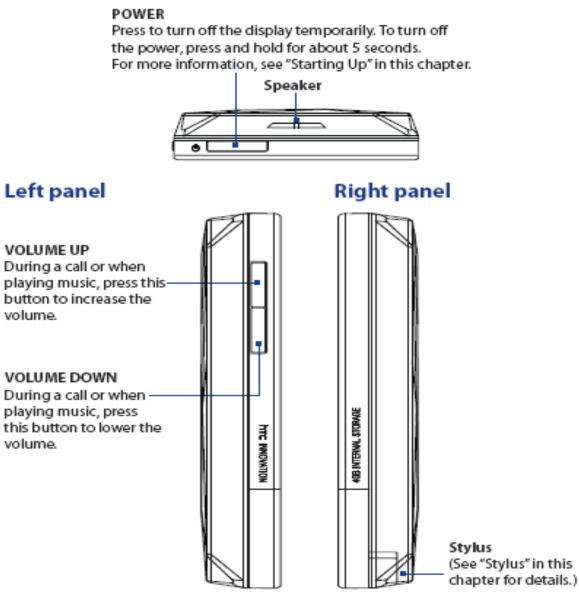
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Talking dictionary(HTC Asia)USs (Xotikaifone)ceCtBckBdMyBRaush E-mail Client (Vodafone)UA			11 of 109	>

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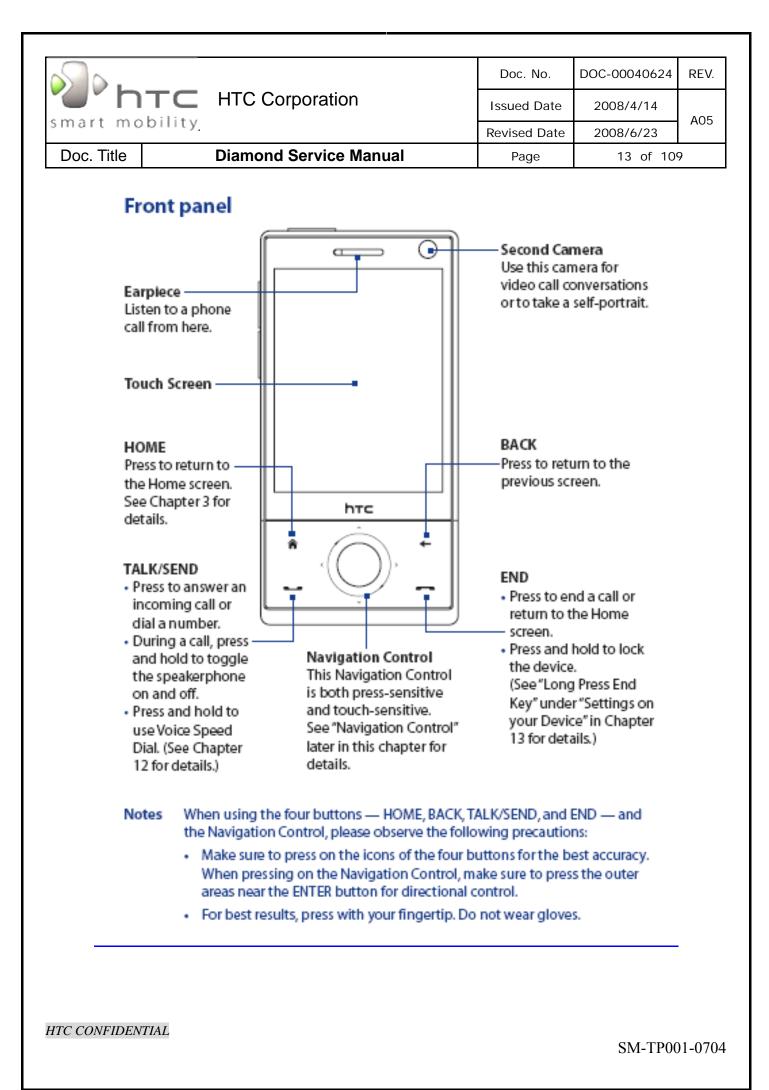
1.2 Product overview

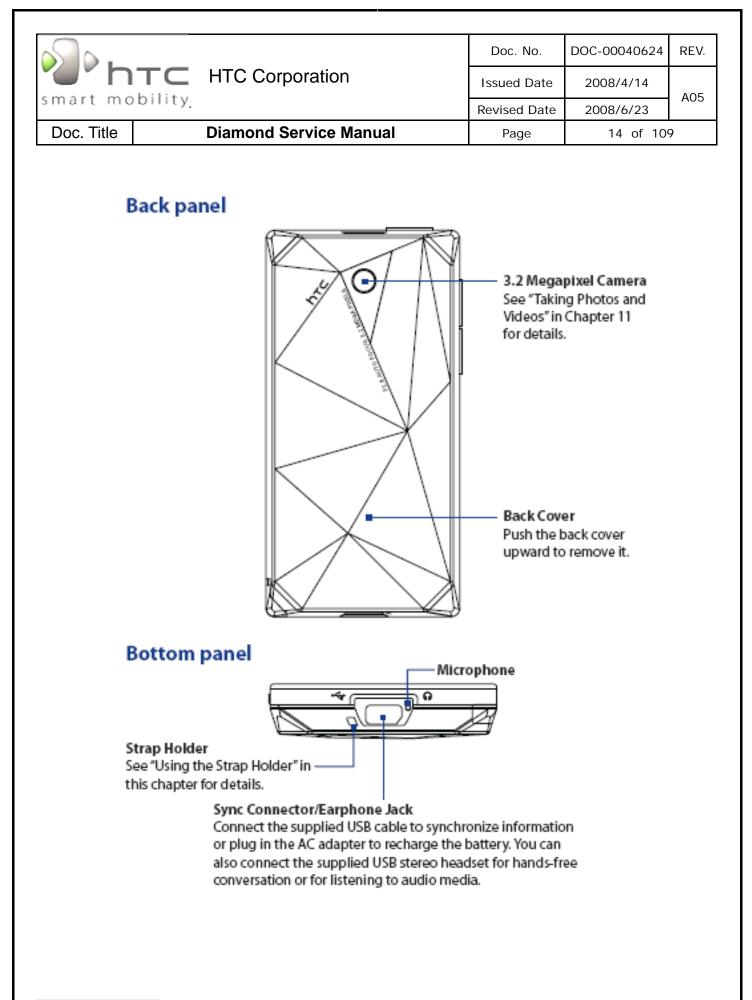
Getting to Know Your Touch Phone and Accessories

Top panel



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Accessories

The product package includes the following items and accessories:

- Battery
- AC adapter
- Screen protector
- Stereo headset
- USB sync cable
- Quick Start Guide and TouchFLO 3D Guide
- Getting Started and Application discs
- Extra stylus

1.2 Installing the SIM Card and Battery

Always turn off your device before installing or replacing the SIM card and battery. You also need to remove the back cover before you can install these components.

To remove the back cover

- 1. Make sure your device is turned off.
- Hold the device with both hands and the front panel facing down.
- Push the back cover up with your thumb until it disengages from the device and then slide it up to remove.



SIM card

The SIM card contains your phone number, service details, and phonebook/ message memory. Your device supports both 1.8V and 3V SIM cards.

Note Some legacy SIM cards may not function with your device. You should consult with your service provider for a replacement SIM card. There may be fees for this service.

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To install the SIM card

- Make sure your device is turned off.
- Locate the SIM card slot, then insert the SIM card with its gold contacts facing down and its cut-off corner facing out the card slot.
- Slide the SIM card completely into the slot.

To remove the SIM card

- 1. Remove the battery if it is installed.
- 2. Slide the SIM card out from the SIM card slot with your thumb.

Battery

Your device comes with a rechargeable Lithium-ion or Lithium-ion polymer battery and is designed to use only manufacturer-specified original batteries and accessories. Battery performance depends on many factors, including network configuration, signal strength, the temperature of the environment in which you operate your device, the features and/or settings you select and use, items attached to connecting ports, and your voice, data, and other program usage patterns.

Battery life estimates (approximations):

- Standby time: Up to 285 hours for GSM Up to 396 hours for WCDMA
- Talk time: Up to 330 minutes for GSM Up to 270 minutes WCDMA
- Video call time: Up to 145 minutes for WCDMA

Note Battery life is subject to network and phone usage.

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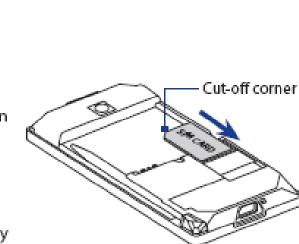


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Warning!

To reduce risk of fire or burns:

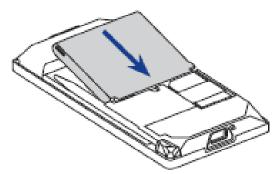
- Do not attempt to open, disassemble, or service the battery pack.
- Do not crush, puncture, short external contacts, or dispose of in fire or water.
- Do not expose to temperatures above 60°C (140°F).
- · Replace only with the battery pack designated for this product.
- Recycle or dispose of used battery as stipulated by local regulations.

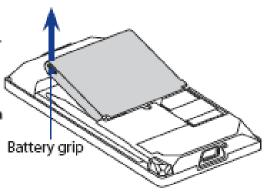
To install the battery

- Align the battery's exposed copper contacts with the battery connectors inside the battery compartment.
- Insert the contact's side of the battery first and then gently push the battery into place.
- Replace the back cover.

To remove the battery

- 1. Make sure your device is turned off.
- Remove the back cover.
- The top left and right sides of the battery have protruding grips. Lift a protruding grip from either side to remove the battery.





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2. Device Disassembling and Assembling Procedure

2.1 Tools List

level	No.	Item	Vendor	P/N
	1	Mini USB DATA interface Cable		
	2	Earphone Headset		
	3	AC Adapter		
	4	WLAN AP		
	5	Mini Memory Card with Diag. test program (need be encoded by HTC)	HTC design	
	6	mini SD memory card for ROM code re-flash (must be encoded by HTC)	HTC design	
L1	7	Y cable for ROM code re-flash and diagnostic test program	HTC special tools	RTT-00004
	8	USB SD card reader	(ZENITRON WFGMRSD-TP)	RTT-00005
	9	Diagnostic card for Diamond		DCT-00001
	9	Unit current consumption test	HTC design	
		fixture		
	10	Power supply		
	11	Current Meter		
	12	Mobile tester		
	13	Special Made Plastic Stick	HTC special tools	
	14	Hand tools		
	15	Navi Board to M/B assembly fixture	HTC design	RTT-00001
	16	LCD FPC to M/B assembly fixture	HTC design	RTT-00003
L2	17	Mylar for Navi keycap gap control(30x5xT0.15)		RTT-00011
	18	Mylar for Navi keycap gap control(30x10xT0.15)		RTT-00012
	19	Label printer		
	18	Lead-free Soldering station		
L 2.5	19	Air heater		

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2.2 Disassembling procedure

Tools Needed for Assembling and Disassembling Process. 1. Lens Cleaning Cloth. 2. Philips Screw Driver 000X40. 3. Flat Plastic Stick. 4. Plastic Tweezers. 5. Board to board connector Assembly fxture
HOLD THE THUMBS ON THE TOP LEFT AND BOTTOM RIGHT OF THE BATTERY COVER AND SLIDE IT UPWARDS AND REMOVE THE BATTERY COVER
SLIDE DOWN THE STYLUS

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		Remove t	HE BATTERY	
		LOCATION	I THE 3 SCREWS AT 1 INDICATED AND REM INA COVER CAREFUL	OVE
		LOCATION	I THE 3 SCREWS AT T INDICATED AND REM OVER CAREFULLY	

<u></u>		Doc. No.	DOC-00040624	REV.
"	TC HTC Corporation	Issued Date	2008/4/14	105
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		Remove t Antenna (THE CAP FROM THE COVER	
			THE SPEAKER AVOID DAMAGE THE	
		LOCATION	I THE 2 SCREWS AT T INDICATED AND REM JS SUPPORTER	

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		sed Date	2008/6/23	
Doc. Title Diamond Service Manual	F	Page	22 of 109)
		Remove th	HE METAL COVER	
	C S F	COVER FRC SEPARATE 1 FROM THE (HE HOOK OF CABLE DM THE HOUSING TH THR GPS COXIAL C/ COVER THEN REMOV BLE COVER CAREFU	EN ABLE /E THE
		Remove th Cover	HE VOLUME BUTTON	

HTC Corporation	Doc. No. Issued Date	DOC-00040624 2008/4/14	REV.
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Doc. Title Diamond Service Manual	Page	23 of 10	9
	Remove -	THE POWER BUTTON	COVER
	Remove - The conn	THE LCM FPC TAPE F	ROM
Image: Non-State State Sta	LOOSE TH THE CONN	E LCM FPC CABLE FR IECTOR	OM

Smart mobility HTC Corporation	lss	oc. No. ued Date rised Date	DOC-00040624 2008/4/14 2008/6/23	REV. A05
Doc. Title Diamond Service Manual		Page	24 of 10	9
Disconnect the FPC cable by using the tweezers and pull it with backward direction			CT THE FPC CABLE ZEERS CAREFULLY	BY
<image/>			CT THE LCM AND NA	
		RELEASE TH	HE HOOK AND TURN OARD	OVER

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Doc. Title Diamond Service Manual	Pa	age	25 of 109	9
<image/>	C C N A Y C	CABLE FROM CAREFULLY NOTE: DO I NND GPS C	NOT RE-USE THE B COAXIAL CABLE WH SEMBLE THE COAXI. ED TO CHANGE THE	T/Wifi EN AL
			THE SIM FPC BOARD OARD THEN TURN IT	
		REMOVE TH	E TAPE FROM THE R	

MTC Corporation		c. No. ed Date	DOC-00040624 2008/4/14	REV. A05
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Doc. Title Diamond Service Manual	F	Page	26 of 109	9
		REMOVE TH BOARD CAR	IE SIM FPC FROM TH REFULLY	EMAI
			POWER BUTTON CA HOUSING CAREFULL	
			VOLUME BUTTON C HOUSING CAREFULL	

	Do	oc. No.	DOC-00040624	REV.
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smart mobility		sed Date	2008/6/23	A05
Doc. Title Diamond Service Manual	F	Page	27 of 109	9
	F	Remove th	IE GASKET TAPE	
			CT THE BT/WIFI COA M THE NAVI BOARD	XIAL
	C E	OUT THEN T	LAASTIC STICK TO S AKE OUT THE RIGID M THE HOUSING	

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	CA		CT THE GPS COAXI, M THE RIGID FLEX B	
	CA		CT THE BT/WIFI CO. M THE RIGID FLEX B	
		EMOVE TH	HE TAPE FROM THE R	

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		LOOSE THE THEN REMO MODULE FF CAREFULLY	E 2 ND CAMERA CONNI DVE THE 2 ND CAMER ROM THE CONNECTO	ECTOR A DR
			HE MAIN CAMERA MO HOUSING CAREFULL	
		Remove th Housing	HE 4 SCREWS FROM	THE

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Doc. Title		Diamond Service Manual		Page	30 of 10	9
					IE MICROPHONE RU NAVI BOARD	BBER
					SASSEMBLE THE NA JSH THE FPC CABLI ECTION	
					: Navi board light n for disassembl'	

	0	Doc. No.	DOC-00040624	REV.
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Doc. Title Diamond Service Manual		Page	31 of 109	9
		REMOVE TH HOUSING C	IE RECEIVER FROM AREFULLY	THE
		NOTE: DUE HINDS THE AND YOU C NUMBER. I THE SERAIL	BLY COMPLETED! TO THE S/N LABEI BACKWARD OF BEZ AN'T SEE THE SERI/ I'S NO NEED TO FILI NUMBER WHEN THE DEFECTIVE MODULE	EL \L

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2.3 Assembling procedure

TOOLS NEEDED FOR ASSEMBLING AND DISASSEMBLING PROCESS. 1. LENS CLEANING CLOTH. 2. PHILIPS SCREW DRIVER 000X40. 3. FLAT PLASTIC STICK. 4. PLASTIC TWEEZERS. 5. BOARD TO BOARD CONNECTOR ASSEMBLY FXTURE
INSERT THE NAVI BOARD MODULE INTO THE HOUSING
FASTEN THE 4 SCREWS AS INDICATED POSITION OF PICTURE TORQUE: 0.5 ± 0.1KGF ^{-CM} P/N: 72H02456-00M * 4

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		HE MICROPHONE RUE	
		THE RECEIVER INTO T CAREFULLY	ſHE
		E THE MAIN CAMERA RIGID FLEX BOARD	ODULE

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	<image/>	ASSEMBLE INTO THE F	THE 2 ND CAMERA MO RIGID FLEX BOARD	DDULE
		S тіск тне	TAPE ON THE CONN	ECTOR

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Doc. Title Diamond Service Manual		Page	35 of 109	
			E WIFI/BT COAXIAL (IGID FLEX BOARD	CABLE
		INSTALL THE GPS COAXIAL CABLE INTO THE RIGID FLEX BOARD		
		RIP THE TAPE OF MAIN CAMERA AND RIGID FLEX BOARD THEN ASSEMBLE THE RIGID FLEX BOARD ON THE FRAME		

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	VOLUME S	PE OF POWER AND WITCH THEN STICK ON THE THE HOUSING
		BT/WIFI COAXIAL CABLE ILLISTER OF THE FRONT
		E WIFI/BT COAXIAL CABLE CONNECTOR OF NAVI

	-			
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				E
		THE MAIN B	OARD THEN STICK T	
		TAPE ON THE CONNECTOR		

s		Doc. No	•	DOC-00040624	REV.
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			NG 1	THE SIM FPC BOA THE 2 HOLES ONTO T	
		INTO T MAIN I NOTE	HE N SOAF MAI SOAF	THE GPS COAXIAL (MAIN BOARD THEN PU DON THE HOUSING SE SURE TO INSERT D AND LOCK WITH T	JT THE

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			THE NAVI BOARD AN ECTORS BY USING FIXTURE	ID LCM
		CABLE INTO	E RIGID FLEX BOARI D THE MAIN BOARD T TAPE ON THE CONNI	HEN

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	Attach th the housi	E VOLUME BUTTON INTO NG
	INTO THE S	E GPS COAXIAL CABLE UPPORT COVER AND HOOK R INTO THE HOUSING
	Attach th the housi	IE POWER BUTTON INTO NG

		1			
<text></text>		oc. No.	DOC-00040624	REV.	
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				METAL COVER ON T OF THE FRONT COVE	
<image/>			ONTO THE I THE 2 SCRE TORQUE: 0	E STYLUS SUPPOTE FRONT BEZEL AND F. EWS .5 ± 0.1KGF ^{-CM} 2454-00M * 2	

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		HE MAGNET INTO THE SLOT YLUS SUPPORTER
		HE SPEAKER INTO THE COVER ASSEMBLY
	Attach ti cover as	HE CAP INTO THE ANTENNA SEMBLY

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	Attach th the front	E ANTENNA COVER (BEZEL	OTIO
<image/>	ANTENNA C TORQUE: 0 P/N: 72H0	.9 ± 0.1кgf ^{-™} 2474-00M * 1 2767-00M *2	HE

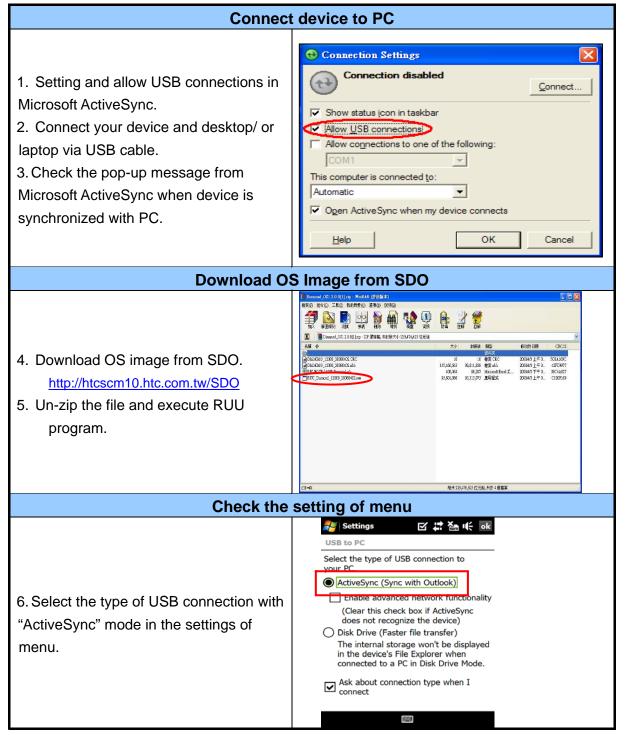
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		SI To P/	ORQUE: 0 N: 72H0	E 5 SCREWS INTO TI 5 ± 0.1KGF ^{-CM} 2668-00M * 2 2474-00M * 3	ΗE
	 Prese <	IN	NSERT THE	BATTERY INTO THE	UNIT

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		INSERT	THE BATTERY COV	ER
		In	SERT THE STYLUS	
Calendar Contacts		Assi	EMBLY COMPLETED	1

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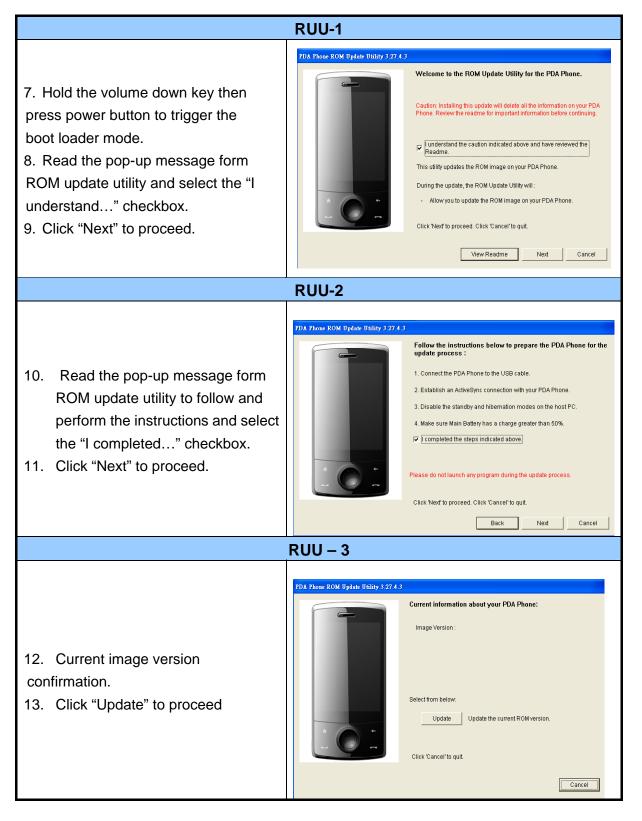
3. ROM Re-flash Procedure

3.1 ROM upgrade thru RUU (Re-flash Upgrade Utility)



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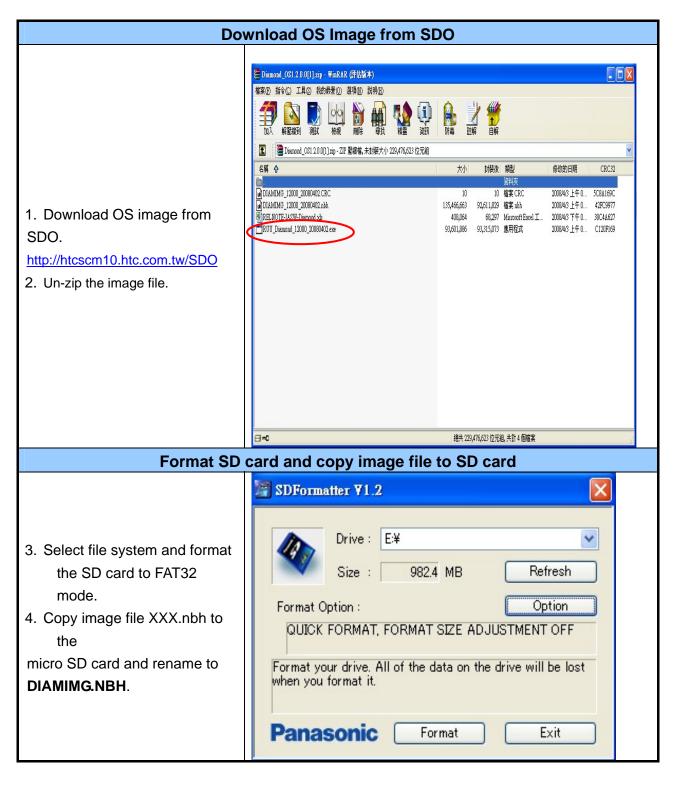
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	RUU-4 PDA Phone ROM Update Ubibly 3.2	27 4 3		
 Double verify the ROM revision which you want to update before re-flash procedure. Click "Next" to proceed. 		Verify that you want to update the RG From : Image Version : To : Image Version : 1.28.110.2 Click Ned to proceed. Click 'Cancel' to quit Back	M version:	
	RUU-5		Caller	_
 16. Read the information from pop-up message and the OS update procedure will takes 10 minutes long. 17. Click "Next" to proceed. 		ou are now ready to update your ROM imag kes approximately 10 minutes. Iring the update process, the following things occur The PDA Phone is prepared for the update process The progress bar is displayed on the host PC are The completion screen is displayed on the host lick Next to proceed. Click 'Cancel' to quit. Back Next	ns. Id on The PDA Phone.	
 You can see the update progress from your PC and in your device. 	Please do not remove the USB connectiv update process. Remember, the operation will take about	on from the PDA Phone or launch any program during th	e	
	RUU – 7 PDA Phone ROM Update Utility 3.27.4.3	2		_
19. The OS upgrade is finished, click "Finish" to close the utility.		Congratulations I Your ROM update is PDA Phone is ready for use.		

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3.2 Rom Image upgrade thru SD card



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		SD Upgrade - 1			
diagnostic it is reliabilit resolution. 5. Connect the ur 6. Connect	t the card reader and lapter into the USB Y				
		SD Upgrade - 2			
insert 8. Press au <u>down</u> press Boot I 9. Press <u>P</u>	device power off and Diagnostic SD card. nd hold <u>Volume</u> + <u>Right</u> button, and <u>Power</u> button to entry oader mode. <u>ower</u> button to start de procedure.	Press a	IttG.mbh - 0_UZ - LOADER - SH1 - - ower button t update image ction button el update image		
		SD Upgrade - 3			
SD ca [Note]: T	his process will takes 10 please don't power off	00	oraning. whb		

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11. After finish, press Reset button to reboot.	DIAMIMG. whith - OK RADIO_UZ - OK BOOTLOADER - OK SPLASH1 - OK OS - OK Update Complete UPDATE SUCCESS -		

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4. DIAGNOSTIC PROGRAM

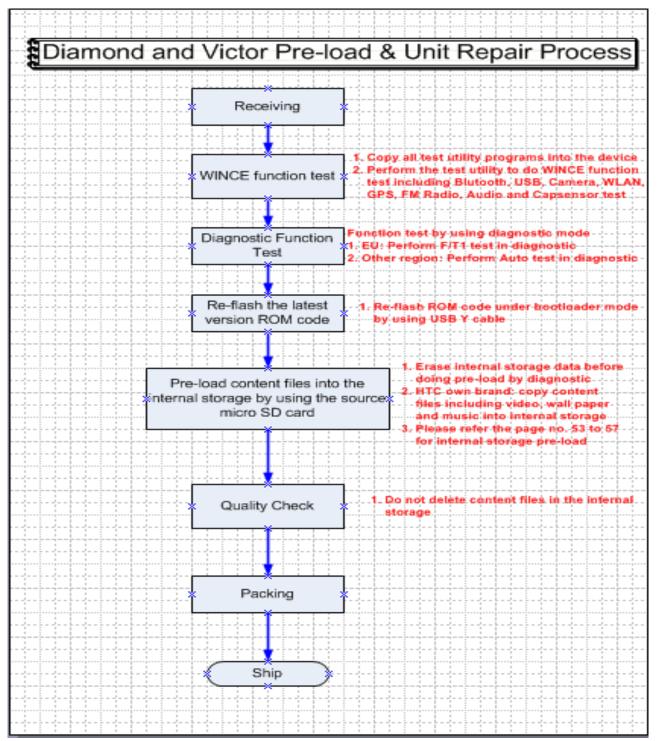
4.1 List of Diagnostic / WinCE Test Items

Mode	No	Item	Description	Remark
	Func	tion Test		
	1	Auto	Auto Regular Tests (Display, B.L, Vibrator, etc)	
	2	ROM Checksum Test	ROM size	
	3	Stylus Detect Test	Stylus remove and insert	
	4	LED Test	Backlight of Navi board module	
	5	Display Test	Color bar/R/G/B/Black/White/Gray pattern.	
	6	LCD Back Light Test	LCD back light test (On/Dim/Off).	
tic	7	Vibrator Test	Vibrator on test.	
Diagnostic	8	Key Test	Power, Volume up, Volume down, Key action, Key left, Key up, Key right, Key down	
D	9	G Sensor Test	Motion G sensor function test	
	Run-	in Test		
	1	1 Hour	1 Hour Run-in Test/Press Soft1 key.	Option
	2	2 Hours	2 Hours Run-in Test/Press Soft 2 key.	Option
	3	4 Hours	4 Hours Run-in Test/Press Start key.	Option
	4	8 Hours	8 Hours Run-in Test/Press OK key.	Option
	Form	at Internal Storage (Pe	ersonal information, talk times)	
	Devi	ce Info		
	1	Bluetooth Test	Bluetooth Function Test	
	2	USB Test	USB link test (Microsoft ActiveSync)	
	3	Camera Test	Camera Function Test	
CE	4	WLAN Test	WLAN Function Test	
Win CE	5	GPS Test	GPS Function Test	
_	6	FM Radio	FM Radio Function Test	
	7	Audio Test	All Audio Function Test	
	8	Cap Sensor Test	Navi Cap Sensor Function Test	

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Unit Repair Process



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	P.				
	Pr	e-load Process-1			
		○ BTC Structs Document On Line - Windows Labrant Doploset ● マード P. Hope/Paulik constrained.lingLapse app WEDD ###EQ ###EQ #201982(2) 二単位) ###EQ		V V MSAL 4 X And	5 🗙
		200 ± 200 ±	20 mart 20 maren • 10 mm • 10 mm • 10 mm • 20	ې ۱۹۰۵ - ۲۹۰۵ - ۲۹۰۵ - ۲۹۰۵ - ۲۹۰۵ - ۲۹۰۵	8055 •
			NE		~
1.	Download diagnostic program	Watcome, Straway, Lis Constitution " The Subject of Undownload Item is in red color. Diagnostic Program for ASP or S58i Status No. Ver.	Subject Model	[Add Documant][Quar Rel. dute Files	22
	from SDO (DOC-00040662).	REARCO COCCOMMISSION CLUB Selection	ECT CSCGR C9 v1.0 DEAMOND CSC-C/Doal Warrenty Service V1.0 DEAMOND VS.01A for A59 DEAMOND VS.02A for A59 DEAMOND	2009/06/13 2 Min(s) 2009/06/18 2 Min(s) 2009/06/09 2 156(s) 2009/06/12 2 1 Min(s)	
	http://htcscm10.htc.com.tw/SDO	Close <u>Dec-ontradoz</u> 2 Relezca Close <u>Esto-utoritoria</u> 2 Relezca	V3.01A for ASP DEAMOND V5.06A for ASP DEAMOND	2008/05/08 <u>1 filedo)</u> 2008/04/16 <u>1 filedo)</u>	
				Lis Bac	(K)
		ля Так Парадар — С.	onschilds (*) 2004 HTC RPOM sondern. All Biolijs Resourced 98. – 🖉 H - 📲 H o. – 🗳 Da. – 🕲 Da. – 🕲 Da. –	© 25 00 € ANN ¹⁰ € ■ 80 0 1 1 1 1 2 4 10 00 10 1 1	91 10245
	Pr	e-load Process-2	2		
Not	e: The display with line of			13	
	gnostic mode is normal due to it is				
relia	ability issue for VGA resolution.	onre A AN	T		
2.	Copy the diagnostic and ROM				
	code into the source mater card				
3.	Connect the USB Y cable into	T		1	
1	the unit. Connect the card reader and AC				
4.	adapter into the USB Y cable.				
		and the state	-		
	Pr	e-load Process-3	5		
		-			
5.	Turn the device power off and	-			
	insert Diagnostic SD card into				
	the USB card reader.				
6.	Press and hold <u>Volume down</u> +		Power =) Reflash Action=) DIAG		
	Right button and press Power button then enter Diagnostic		articles bind		
	mode.				
7.	Press "Action" key to enter				
	· · · · · · · · · · · · · · · · · · ·				
	Diagnostic mode.				

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	Pro	e-load Process-4			
8.	Press action key to select Content Tool for content files restore.		And		
	Pre	e-load Process-5	•		
9.	Press action key to select Check Contents before doing the file pre-load.	En	AND		
	Pr	e-load Process-6			
10.	Confirm the checking result and shows on the screen.		Check Contents		

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Pre-load Process-7							
11. Press action key to select Restore Content to MoviNAND							
Pre-load Proces							
12. It will restore content files into internal storage automatically.	<text></text>						
Pre-load Proces	ss-9						
 It shows the checksum and total time after finishing the content files restore. 	<text><text></text></text>						

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	Pre-load Process-10			
		ontent +	i€ × Name -	

田

Up

Menu

14. Reboot the device then enter OS to check the content files in the internal storage.

Pre-load Table

Pre-load the all files into the internal storage.

Diamond	Pre-load files	Folder Name
		White Denim
		CoCo B's
Music	Yes	Bethurum
		Bad Viens
		Absolute Madman
		wallpaper_facet
		wallpaper_flames
		wallpaper_flower
Wall Paper	Yes	wallpaper_leaf
		wallpaper_ocean
		Wallpaper_pink
		wallpaper_pinkflower
Demo Video	Yes	Touch_Diamond_GettingStarted.3gp

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WinCE Test

	Blueto	oth Test - 1	
1. 2. 3.	Tap icon <u>Comm Manager</u> on the Today screen and turn on Bluetooth. Tap the icon "Settings" down-right the corner of the screen and select the "Make this device" Checkbox. Press Action key (Jog-ball) to go next test pattern.	Comm Manage Image	Bluetooth Turn on Bluetooth Make this device visible to other devices To connect to a device, click on the Devices tab below. Devices Mode COM Ports SIM Access
	Blueto	Exit Settings	
		Settings 区 計 备 帐 亟	Notes 区 試 法 🕷 帐 💿 k
4. 5. 6.	Tap <u>Start->Settings->Connections-></u> <u>Beam</u> and select "Receive all" Checkbox. To create a file, tap Start->Programs ->Notes->New Tap and select the "Beam file"	Beam Receive all incoming beams.	View Recording Toolbar ✓ Draw Undo Redo Cut Copy Paste Ed Rename/Move Zo To Send New
	Blueto	ooth Test-3	
7.	Once device is searched, tap the device to send the file. Return to Today screen and tap <u>Start->Program->Comm Manager</u> <u>->Bluetooth</u> to turn off Bluetooth.	Notes Image: Constraint of the sector o	ok Comm Manager Image:

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	U	SB Test
1. 2. 3. 4.	Start up the Microsoft® ActiveSync®program in the PC. Select ActiveSync in the setting of menu Insert USB cable and connect unit to desktop/ or laptop. The USB to PC icon ->-> is appears on the Today screen when your device is connected to your desktop/ or laptop.	Settings Image: Start Ima
1. 2. 3.	Tap <u>Start->Program->Camera</u> or Press Camera button to turn on the Camera. Make sure the device will present and enter the preview display. Check camera pre-view and image quality.	Programs Image: Control of the

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	WL	AN Test	
1. 2. 3.	Tap icon <u>Comm Manager</u> on the Today screen and turn on WLAN. Select the hot-spot/ or access point which searchable and appears on screen. Once the hot-spot (access point) is connected, press the IE button and logon Internet.	Settings Image: Connection Connections Setup Advanced Beam Bluetooth Network Image: Connection Connections Setup Comm Connection Connections Manager Setup Image: Connection Connections Multiple Networks Detected Select a network to connect to: Image: Wan [Security-enabled] HTC [Security-enabled] HTC [Security-enabled] Image: Descurity-enabled] Image: Descurity-enabled Image: Descurity-enabled Image: Descurity-enabled Image: Descurity-enabled	Internet Explorer (* * *) (*) File://windows\default_0409.htm * * file://windows\default_0409.htm * * file://windows texplorer Mobile Favorites * Favorites * History * Favorites History * Favorites * History
	G	PS Test	
15. 16. 17. 18.	Place device in GPS receptor coverage area and tap the icon "Open GPS".	ITC GPS Tool Image: Color of the second	
	FM F	Radio Test	

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 Insert the headset into the USB connector before doing the testing. Tap icon FM Radio in the programs of the menu. Select the different channels for testing. 	Image: Programs Image: Programs Bluetooth Explorer Image: Programs Comm Comm Comm Manager File Explorer Image: Programs Image: Programs		PH #### Q → (1 + 1) Now Playing Q 92.7 0 1 91.1 2 91.5 3 91.9 4 92.7 5 96.0 6 99.5	
		T	Presets Menu	
Au	dio Test-1			
 Download test program from SDO (GSD-00004973) <u>http://htcscm10.htc.com.tw/SDO</u> Un-zip the image file. Copy "mfgtest.dll" and "Audio Test.exe" to internal storage. Execute "Audio Test" program from 	Diamond Audio Test 1 Diamond Audio Test 1 Diamond Audio Test Copyright(c) 2000- High Tech Computer All rights reserve	t 1.00 Diam 2008 Cop Corp. High ed A	Audio Test 1 # 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
internal storage.5. Choose the each test in the menu of "Tools"	Exit 祥		Headset Test Int-Record Test Ext-Record Test sols	
Au	dio Test-2			
	Speak	Test 1 🗱 🎦 🌾 🗙 ter Test		
 Select the Speaker Test then press Play button for testing 	P	lay		
		xit		
Au	dio Test-3			

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🔧 Diamond Au	udio Test 1 🛱 🏪 🌾 🗙		٦
Re	ceiver Test		
Press "Pla	y" button for testing.		
7. Select the Speaker Test then press			
Play button for testing	Play		
	Exit		
	EAR		
Audio Test-4			
	Audio Test 1 🛱 🤚 🌾 🕽	K	
	leadset Test		
Press "P	Play" button for testing.		
8. Connect the headset into the USB			
port before doing the testing			
9. Select the Headset Test then press	Play		
Play button for testing			
	Exit		
			_
Audio Test-5			
	Audio Test 1 🛱 🥍 😫 nt-Rec Test	1	
	×		
10. Select the Int-Rec Test then press			
the "Record" button for voice			
recording first			
11. Stop the voice record then press			
"Play" button for internal receiver	Press 🔶 to RECORD.		
test	Press ■ to STOP. Press ▶ to PLAY.		
	$\mbox{Press}\times$ to EXIT the test.		

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Audio Test-6		_	
 12. Connect the headset into the USB port before doing the testing 13. Select the Ext-Rec Test then press the "Record" button for voice recording first 	Press & to RECORD. Press & to RECORD. Press & to STOP. Press & to PLAY. Press & to PLAT the test.		
Cap Sensor Test-1			
 Install CapSensorTest tool to device. Execute the test tool. Execute the test tool. 	A/15/08 78 4/15/08 78 4/15/08 5/12/08	pSensorTester ⊄ ‱ 4€ ok 100 1.00.00	
Cap Sensor Test-2	2		
 Light touch the surface of keycap and press down the Navi key. The program will exist automatically once the function is normal. 			
Cap Sensor Test-3	3		

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5. Find the "CapSensorTestOK" log file in the folder and it means cap sensor function pass.	associat "CapSen the appl open thi the appl GensorTest GensorOK FintRecord CILF_noise30s log MEGdin1Test	no application ed with isorTesterOK". Run ication first, then s file from within		

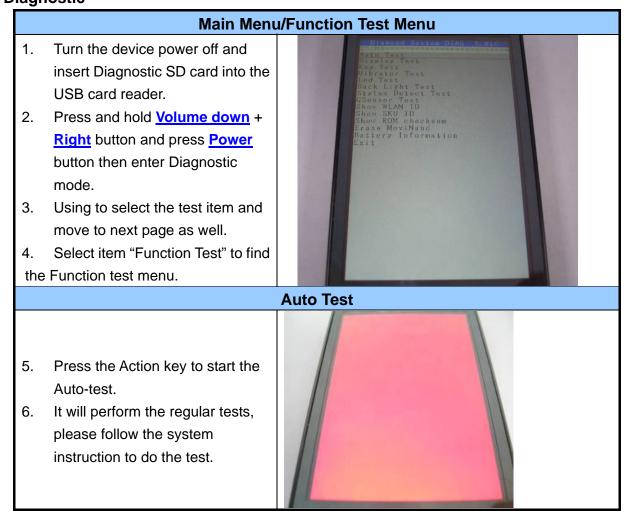
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Test Procedure

How to select test item: Using navigation button -"Up" or "Down" to select the test items

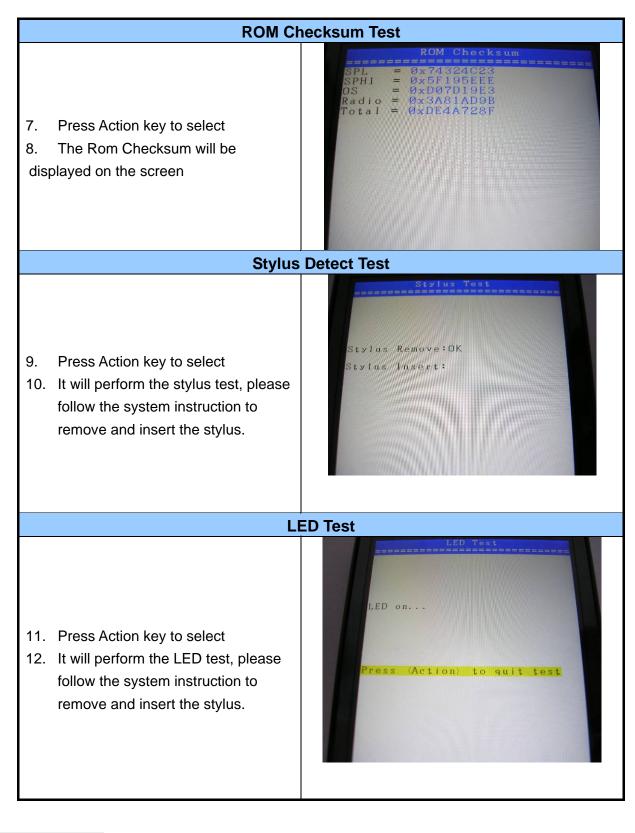
How to execute the test program: Press "Action" button to start each of test items.

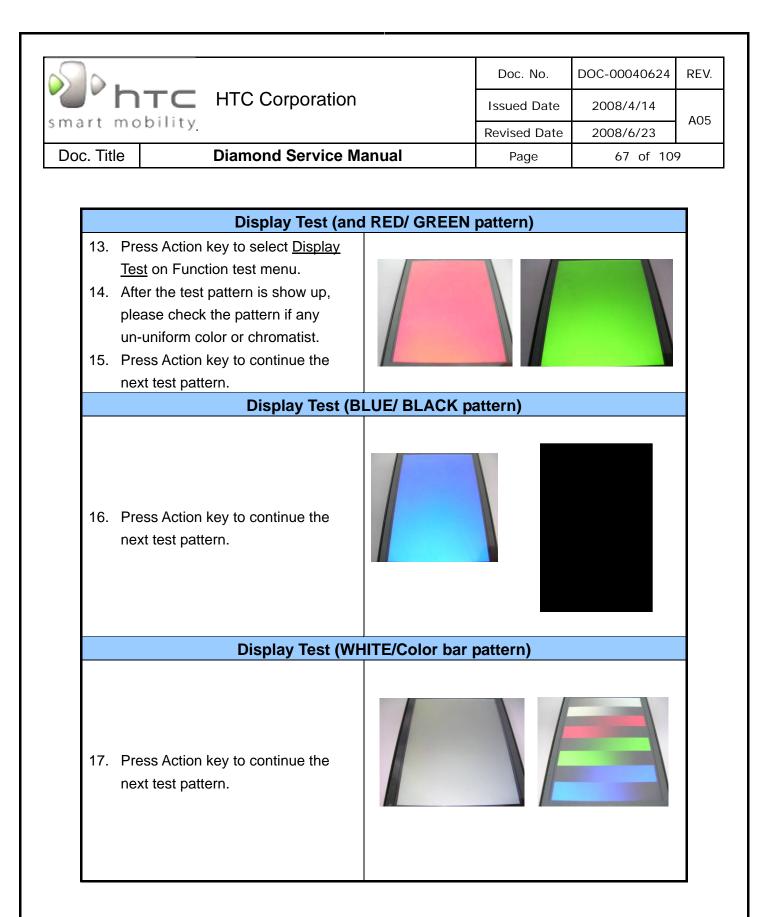
Diagnostic



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	LCD B	ack Light Test
	Press Action key to select <u>B.L Test</u> on Function test menu. Press Action key to switch the LCD backlight level from Level 1,Level2, Level3, Level4, Level5 Press Action key to exit and return to Function test menu.	Level 9 (Max)
	Vit	prator Test
	Press Action key to select <u>Vibrator</u> <u>Test</u> on Function test menu. Press Action key to exit and return to Function test menu.	Vibrator is vibrating All LEDs are On Press (Action) to quit tes
	ł	Key Test
23. The	Press Action key to select <u>Button</u> <u>Test</u> on Function test menu. Follow the instruction on screen to perform the Key/Button test (Power, Volume up, Volume down, Key action, Key left, Key up, Key right, Key down). screen will return to Function menu after the test is finished.	Key Test Power =>) OK Volume Up =>) OK Volume Down =>) OK Left =>) OK Up =>) OK Risht =>) OK Down =>)

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<u>Te</u> 25. Pu wl	<u>G Sensor Te</u> ess Action key to select <u>G Sensor</u> <u>st</u> on Function test menu. ut the unit on the table with hen performing this G sensor sting.	D. KRGSENSOR X: 2063, Y: 2023, 2: 1264		

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5. Power Measurement Test

5.1 Main board leakage current Test Procedure

This is a quick method to measure if any abnormal leakage current on main board which caused high power consumption compare to GOOD main board. (1) Requirement :

- Control box

Equipm	ent list
JUSTECK* JUSTECK* JUSTE	1. Control box
	2. 4 colors cable Cable A: Red Cable B: Yellow Cable C: Green Cable D: Black

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	Equipment set 1. Conr	(3 pins-Short)		

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accordin	2. Set up each button by row A~D according to product specification Following is an setting for Diamond				n
A/DC	JIG TYPE		Button set up matrix		
		A	В	С	D
Diamond	E	0	8	X	0
C Battery Control Box+Battery holder	s, press⊺	buttor	n A0,E	38,D0	
3. Install (the photon of the	oto is fo		rence	e only)	
Start testing 1. Turn o	n contro	l box p	oower	button	

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Image:	Device 3. In "main Click "Tur Set the ur * Flight mo * Make su BT, Wifi)	n on flight mo nit to : ode ire all RF func	ck phone status de"	ne,
Idle current test	value mus criteria, it	re Idle mode c st under 80m/ means M/B fa I/B for repair.	•	ren
Sleep current test	the unit. U sleep curr over the c	Jnit is turn off rent value mu	cked, Switch O and no display. st under 3mA, i ns M/B failed, repair.	,
If current consumption is passed at both of ic there is any item FAILED at idle or sleep mo				

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5.2 Battery rundown test procedure

Test Requirement:

-Windows 2000/XP

-USB Cable

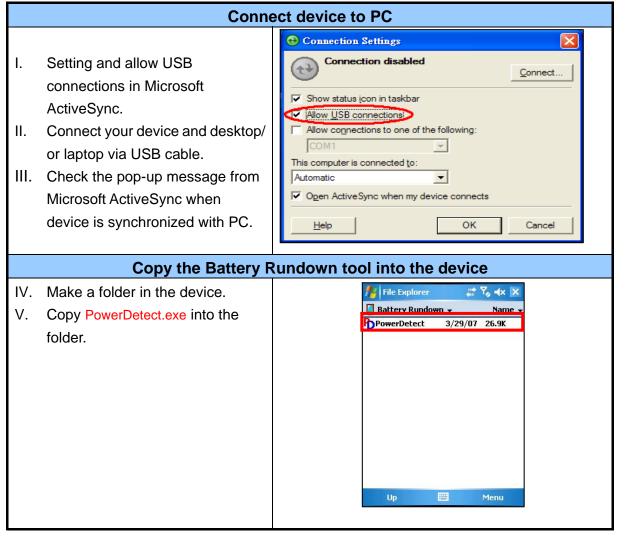
-ActiveSync 4.2 above (WINCE 6.0 should use ActiveSync 4.5)

-Master Unit

-Battery in Warranty

Caution: Please charge your unit to full capacity for battery (until the green light is displayed) before doing the test.

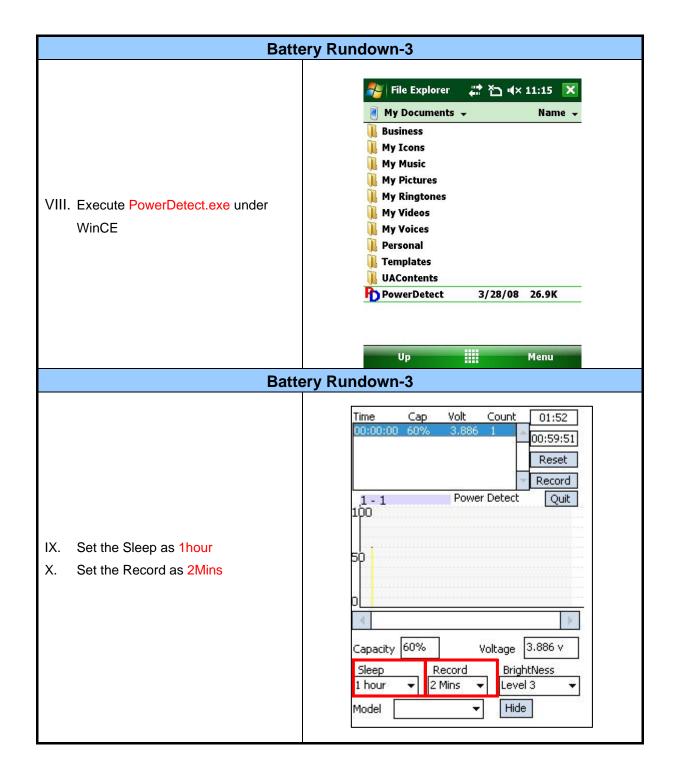
TEST PROCEDURE



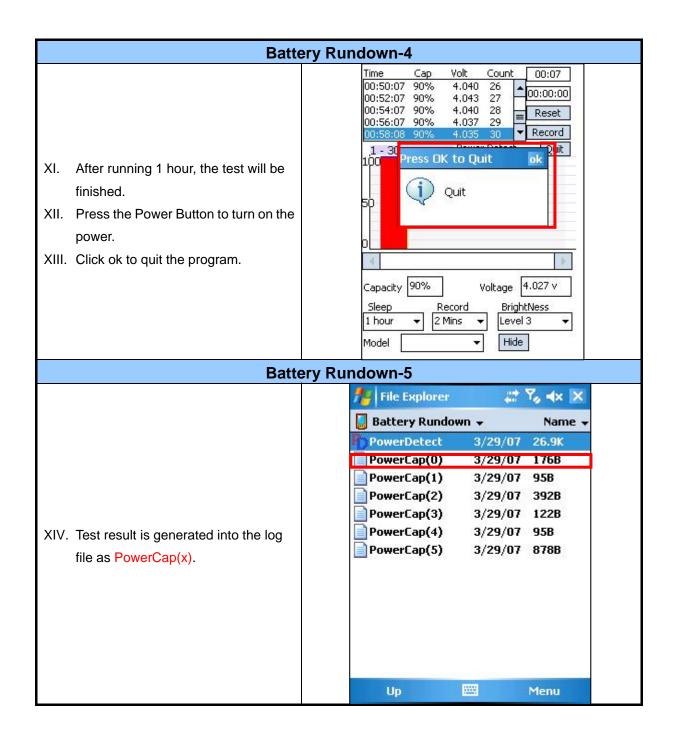
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	Batte	ery Rundown-1			
		🔊 Setting	as 🛱 ไ⊐ •(×	11:32 ok	
		Power			
			ttery power:	Duicht	
		Power Sav	e 	Bright	
				Ý 📟	
\	 Adjust the Backlight brightness 	Power Save	ternal power:	Bright	
	into the maximum level on battery power.			Q 🖸	
	power.		djust backlight		
		Battery Bac	klight Advanced		
	Batte	ery Rundown-2			
		Settings	🗱 🎦 🕯 🛪 11:44	ok	
		Power			
		On battery po			
		Turn off backligi Turn off backligi is not used for	nt if device 10 sec	V	
,	/II. Dinsabifebarcklight if device	Turn off device i	f not used 1 min	•	
	is not used for in Battery power.	巐 On external po	ower:		
		Turn off backligi is not used for	nt if device 1 min		
		Turn off device	f not used 2 min	•	
		Battery Backlight A	dvanced		

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Battery R	undown-6				
	🏄 Word Mobile 🛛 🗱 🍫 ok				
	00:46:06 90% 4.052 □€0 ▲				
	00:48:06 90% 4.048 ⊡€0				
	00:50:07 90% 4.040 ⊟€0				
	00:52:07 90% 4.043 ⊟€0				
XV. Tag the log file to check the capacity.	00:54:07 90% 4.040 ⊡€0				
	00:56:07 90% 4.037 ⊑€0				
	00:58:08 90% 4.035 ⊟€0 ≡				
	_				
	B I ∐ ≣ ≣ ≣ 띂 띂 ≇ ≇				
	View 🔤 Menu				
Caution: If the capacity is under 70%, Please replace a new battery.					

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6. Cosmetic Inspection Criteria

6.1 Classes definition of inspective area

- Class A area => The front side of main unit involve all buttons and LED lens except LCD.
- Class C area => 4 sides and back views of main unit.
- Class D area => The socket of battery, inner side of battery cover.

Photo of inspection areas



IT IS GENERIC COSMETIC INSPECTION CRITERIA FOR ALL PRODUCTS IF THERE HAVE ANY CONFLICT WITH THESE GENERIC CRITERIONS; PLEASE FOLLOW THE PRODUCT INSPECTION CRITERIA RESPECTIVELY.

Description

- > D: Diameter / L: Length / W: Width / N: Number of defects/ S: Distance from dot to dot
- Inspecting distance: 30 ± 5cm / Mechanical inspection angle: 90 degrees /
- > LCM inspection angle: 90 \pm 15 degrees / Inspection time: 5 seconds per surface.
- > Ambient illumination is to be 500-1100 Lux
- > The inspection condition of Newton ring:

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a. Inspection distance: 30cm / Inspection time: 5 sec

b. Ambient illumination is to be 500-1000 Lux (Incandescent lamp)

c. Inspection should be performed under the condition that LCD screen could reflect the mirror image of lamp.

d. The criteria of Newton ring's tinges and measure of area must follow up the worst-case sample.

6.2 Display inspection

	Inspection	Defects	Accept Level	Level
		Single	Red+ Green+ Blue \leq 3, S \geq 5mm.	Minor
	Bright Dots	2 adjacent	0	Minor
		3 or more adjacent	0	Minor
Electrical	Dark Dots	Single	Total Number ≤ 2 , S \geq 5mm.	Minor
Characteristic	Dark Dols	2 adjacent	0	Minor
Defects	Dark or Brigh	nt lines	0	Minor
	All Allowable Dots Defects		Total Number ≦ 3, S <u>></u> 5mm.	Minor
	Shift and tilt of screen viewed area		The black edge around display area must be detected by front view.	Minor
	Scratch		$0.03 < W \le 0.1 \text{ (mm)}$ L $\le 5 \text{ (mm)}, N \le 2 \text{ (mm)}$	Minor
Foreign Scratch, Objects or Lint	Lint (linear fo	reign objects)	0.03 < W ≦ 0.1 (mm) 0.3 < L ≦ 3.0 (mm) N ≦ 5	Minor
on power off status	Spots		0.1 < D \leq 0.3 (mm), N \leq 4	Minor
Statuo	Fish eye on f	ilm	$0.1 < D \le 0.4$ (mm), $N \le 4$	Minor
	Breakage on	film surface	Not acceptable	Minor
	Total accepta	ble defect quantity ≤ 10		Minor

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6.3 Main unit inspection

	Gap & Step inspection					
	Description	Accept criteria	Level			
1	GAP BETWEEN ALL GENERIC ME PARTS	< 0.4 mm	Minor			
2	GAP BETWEEN TOUCH WINDOW AND A PARTS	< 0.3 mm	Minor			
3	STEP BETWEEN MATING PARTS	< 0.3 mm	Minor			

It is generic cosmetic inspection criteria for all products if there have any conflict with these generic criterions; please follow the product inspection criteria respectively.

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7. Generic Troubleshooting

1 · Main Unit Does Not Respond to Power Button

(1) Connect the AC adapter, maybe the battery pack is exhaust and wait few minutes for battery recharging.

- (2) Check if battery installed well.
- (3) Check the Power Button whether it's damaged.
- (4) Replace another battery pack.
- (5) Try to start boot-loader mode [refer to section 4.2]. Re-flash ROM if boot loader mode is enabled.
- (6) Check all connectors including LCD FPC to Main Board.
- (7) Replace Main Board if necessary.
- (8) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.

2 · Touch Panel Does Not Respond to Screen Tap

- (1) Check the connection of LCM FPC cable whether is properly connected.
- (2) Try to cold boot the unit then perform screen tap again.
- (3) Try with another T/P with housing assembly.
- (4) Try with another Main Board.
- (5) Replace T/P with housing if necessary
- (6) Replace Main Board if necessary.
- (7) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.

3 · Buttons Do Not Respond

- (1) Try to cold boot the unit then tries again.
- (2) Dismantle the unit; check the status of switches on the Main Board and the plastic parts of the Button not responding.
- (3) Try with another Main Board or Front Bezel.
- (4) Replace Main Board or Front Bezel if necessary.
- (5) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.

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4 · Unusual Vertical / Horizontal lines or partial display

- (1) Check the connection of LCM FPC whether is properly connected.
- (2) Try to cold boot the unit then tries again.
- (3) Try to re-flash the ROM code.
- (4) Try with another T/P with housing assembly.
- (5) Try with another Main Board.
- (6) Replace T/P with housing assembly if necessary
- (7) Replace Main Board if necessary.
- (8) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

5 · Back Light Does Not Turn ON/OFF

- (1) Check the connection of LCM FPC whether is properly connected.
- (2) Try to re-flash the ROM code.
- (3) Try with another T/P with housing assembly.
- (4) Try with another Main Board.
- (5) Replace T/P with housing assembly if necessary
- (6) Replace Main Board if necessary.
- (7) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

6 · PC Connection not possible

- (1) If test result is NFF, it is possible caused by user connect cradle to computer before ActiveSync is installed.
- (2) Check whether "Connection Settings" in the MS ActiveSync is properly set.
- (3) Check whether it connects with other cables or cradle, customer's cable might be damaged.
- (4) Check the external appearance of the connector on the unit whether it is physically damaged.
- (5) Try to re-flash the ROM code.
- (6) Replace Main Board if necessary.
- (7) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

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Revised Date 2008/6/23 Doc. Title Diamond Service Manual Page 84 of 109 7 • Battery Pack does not start (1) Make sure the battery cover is closed properly. (2) Connect to the AC Adapter and see if it takes charge. Also check AC Adapter condition. (3) Check whether AC Adapter is functioning properly. (4) Check whether the condition of Battery Charging status is correct. (5) Check the appearance of Battery Pack if any abnormal (6) Try with another Battery Pack or Replace Battery Pack if necessary. (7) Try with another Main Board or Replace Main Board if necessary. (8) Once the defective part has been identified, verify it again with the defective part whether the symptocould be duplicated. 8 • Battery discharges quickly even after fully charged (1) Make sure the Battery Pack takes fully charge with AC Adapter. (2) Check whether the condition of Battery Charging status is correct. (3) Dismantle the unit and check the appearance of Battery Pack. (4) Try with another Battery Pack or Replace Battery Pack if necessary. (6) Once the defective part has been identified, verify it again with the defective part whether the symptocould be duplicated. 9 • Battery Pack does not recharge (1) Make sure the Battery Pack takes fully charge with AC Adapter. (2) Check whether the condition of Battery Charging status is correct. Charge should be done no more thar hours. (3) Dismantle			Doc. No.	DOC-00040624	REV.
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(1) Check "Sound & Notifications" Settings in the unit for Sound Enabling.

(2) Make sure it's not MUTED.

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- (3) Try to re-flash the ROM code.
- (4) Clean up the speaker connection side on MB if there is any contamination.
- (5) Dismantle and Check whether the Speaker is properly installed (Orientation)
- (6) Replace Speaker if necessary.
- (7) Replace Main Board if necessary.
- (8) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

11 · No Recorded Sound or Distorted sound

- (1) Check "Sound & Notifications" Settings in the unit for Sound Enabling.
- (2) Make sure it's not MUTED.
- (3) Try to re-flash the ROM code.
- (4) Dismantle and Check whether the Microphone is properly installed.
- (5) Replace Microphone if necessary.
- (6) Replace Main Board if necessary.
- (7) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.

12 · Wireless connection (WLAN/BT) not functioning

- (1) Make sure the wireless environment is OK before connecting to WLAN.
- (2) Make sure the wireless connection setting has properly set.
- (3) Make a life connection with Internet or another device.
- (4) Try to re-flash the ROM code.
- (5) Try with another main board if necessary
- (6) Try with another Navi board assembly module if necessary
- (7) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.

12 · GPS not functioning

- (1) Make sure the GPS environment is outside of room before connecting to satellite.
- (2) Make sure the GPS connection setting has properly set in navigation map.
- (3) Try to re-flash the ROM code.
- (4) Try with another main board if necessary

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(5) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.

12 · Internal storage device not functioning

- (1) Make sure the GPS environment is outside of room before connecting to satellite.
- (2) Make sure the GPS connection setting has properly set in navigation map.
- (3) Try to re-flash the ROM code.
- (4) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.

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8. Generic Labeling Plan

Model ID	DIAM100	DIAM110	DIAM120	DIAM130	DIAM140	DIAM300
Band	UMTS: 900/2100 GSM: 900/1800/1900	UMTS: 850/1900 GSM: 850/1800/1900	de-3G GSM: 900/1800/1900	UMTS: 850/2100 GSM: 900/1800/1900	de-3G GSM: 900/1800/1900	UMTS: 900/2100 GSM: 900/1800/1900
ID difference	Diamond A Metal-Bezel	Diamond A Metal-Bezel	Diamond A no 2nd camera hole			Diamond B Metal-Bezel(Flat)

Agency label_DIAM100

The brand name is shown on Bezel. HTC P/N: 77H00598-00M Size: 40.3 X 38.55mm

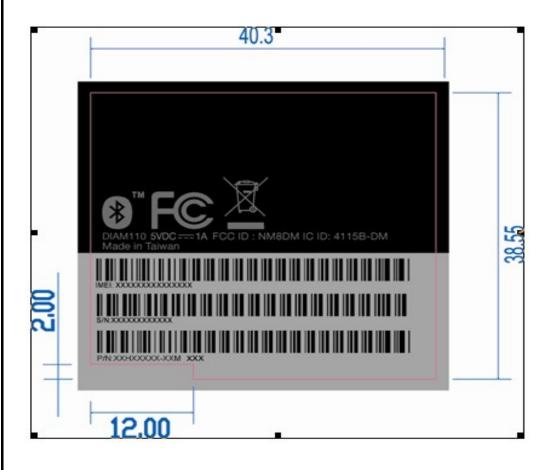
40.3	
	38.55
	TM FCC C C C C C C C C C C C C C C C C C

HTC P/N	Description

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The brand name is shown on Bezel. HTC P/N: 77H00598-01M Size: 40.3 X 38.55mm



HTC P/N	Description

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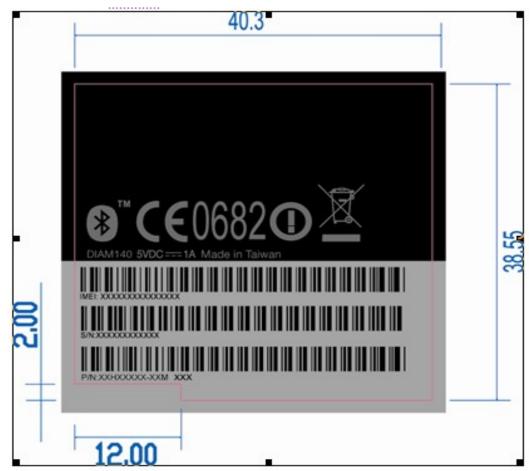
The brand name is shown on Bezel. HTC P/N: 77H00598-03M Size: 40.3 X 38.55mm

		40.3	l
2.00		XXXX XXXX	38.55
HT	C P/N	Description	
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No bere	HTC Corporation	Doc. No.	DOC-00040624	REV.
smart mobility		Issued Date	2008/4/14	A05
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Doc. Title	Diamond Service Manual	Page	90 of 10	9
Agency label_DIAM1 The brand name is sh HTC P/N: 77H00598- Size: 40.3 X 38.55mm	own on Bezel. 05M			
1	40.3	1		
	Image: with the second secon	38.55		
12.00				
HTC P/N	Description			
HTC CONFIDENTIAL			SM-TP00)1-0704

Smart mobility HTC Corporation		Doc. No.	DOC-00040624	REV.
		Issued Date	2008/4/14	A05
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The brand name is shown on Bezel. HTC P/N: 77H00598-06M Size: 40.3 X 38.55mm

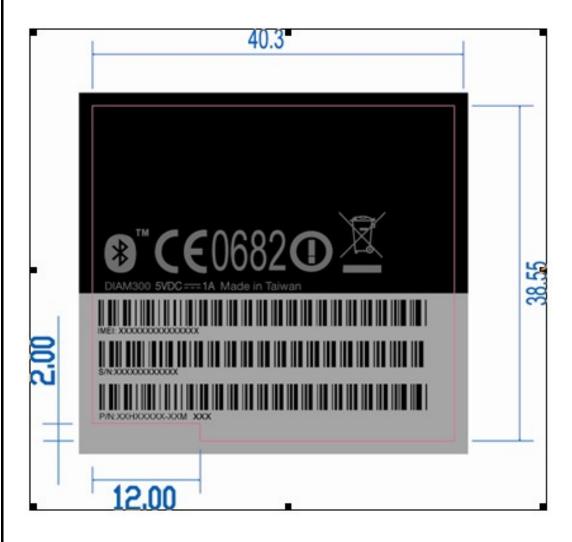


HTC P/N	Description

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The brand name is shown on Bezel. HTC P/N: 77H00598-02M Size: 40.3 X 38.55mm



HTC P/N	Description

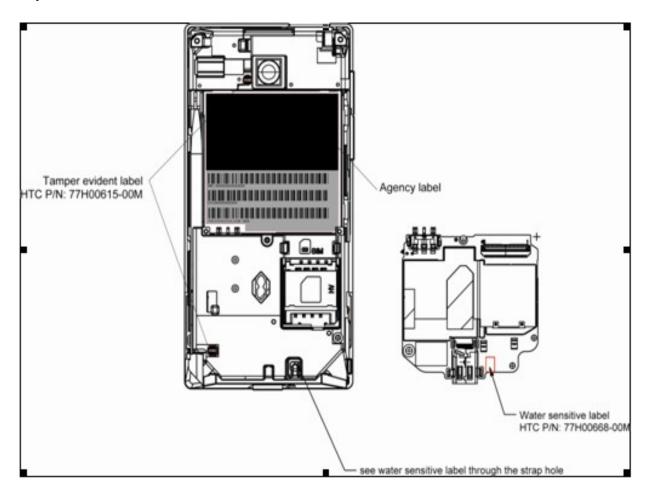
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Unit label location explanation

Water sensitive label HTC P/N: 77H00668-00M Qty: 1

Tamper evident label HTC P/N: 77H00460-01M Qty: 2



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Battery label

Standard battery 900mAh_Li-ion_English version

HTC P/N: 35H00112-00M (TWS)

35H00112-01P (Samsung)



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Standard battery 900mAh_Li-ion Polymer (Desay) _English version

HTC P/N: 35H00113-00P (Sony, Desay)



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9. Generic Spare Part List and Photos

9.1 SPL for Repair

Item	P/N	Description	Qty	Substitute
1	35H00112-00M	BATTERY_LI-ION,900mAh,3.7V,TWS,ICP533640SR,MAXELL,60/-20degC,42*40	1	
		*5.5mm	-	
2	36H00684-00M	Speaker,KDIC,MPS-101706BA	1	
3	36H00685-00M	Receiver,KDIC,MPR061501DA	1	
5	51H10073-00M	Rigid-Flex Board ASSY, Upper BD with ACF Assy, Diamond	1	
6	54H00278-00M	Camera Module,FF,Largan,Largan,PREMIER,NBR727 Module drawing, mutual tek,0.3Mpixel,5*5*2.62mm,Diamond	1	
7	54H00279-00M	Camera Module,PREMIER,CMHT-3A403D,AF,TDK,LARGAN,相互,Micron MI-3130,3.1Mpixel,Micron,19.2*8.9*6.3mm,Raphael	1	
8	71H02327-00M	Cover, MEGA POWER, COVER LEFT COAXIAL CABLE, DIAMOND	1	
9	71H02328-00M	Button, UNITEL, PWRBTN, DIAMOND	1	
10	71H02329-00M	Button, UNITEL, VOLBTN, DIAMOND	1	
11	72H02445-00M	Magnet, MAGNET DIAMOND	1	
12	72H02453-00M	Screw,FPHM1.2-1.1(2.6,0.3),Diamond	2	
13	72H02454-00M	Screw,FPHM1.2-0.25*2.4(2,0.35),AISI-1018,BLACK,Diamond	2	
14	72H02456-00M	Screw,FPHM1.4-0.3x2.0(2.55,0.2)Ni/BI, Diamond	4	
15	72H02460-00M	Cover, JUN-YEN, metal cover label, Diamond	1	
16	72H02474-00M	Screw,M1.4-L4.3-D2.6	4	
17	72H02767-00M	Screw,M1.4-L4.3-D2.6,Silver,Diamond	2	
18	73H00278-00M	Cable,MURATA,MXHP34HP0590,PLUG CABLE, coaxial cable, GPS,DIAMOND	1	
19	73H00280-00M	Cable,MURATA,MXHP34HP0980C1,coaxial cable, BT/WiFi, DIAMOND	1	
20	73H20139-41M	FPC Pre-Assy, SIM, GLOBAL FLEX, Diamond	1	
21	74H01123-00M	Sound Box Pre-Assy, DIAMOND	1	
22	74H01131-00M	Cover Pre-Assy,Antenna,Diamond-A,Diamond	1	
23	74H01132-00M	Cover Pre-Assy,Battery,Diamond-A,Diamond	1	
24	74H01133-00M	Cover Pre-Assy,SIM,Diamond-A,Diamond	1	
25	74H01139-00M	Support Pre-Assy, ASSY Support cover right, RF cable, Diamond	1	
26	74H01144-00M	Keycap Pre-Assy,htc navi,diamond	1	
27	74H01159-00M	Stylus Pre-Assy,Diamond-A,Diamond	1	
28	76H02515-00M	Rubber,Silicon,MIC,Diamond	1	
29	76H02650-00M	Cushion,speaker,27.9*12.75*0.5mm,SCF100,Diamond	1	
30	76H02653-00M	Tape,BTB connector,16*10*0.06mm,Kapton,Diamond	1	
31	76H02656-00M	Rubber,BT coaxial plug holder,Diamond	1	
32	76H02692-00M	Mylar,upper board switch,6.5*4.5*0.05mm,Diamond	1	
33	76H02756-00M	Mylar,Power key,Diamond	1	
34	77H00460-00M	Tamper-Evident Label, VOID wording, black background,3*3mm,MING JYE	1	
35	77H00598-00M	Regulation Label,40.3*38.55mm,CHENG MAY,DIAM300,Diamond	1	
36	77H02203-00M	Water Sensitive Label,4*2.5mm,Ming Jye, BlueAngels	1	
37	80H00704-00	FRU-SUB ASSY,TFT-LCD MODULE,TPK,TPK_TW,HITACHI,Black,W/ Bezel,Diamond	1	
38	99HEJXXX-02	PCBA Main Board and sub board	1	

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NOTE:

THE PHOTO OF SPL IS GENERIC AND ONLY FOR REFERENCE, THE COLOR AND APPEARANCE MAY BE DIFFERENT FROM THE SHIPPED PARTS, IF YOU WANT TO APPLY THOSE PARTS, PLEASE CONTACT YOUR SERVICE ACCOUNT MANAGER FOR MORE INFORMATION.

AS FOR PICTURE, PLEASE REFER TO THE TABLE AS BELOW.

FOR REFURBISHMENT PARTS, THE TABLE IS FOR YOUR REFERENCE. YOU CAN DO THE REFURBISHMENT ONLY WHEN YOUR SERVICE MODEL IS ALLOWED TO DO IT.

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	(P	Picture for SPL 80H Ke art no on picture is for Generic version only		NUMBER OF STREET, STREE	er)	
	ψ.	art no on picture is for Generic version onig	y, piease check Si	-Lior detail per custom		
Part No.	35H00112-00M		Part No.	36H00684-00M		
Description	BATTERY_LI-ION	The south	Description	Speaker	\bigcirc	
Q'ty	1		Q'ty	1		
Refurbishment Repair Code	No B101		Refurbishment Repair Code	No G103	and the second	
Part No.	36H00685-00M	and the second sec	Part No.	51H10073-00M		
Description	Receiver		Description	Rigid Flex Board		T
Q'ty	1		Q'ty	1		
Refurbishment Repair Code	No G103.1		Refurbishment Repair Code	No M201.2	0	
Topun oodo				WI201.2		
Part No.	99HEJXXX-02M		Part No.	54H00278-00M		
Description	PCBA Main Board and sub board		Description	2nd Camera Module	-	
Q'ty	1		Q'ty	1		
Refurbishment Repair Code	No M001		Refurbishment Repair Code	No G117		
Repail Coue	MIGOT			VIII		
Part No.	54H00279-00M		Part No.	71H02327-00M		
Description	Main Camera Module	Dm	Description	Left Coaxial Cable Cover		-
Q'ty	1		Q'ty	1		
Refurbishment	Yes G117		Refurbishment	No		
Repair Code	G117		Repair Code	N/A		

Number of the second					Doc. No.	DOC-00040624	REV.
Number of the second		hтс	HTC Corporation		Issued Date	2008/4/14	
Part No. 7 'H02328-00M Description Power Button Cover Oty 1 Refurblishment Yes Refurblishment Yes Part No. 72H02445-00M Description Magnet O'y 1 Refurblishment Yes Repair Code C106 Part No. 72H02445-00M Description Magnet O'y 1 Refurblishment No Repair Code C106 Part No. 72H02445-00M Description Magnet Part No. 72H0245-00M Description Screev [FPHM12- 1:1(2:0:3) O'y 2 Refurblishment No Repair Code NA Part No. 72H02456-00M Description Screev [FPHM14- 0:3:2 0(2:55,0:2]N/B O'y 2 Repair Code NA Part No. 72H02460-00M Description Screev [FPHM14- 0:3:2 0(2:55,0:2]N/B	smart	mobility			Revised Date	2008/6/23	A05
Construint Power Button Cover Construint Volume Button Cover Oty 1 Description Volume Button Cover Oty 1 Construint Veloce Reductionment Veloce Oty 1 Reductionment Veloce Volume Button Cover Part No. 72:H02445-00M Part No. 72:H02465-00M Description Magnet Part No. 72:H02668-00M Regult Code No Screw, FPH-M12- 1.1(2.6.0.3) Oty Oty 1 Screw, FPH-M12- 1.1(2.6.0.3) Oty Part No. 72:H02454-00M Screw, FPH-M12- 0.2257.2(2.0.85) Oty Oty 1 Screw, FPH-M12- 0.2257.2(2.0.85) Oty Oty 2 Screw, FPH-M12- 0.2257.2(2.0.85) Oty Oty 2 Screw, FPH-M12- 0.2257.2(2.0.85) Oty Oty 2 Screw, FPH-M12- 0.227.2(2.0.85) Oty Oty 2 Screw, FPH-M12- 0.227.2(2.0.85) Oty Oty 2 Screw, FPH-M12- 0.227.2(2.0.85) Oty <th>Doc. Tit</th> <th>le</th> <th>Diamond Service Manu</th> <th>lal</th> <th>Page</th> <th>99 of 109</th> <th>9</th>	Doc. Tit	le	Diamond Service Manu	lal	Page	99 of 109	9
Construint Power Button Cover Construint Volume Button Cover Oty 1 Description Volume Button Cover Oty 1 Construint Veloce Reductionment Veloce Oty 1 Reductionment Veloce Volume Button Cover Part No. 72:H02445-00M Part No. 72:H02465-00M Description Magnet Part No. 72:H02668-00M Regult Code No Screw, FPH-M12- 1.1(2.6.0.3) Oty Oty 1 Screw, FPH-M12- 1.1(2.6.0.3) Oty Part No. 72:H02454-00M Screw, FPH-M12- 0.2257.2(2.0.85) Oty Oty 1 Screw, FPH-M12- 0.2257.2(2.0.85) Oty Oty 2 Screw, FPH-M12- 0.2257.2(2.0.85) Oty Oty 2 Screw, FPH-M12- 0.2257.2(2.0.85) Oty Oty 2 Screw, FPH-M12- 0.227.2(2.0.85) Oty Oty 2 Screw, FPH-M12- 0.227.2(2.0.85) Oty Oty 2 Screw, FPH-M12- 0.227.2(2.0.85) Oty <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							
Oty 1 Oty 1 Refubilitment Repair Code Yes Colo Part No. 72±0245-00M Part No. 72±0245-00M Description Magnet Image: Code C106 Image: Code C106 Oty 1 Image: Code C106 Image: Code C106 Description Magnet Image: Code C106 Image: Code C106 Refurbitiment No Refurbitiment No Refurbitiment No Refurbitiment No Refurbitiment No Refurbitiment No Part No. 72±02450-00M Image: Code NA Image: Code NA Description 0:32:0 2(2:0.35) Image: Code No Refurbitiment No Refurbitiment No Refurbitiment No Refurbitiment No Repair Code NVA Image: Code NVA Image: Code NVA Part No. 72±02450-00M Image: Code NVA Image: Code NVA De	Part No.	71H02328-00M		Part No.	71H02329-00M		
Refurbisitment Yes Repair Code C106 Part No. 72H0245-00M Description Magnet O'vy 1 Refurbisitment No	Description	Power Button Cover		Description	Volume Button Cover	_	
Repair Code C108 Repair Code C108 Part No. 72H02445-00M Part No. 72H02868-00M Description Magnet Description Screw, FPHM12- 1.1(2.6.0.3) 1 O'ty 1 Part No. 72H02456-00M Refurbishment No Refurbishment No Repair Code NA Refurbishment No Part No. 72H02454-00M Part No. 72H02456-00M Refurbishment No Part No. 72H02454-00M Part No. 72H02456-00M Refurbishment No Q'ty 2 Screw, FPHM12- 0.25'2.4(2.0.35) Screw, FPHM14- 0.3s2 0(2.5'5.0.2N/F) Screw, FPHM14- 0.3s2 0(2.5'5.0.2N/F) Q'ty 2 Part No. 72H02456-00M Refurbishment No Refurbishment No Refurbishment No Refurbishment No Part No. 72H02480-00M Part No. 72H02474-00M Refurbishment No Part No. 72H02480-00M Part No. 72H02474-00M Refurbishment No <t< th=""><th>Q'ty</th><th>1</th><th></th><th>Q'ty</th><th>1</th><th></th><th></th></t<>	Q'ty	1		Q'ty	1		
Part No. 72H02445-00M Description Magnet O'ty 1 Refurbishment No. Repair Code NA Part No. 72H02454-00M Description Screw, FPHM12- 1.1(26,0.3) O'ty 1 Part No. 72H02454-00M Description Screw, FPHM12- 0.25*2.4(2.0.35) O'ty O'ty 2 Part No. 72H02456-00M Description Screw, FPHM12- 0.25*2.4(2.0.35) O'ty O'ty 2 Part No. 72H02456-00M Description Screw, FPHM12- 0.25*2.4(2.0.35) O'ty 4 Part No. 72H02456-00M Description Screw, FPHM14- 0.3v2.0(2.55.0.2)N//B O'ty 2 O'ty 4 Part No. 72H02460-00M Part No. Screw, M1.4-L4.3- D2.8 O'ty Part No. 72H02474-00M Description Screw, M1.4-L4.3- D2.8 O'ty 4 Part No. 72H02474-00M Refurbishment No No Refurbishment No							
Image: Code Screw, FPHM12- 1.1(2.8.0.3) Image: Code Screw, FPHM12- 1.1(2.8.0.3) Image: Code Screw, FPHM12- 1.1(2.8.0.3) Refurbishment No Refurbishment NO Description Screw, FPHM12- 0.25*2.4(2.035) Screw, FPHM14- 0.25*2.4(2.035) Screw, FPHM14- 0.25*2.4(2.035) O'ty 2 Refurbishment No Screw, FPHM14- 0.25*2.4(2.035) Screw, FPHM14- 0.25*2.4(2.035) O'ty 2 Screw, FPHM14- 0.25*2.4(2.035) Screw, FPHM14- 0.25*2.4(2.035) Screw, FPHM14- 0.25*2.4(2.035) O'ty 2 Screw, FPHM14- 0.25*2.4(2.035) NA Screw, FPHM14- 0.25*2.4(2.035) Part No. 72H02460-00M Fefurbishment No No Part No. 72H02460-00M Screw, M14-14.3- D2.8 Screw, M14-14.3- D2.8 Screw, M14-14.3- D2.8 O'ty 1 No Screw, M14-14.3- D2.8 Screw, M14-	Repair Code	C106		Repair Code	C106		
Description Integrate Integrat Integrate Integrate	Part No.	72H02445-00M		Part No.	72H02668-00M		
Refurbishment No Refurbishment No Part No. 72H02454-00M Description Screw.FPHM1.2- 0.25*2.4(2,0.35) Q'ty 2 Refurbishment No Refurbishment No Refurbishment No Refurbishment No Refurbishment No Refurbishment No Part No. 72H02460-00M Description 72H02460-00M Description 72H02460-00M Description 72H02460-00M Part No. 72H02460-00M Description Screw.M1.4-L4.3- D2.6 O'ty 1 Core Screw.M1.4-L4.3- D2.6 O'ty 1 Refurbishment No	Description	Magnet		Description			
Repair Code N/A Repair Code N/A Part No. 72H02454-00M Part No. 72H02456-00M Screw, FPHM1.4- 0.3x2.0(2 55,0.2)N/B 1 Orly 2 Orly 4 Screw, FPHM1.4- 0.3x2.0(2 55,0.2)N/B 1 Screw, FPHM1.4- 0.3x2.0(2 55,0.2)N/B 1 Screw, FPHM1.4- 0.3x2.0(2 55,0.2)N/B 1 Screw, FPHM1.4- 0.3x2.0(2 55,0.2)N/B 1 Part No. 72H02460-00M Part No. 72H02474-00M Screw, M14-14.3- D2.6 Screw, M14-14.3- D2.6 Screw, M14-14.3- D2.6 Orly 1 Orly 4 Screw, M14-14.3- D2.6 Screw, M14-14.3- D2.6 Screw, M14-14.3- D2.6 Screw, M14-14.3- D2.6 Orly 1 Screw, M14-14.3- D2.6 Screw, M14-14.3- D2.6 <th>Q'ty</th> <th>1</th> <th></th> <th>Q'ty</th> <th>2</th> <th></th> <th></th>	Q'ty	1		Q'ty	2		
Part No. 72H02454-00M Part No. 72H02456-00M Description Screw, FPHM1.2- 0.25*2.4(2,0.35) Output Screw, FPHM1.4- 0.3x2.0(2.55,0.2)Ni/B 1 Description Screw, FPHM1.4- 0.3x2.0(2.55,0.2)Ni/B 1 Q'ty 2 Part No. Refurbishment N/A No Part No. 72H02480-00M Part No. 72H02474-00M Part No. Description Metal Cover Part No. 72H02474-00M Screw,M1.4-L4.3- D2.6 Screw,							
Image: Construction in the second				Repail Code	NA		
Description Screw, PFMM12- 0.25*2.4(2,0.35) Description 0.3x2.0(2.55,0.2)Ni/B 1 Q'ty 2 Q'ty 4 Refurbishment No Refurbishment No Repair Code N/A Part No. 72H02460-00M Description Metal Cover Part No. Screw, M1.4-L4.3- D2.6 Screw, M1.4-L4.3- D2.6 Q'ty 1 Core Screw, M1.4-L4.3- D2.6 Screw, M1.4-L4.3- D2.6 Screw, M1.4-L4.3- D2.6	Part No.	72H02454-00M		Part No.	72H02456-00M		
Refurbishment No Refurbishment No Repair Code N/A Metal Cover Metal Cover Q'ty 1 Refurbishment No	Description			Description			
Repair Code N/A Repair Code N/A Repair Code N/A Repair Code N/A Part No. 72H02460-00M Description Metal Cover Q'ty 1 Refurbishment No						•	
Part No. 72H02460-00M Description Metal Cover Q'ty 1 Refurbishment No			A REAL PROPERTY AND ADDRESS OF				
DescriptionMetal CoverMetal CoverDescriptionScrew,M1.4-L4.3- D2.6Q'ty1Q'ty4RefurbishmentNoNo		1973		Repair Court	19075		
Description Metal Cover Q'ty 1 Refurbishment No	Part No.	72H02460-00M		Part No.	72H02474-00M		
Refurbishment No Refurbishment No	Description	Metal Cover		Description			
	Refurbishment Repair Code	No N/A		Refurbishment Repair Code	No N/A		

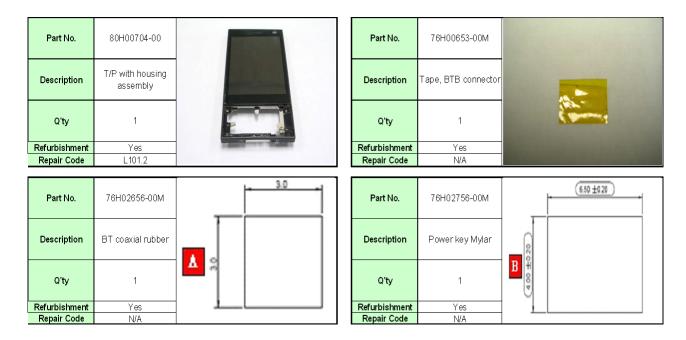
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Part No.	72H02767-00M		Part No.	76H02650-00M	Adhesi	ve side
Description	Screw,M1.4-L4.3- D2.6, Silver	se and a second s	Description	Speaker cushion		
Q'ty	1	×.	Q'ty	1		7
Refurbishment Repair Code	Yes N/A		Refurbishment Repair Code	Y es N/A		
Part No.	73H00278-00M		Part No.	73H00280-00M		
Description	GPS Coaxial Cable		Description	BT/Wi-Fi Coaxial Cable		2
Q'ty	1		Q'ty	1	1	1
Refurbishment Repair Code	Yes B108		Refurbishment Repair Code	Yes B108		
Part No.	73H20139-41M		Part No.	74H01123-00M		
Description	SIM FPC assembly	Contract	Description	Sound box assembly	00	
Q'ty	1	Anna Anna	Q'ty	1		
Refurbishment Repair Code	No M201.1		Refurbishment Repair Code	No N/A		
Part No.	74H01131-00M		Part No.	74H01132-00M	17	
Description	Antenna cover assembly		Description	Battery cover assembly		
Q'ty	1		Q'ty	1		
Refurbishment	No		Refurbishment	Yes		
Repair Code	G114.1		Repair Code	C112		

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Part No.	74H01133-00M		Part No.	74H01139-00M	
Description	SIM cover assembly	H-0	Description	Support cover	
Q'ty	1	T.A.	Q'ty	1	
Refurbishment	Yes		Refurbishment	No	
Repair Code	C102		Repair Code	C108	
Part No.	74H01144-00M		Part No.	74H01159-00M	
Description	Navi Keycap		Description	Stylus	
Q'ty	1		Q'ty	1	
Refurbishment	No		Refurbishment	No	
Repair Code	C109		Repair Code	G102	
Part No.	76H02515-00M		Part No.	77H00460-01M	100 100 100 100 100 100 100 100 100
Description	Microphone rubber		Description	Tamper evident label	
Q'ty	1	-	Q'ty	2	
Refurbishment	No		Refurbishment	No	
Repair Code	N/A		Repair Code	N/A	
Part No.	77H00598-00M	•) • FC & •	Part No.	77H00668-00M	
Description	Regulation label		Description	Water Sensitive Label	The second second
Q'ty	1		Q'ty	1	
Refurbishment	No		Refurbishment	Yes	
Repair Code	N/A		Repair Code	N/A	

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9.2 Bo	oard Level 2.5 Repairs			
	sic Repair Instructions for Component R	eplacement.		
Step 1	Place the solder-proof tape to cover the surrounding ar	•	ents which being r	eplaced
	Warning : DO NOT overheat the tape and components to avoid the ta		-	•
Step 2	Use Heater Gun (HAKO850B, set the temperature betv	veen 350°C, Air Sj	peed 3~5) to remo	ve the
-	components.			
Step 3	Wait till the temperature cool down before removing the	solder-proof tape	to avoid other com	ponents
being re	moved			
Step 4	After the damaged or defective components have been and flux residues.	replaced; clear th	e surroundings for	⁻ solder
Notice:				
Α.	Checking the polarity of CON8, and the position can't b	e shifted.		
В.	Checking the polarity of SW8 SW7, and it can't be rev	ersed.		
C.	All the parts of the PCB should be checked if it is missing	ng or not.		
D.	The OP must to wear antistatic wrist band .Don't put bo	ards together and	avoid hitting them	1.
E.	When you solder and repair that the soldering iron, tem	perature must be	setup 415 $^\circ\!\mathbb{C}$. (The	!
	temperature range is 415 $^\circ\!\mathrm{C} \pm 5 ^\circ\!\mathrm{C}$), and the solder wire's	diameter is 0.4/0.	5/0.6mm (SAC 30	5 (1.1%)
F.	Please be noticed to follow below steps for main board	repair which is eq	uipped with Golde	en
	Capacitor:			
	1. When replacing level 2.5 components located aro	-	pacitor:	
	I. The temperature of the hot air blower must b			20
	II. When apply the hot air to the part / component seconds (including the time of removing and	•	ie must be under a	20
	III. The temperature of the soldering iron must b	•		
	IV. When apply the solder tip to the part / compo	onent, the heating	time must be und	er 5
	seconds V. The solder tip must not contact with the gold	en capacitor		
	2. For BGA replacement: The golden capacitor must	•	re perform pre-hea	ating,
	heating, soldering and de-soldering process, and	then it must be re	placed with a new	one
	(please refer to 1.c. and 1.d. steps)			
	3. For main board which failed to pass the function to	est, the golden ca	pacitor must be re	placed
	with a new one and must follow below soldering c	iteria: The tempe	rature of the solde	ring iror
	must be under 350°c When apply the solder tip to	the part / compor	nent, the heating ti	me mus
	be under 5 seconds The solder tip must not have	a contact with the	body of golden c	apacitor
	NTIAI			
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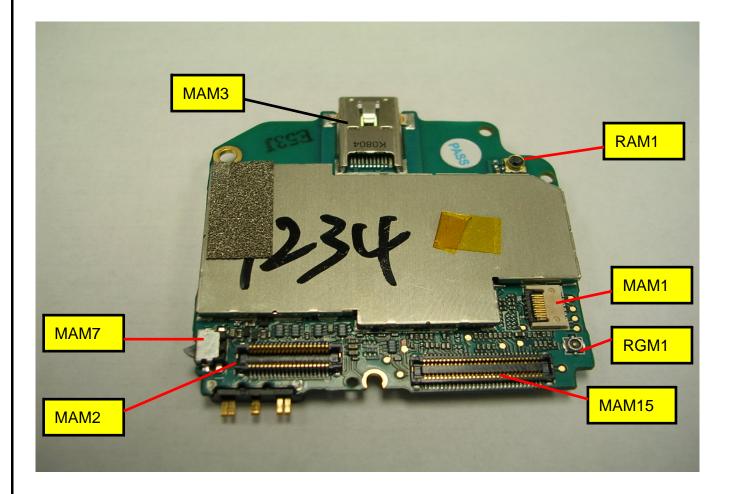
51H40485-XXM PCBA-MAIN BOARD (Side A)

Location	P/N	Description	Remark
MAM1	75H00643-00M	Connector B to C,10P,0.3Pitch,FF12-10A-R11A,DDK,0.2A,50V,5.2*4.23*0.9mm	SIM FPC Board
MAM2	75H00772-00M	Connector B to B,90mohm,Female,MATSUSHITA,AXT340164,40P,0.4Pitch,0.3A,60V	Navi Board
MAM3	75H00769-00M	Connector I/O,40mohm,ACON,C-MJE24-00-00,11P,0.45Pitch,0.5A,30V	USB Connector
MAM7	36H00678-00M	Switch,DT-24M,ROKI	Light Switch
MAM15	75H00768-00M	Connector B to B,90mohm,Female,MATSUSHITA,AXT560124,60P,0.4Pitch,0.3A,60V	LCM FPC
RGM1	75H00750-00M	Connector RF,MURATA,MM4829-2702B,4,0.8mm	GPS Coaxial cable
RAM1	75H00734-00M	Connector RF,6P,2Pitch,MM8130-2600,MURATA,2.5*2.5*1.5mm 1	External RF Antenna cable

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Side A Photo and Component Location



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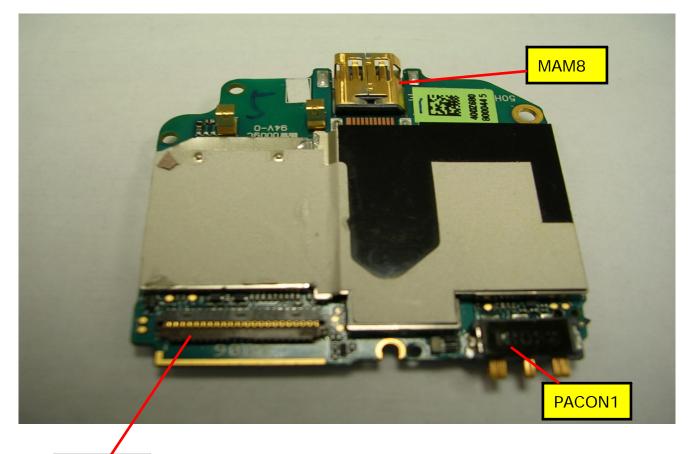
51H40485-XXM PCBA-MAIN BOARD (Side B)

Location	P/N	Description	Remark
MAM14	75H00628-00M	Connector FPC,45P,100mohm,HIROSE,FH26-45S-0.3SHW(05),0.2A,30V,0.3SHW	Upper board FPC
MAM8	75H00771-00M	Connector I/O,40mohm,ACON,C-MJE23-00-00,11P,0.45Pitch,0.5A,30V	USB Connector
PACON1	75H00776-00M	Connector Device,60mohm,SUYIN,060062MB003GX01ZL,3P,2.75Pitch,2A,12V	Battery Connector

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Side B Photo and Component Location



MAM14

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10.RF Antenna Specification

	EIRP & Sensitivity 1	Fest		
	Channel	975	42	124
	EIRP (dBm)			
	EIRP Spec	28.0	28.0	28.0
EGSM	Cell power (dBm)			
	Cell power Spec (dBm)	-104	-104	-104
	Channel	512	698	885
	EIRP (dBm)			
DCS	EIRP Spec	28	28	28
	Cell power (dBm)			
	Cell power Spec (dBm)	-104.0	-104.0	104.0
	Channel	512	661	810
PCS	EIRP (dBm)			
	EIRP Spec	26	26	26
	Cell power (dBm)			
	Cell power Spec (dBm)	-104.0	-104.0	104.0
	Channel	2937	3013	3088
	EIRP (dBm)			
WCDMA Band VIII	EIRP Spec	18	18	18
	Cell power (dBm)			
	Cell power Spec (dBm)	-104.0	-104.0	104.0
	Channel	10563	10700	10837
	EIRP (dBm)			
WCDMA Band I	EIRP Spec	18	18	18
	Cell power (dBm)			
	Cell power Spec (dBm)	-104.0	-104.0	104.0

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BT	Channel 0	Channel 39	Channel 78
EIRP (dBm)			
EIRP Spec (dBm)	>-6	>-6	>-6
EIS (dBm)			
EIS Spec (dBm)	<-73	<-73	<-73

	WiFi2400 (b mode)	WiFi2400 (g mode) (11Mbps)
EIRP Spec	>9.0dBm	>9.0dBm
EIS Spec	< -76.0dBm	< -74.0dBm

GPS: @ -128dBm (with Spec: 35)

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