## GPRS PHONE SERVICE MANUAL



Rev 1.0

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## **1. Introduction**

This model is a Slide type mobile phone operated in the GPRS Digital Cellular Mobile Radio System, which is the Pan-European mobile cellular standard. This model has the operation band of GSM 900, DCS 1800 and PCS190. GPRS Class 10 II features are fully supported and parts of the GSM Phase II+ features are also supported. About the SIM Toolkit, This model supports up to Class 3 including Class 1, 2. For speech communication, This model supports Full Rate(FR), Enhanced Full Rate(EFR) and Half Rate(HR). For easy text, eZi Text is implemented and WAP protocol is adopted for internet connection. Bluetooth module is built, it's able to use Bluetooth headset.

Introduction

Memo

## 2. Specification

#### 2.1 HW Features

Item	Description	Remark
Supporting standard	GSM 900/DCS 1800/PCS1900 Tri-Band GSM Phase 2 and Phase 2+ SIM Toolkit : Class 1,2,3 GPRS Class 10	
Frequency range	E-GSM TX : 880 - 915 MHz E-GSM RX : 925 - 960 MHz DCS 1800 TX : 1710 - 1785 MHz DCS 1800 RX : 1805 - 1880 MHz PCS1900 TX : 1850-1910 MHz PCS1900 RX : 1930-1990 MHz	
Battery	Capacity Standard : Li-ion, 860 mAh	
Display	Full graphic type LCD 65K TFT Color 128 x 160Dots	
Camera	CMOS type 1.3M Pixels, SXGA (1280 x 1024)	
Camera Flash LED		3-die White LED
Antenna	In-tenna type	
PC synchronization	Applied	
Speech coding	FR, EFR, HR	
Data & Fax	Built-in	
Vibrator	Built-in	
Dual Stereo Speaker	Applied (64 poly Stereo Sound)	
Portable Handsfree (Ear-Phone)	Built-in	
Travel charger	Built-in	
Bluetooth	Built-in	

#### 2.2 SW Features

Main menu	Sub menu	Detail item
Message	Write Message	SMS/MMS
	Inbox	SMS/MMS
	Outbox	SMS/MMS
	Draft	SMS/MMS
	Template	Thank you very much!!
		See you later.
		Where are you?
		When can we meet?
		Please call me back.
	Voice Mail	Call Voice Mail
		Voice Center
	Info Message	Read
		Receive
		Topics
		Languages
		Alert
	Settings	SMS
		EMS
		MMS
		Memory Status
Call Register	Call History	Missed No.
		Received No.
		Dialed No.
	Call Duration	Last Incoming
		Last Outgoing
		Total Incoming
		Total Outgoing
		Reset

Specification

Main menu	Sub menu	Detail item
Call Register	GPRS Counter	Last Sent
		Last Received
		Total Sent
		Total Received
		Reset
Profile	General	Activate
		Personalize
		Rename
	Silent	Activate
		Personalize
		Rename
	Vibration Only	Activate
		Personalize
		Rename
	Outdoor	Activate
		Personalize
		Rename
	Other 1	Activate
		Personalize
		Rename
	Other 2	Activate
		Personalize
		Rename
	Other 3	Activate
		Personalize
		Rename
Setting	Time/Date Set	Time Set
		Date Set
	Alarm Set	Set Alarm
		Alarm Sound
		Power Off Alarm

Specification

Main menu	Sub menu	Detail item
Setting	Call Setting	Call Divert
		Call Waiting
		Send My Caller ID
		Answer Mode
		Min Minder
		Auto Redial
		Auto Answer
		Data Transfer Mode
	Phone Setting	Language
		Main LCD
		External Key
		Key Back Light
		Screen Saver
	Security Setting	PIN Code
		Phone Lock
		Call Barring
		Fixed Dial Number
		Change Codes
	Network Select	Automatic
		Manual
		Preferred List
	Bluetooth	Discover
		Paired Devices
		Settings
	Factory Set	
Organizer	Phonebook	Name Search
		Group Search
		Add Entry
		Speed Dials
		Caller Groups
		PB Manage

Specification Main menu Sub menu Detail item Organizer Scheduler Daily view Weekly view Monthly view Make Delete All Setting To Do Memory Status File Manager File List Connect USB To Computer Format Memory Take Photo Option Camera Mode Record Video Option Mode Photo Album Internal Memory External Memory Video Album Internal Memory External Memory Phonebook Album View Delete Rename Configuration Shutter Sound Auto Save Album Lock Set Save Storage Application MP3 Music Player Configuration Othello Calculator

Unit Converter

Length

Weight

Main menu	Sub menu	Detail item
Application	Unit Converter	Volumes
		Surface
		User Define
	World Time	
	Voice Memo	Record
		Play
Application	Voice Memo	Set Save Storage
Java	Downloads	
	Memory status	
	Network	APN
		User Name
		Password
Internet	Homepage	
	Bookmarks	Add Bookmark
		Create new folder
	Recent Pages	
	Enter address	
	Resume	
	Settings	Edit Homepage
		Select Profile
		Connection
		Rename Profile
		Cache
		Clear Recent Page List
	Push	Inbox
SIM AT		

## **3. Disassembly Instruction**

#### 3.1 Before Disassembly

- 1. Remove the battery. To do so:
  - 1 1 Pull down the back cover and open it.
  - ② Lift up the back the battery and pull it out.



2. Remove the SIM card. To do so:



**Disassembly Instruction** 

#### 3.2 Main Frame

- 1. Remove screws. To do so:
  - 1 Remove the Deco rear as shown.
  - 2 Remove Six screws on the back of the phone.
- Insert a small ' ' type driver between the front case the rear case, and lift up the front case.





3. Now remove the rear case, intenna, Main PCB and Key PCB in order.



Disassembly Instruction

## 3.3 Slide upper

1. Remove the rear case as described at Steps 1 and 2 under Main Frame Disassembly on page 3-2.



2. Unplug the connector shown at the right from the LCD module.



Disassembly Instruction

- 4. Now, you can remove the LCD ass'y and the other components.

Insert a small ' - ' type driver between the slide
 A-cover and the slide B-cover, and lift up the slide

A-cover.

## 3.4 Exploded View and Parts List

#### 3.4.1 Exploded View – Main Frame



8) 9

10)

(11) (12)

(13)

(14)

15

6 17

(18)

(19) (20)

(21) (22)

# 23 (24) (1)2 3 4 5 (16) (25)

#### 3.4.2 Exploded View – Slide upper

7

#### 3.4.3 Mechanical Parts List

NO.	DESCRIPTION-Main Frame	Q'TY	NO.	DESCRIPTION-Slide upper	Q'TY
1	DUMMY FRONT	1	1	SLIDE UPPER	1
2	TAPE-DUMMY FRONT	1	2	SLIDE KEYPAD	1
3	SIDE-KEY	1	3	SLIDE DOME	1
4	FRONT-CASE	1	4	LCD MODULE	1
5	KEYPAD-MAIN	1	5	FPCB	1
6	MAIN-DOME	1	6	STOPPER(L)	1
7	VIBRATOR	1	7	SLIDE MODULE	1
8	RUBBER-MIC	1	8	DECO SPEAKER	1
9	SPONGE-MIC	1	9	TAPE DECO SPEAKER	1
10	REAR-CASE	1	10	MAIN WINDOW	1
11	RUBBER-SCREW	1	11	TAPE SPEAKER FILLTER	2
12	SIDEKEY-F/PCB	1	12	SPEAKER FILLTER	1
13	EAR-COVER	1	13	LCD CUSHION(A)	1
14	SCREW	6	14	LCD CUSHION(B)	1
15	CAMERA	1	15	SCREW(M1.4 X 2.0,흑착색)	2
16	PCB-ASS'Y	1	16	SCREW(M1.4 X 2.0,NI도금)	6
17	INTENNA ASS'Y	1	17	STOPPER(R)	1
18	CUSHION-CAMERA	1	18	SLIDE LOWER	1
19	RF-COVER	1	19	TAPE MIRROR	1
20	IO-COVER	1	20	MIRROR	1
21	T_FLASH COVER	1	21	SCREW(T1.7 X 3.0)	2
22	TAPE-CAMERA-WINDOW	1	22	COVER SCREW	2
23	WINDOW-CAMERA	1	23	TAPE MAIN WINDOW(A)	1
24	TAPE-DECO-CAMERA	1	24	TAPE MAIN WINDOW(B)	1
25	DECO-CAMERA	1	25	SHIELDTAPE-HINGE	1
26	INNER-PACK	1			
27	BATT-CASE	1			
28	SCREW	6			
29	SHIELDFOAM-FRONT	1			
30	CAPTON-KEY PCB	2			
31	ABSORBER-FRONT	1			
32	CAPTON-F/PCB	1			
33	CUSHION-F/PCB	1			
34	CONDUCTIVE SHEET SIMCARD	1			
35	SHIELDFOAM-IO	1			
36	CONDUCTIVE SHEET KEYPCB	2			
37	SHIELD FOAM-SLIDE LOWER	1			
38	TAPE-VIBRATOR	1			

## 4. Data Kit & Download Procedure

#### 4.1 Data Kit

#### 4.1.1 Download Equipment

Data Kit & Download Procedure

- 1. Download Cable
- 2. Desktop or Notebook PC
- 3. Download Fluid Program
- 4. Mobile Phone

#### 4.1.2 Download Procedure

#### DOWNLOAD ENVIRONMENT

To download software of this model, the following environments should be Prepared:

- Download cable, Interface JIG, is connected to serial port of the desktop or notebook PC.
- Download fluid program is copied to the desktop or notebook PC.
- Target software is downloaded to this mobile phone.

#### Warning

You must use the download cable kit (Interface JIG) and UART download monitor program. Otherwise, downloading process won't work properly.

#### DOWNLOAD PROCEDURE

- 1. Unzip the model download fluid program (fluid2.11.zip) in the PC.
- 2. Execute **fluid\_gui.exe**. And then select "Global settings" tab. Then choose a correct serial port in the RS232 serial port Box. <Figure 1>

😻 F.L.U.I.D. Graphics Use	er Interface (Texas Instrum	ents)	
Fluid location: D:\07.개발 PROGRAM\F.Lu.i.d\Flu Target type: Auto detect Fluid verbosity: Level 2 Erase/Program flash Read fl	id_V2.3.3V/luid.exe RS232.setial-port. COM 3 921600 bps (D-Semple ach Global settings Optional	Use (old) RS232 pow e only!) Serial i	Browse ered level converter bake sure the PC is fed with high-speed nterfacel
Command line:	Command line help	Debug help	List devices
Output (stdout + stderr):	Elapsed = 7.1 Sec.	Vebug help	S Abort
D:\07.개世 PROGRAM\F.l.u.i 05.Project\FINO10\SOFTWARE KO_T_050818a.m0"	.d\Fluid_V2.3.3\fluid.exe -; \FINO10_T_050818a_터키잫(BE	o3 -b921 -v -o0 -e (0) 경식 버젼\bin\	*+* -f"D:\ FIN010_BEK0_T_05
Fluid Version 2.3.3, (26 A Reading image file: 'D:\05 경식 버젼\bin\FINO10_BEKO	ug 2005). Updated by Bellwav .Project\FINO10\SOFTWARE\FI _T_050818a.m0' (14249kB) ok	/e_2005/08/03. WO10_T_050818a_터;	기량(ВЕКО)
III Process terminated III			
Process completed 오전 10:	48:27		
<			>



3. To download software, you must add the target software in the "Erase/Program flash" tab. So, push the "Add" button, then choose the target software that you want to download.

😽 F.L.U.I.D. Graphics User Interfa	ce (Texas Instrum	ents)	
Input hex file(s). Highlight the one(s) you want to d D:\05.Project\FIN010\S0FTWARE\FIN010_T_	ownload: 050818a_터키향(BEKO) 장	성식 버젼\bin\FIN010_BEK	O T Of Add Berneve
Programming options: ''Dry run'' i.e. test only, nothing is programme Erase entire flash device (including FFS) Write magic number for Calypso ROM code Boot in ROM   Eoct in Flash   Auto de	d Disable d Disable g Other options stect (Unstable!!)	lata <u>c</u> ompression lelta download using check- :: [	sum
Erase/Program flash Read flash Glob	al settings Optional	1 .u. of . CD-V05 Project/Ell	
	Command line help	Debug help	List devices
Output (stdout + stderr):	Elapsed = 7.1 Sec.	✓ Erase/Program	S Abort
o:\07.개眥 PROGRAM\F.l.u.i.d\Fluid_ 05.Project\FINO10\SOFTWARE\FINO10_T KO_T_050818a.m0"	V2.3.3\fluid.exe -p _050818a_터키핳(BEN	)3 -b921 -V -o0 -e+ (0) 경식 버젼\bin\F	* -f"D:\ INO10_BEKO_T_05
Fluid Version 2.3.3, (26 Aug 2005). Reading image file: 'D:\05.Project\ 경식 버젼\bin\FINO10_BEKO_T_050818	Updated by Bellwa FINO10\SOFTWARE\FIN a.mO' (14249kB) ok	/e 2005/08/03. WO10_T_050818a_터키	\$=(ВЕКО)
III Process terminated III			
Process completed 오전 10:48:27			
<			×

<Figure 2>

4. Select the "Boot in flash" in the "Programming options" box.

😽 F.L.U.I.D. Graphics User Interfa	ace (Texas Instrum	ents)	
Input hex file(s). Highlight the one(s) you want to D:NO5.ProjectXFINO10XSOFTWAREXFINO10_T	download: _050818a_터키향(BEKO) 장	성식田견\bin\FINO10_BEK	00:
Programming options: "By run" te. test only, nothing is pregramm Erase entire flash device (including FFS) Write manic number for Calupso ROM code © Boot in ROM © Boot in Flash Auto of Erase/Program flash Read flash Glol	ed T Disable d Disable d Other options detect (Unstable!!) bal settings Optional	ata <u>c</u> ompression elta download using check- :: [	sum
Command line: D:\07.개발 PROGRAM\F.l.u.i.d\Flu	uid_V2.3.3\fluid.exe -p3 -b92	1 -v -o0 -e+* -f"D:\05.Projec	x\FIN010\SOFTWARE
Output (stdout + stderr):	Elapsed = 7.1 Sec.	Erase/Program	25 Abort
o:\07.개眥 PROGRAM\F.l.u.i.d\Fluid 05.Project\FINO10\SOFTWARE\FINO10_ KO_T_050818a.m0"	_V2.3.3\fluid.exe -r T_050818a_터키향(BEH	03 -b921 -v -o0 -e+ (0) 경식 버젼\bin\F:	* -f"D:\ INO10_BEKO_T_051
Fluid Version 2.3.3, (26 Aug 2005) Reading image file: '0:\05.Project' 경식 버젼\bin\FINO10_BEKO_T_05081	. Updated by Bellwa \FINO10\SOFTWARE\FIM Ba.mO' (14249kB) ok	/e 2005/08/03. W010_T_050818a_터키기	\$=(BEKO) ≣
III Process terminated III			
Process completed 오전 10:48:27			
<			

<Figure 3>

5. Push the "Erase/Program" button to download.

F.L.U.I.D. Graphics User	Interface (Texas Instrume	nts)	
Input hex file(s). Highlight the one(s) you D:\05.Project\FIN010\S0FTWARE\F	i want to download: INO10_T_050818a_터키향(BEKO) 정4	식버젼\bin\FINO10_BEK	KO_T_05Add
Programming options: ☐ "Dry run" i.e. jest only, nothing is p ☑ Erase entire flash device (including ☐ Write magic number for Calypso Ri C Boot in ROM	rogrammed Disable da <u>FFS</u> Disable del DM code Other options: C Auto detect (Unstable!!)	a <u>c</u> ompression ta download using check-	sum
Erase/Program flash Read flas	h Global settings Optional	-v -o0 -e+* -f"D:\05 Proje	
Erase/Program flash Read flas Command line: D:\07.개발 PROGRAM\F	h Global settings Optional .lui.d\Fluid_V2.3.3\fluid.exe-p3-b921 Command line help	-v -o0 -e+* -f"D:\05.Proje Debug help	ct\FIN010\S0FTWARE
Erase/Program flash Read flas Command line: D:\07.개발 PROGRAM\F Dutput (stdout + stderr):	h Global settings Optional I.u.i.d\Fluid_V2.3.3\fluid.exe -p3 -b921 Command line help Elapsed = 7.1 Sec.	-v -o0 -e+* -f"D:\05.Proje Debug help V Erase/Program	ct\FIN010\S0FTWARE List devices
Erase/Program flash Read flas command line: D:\07.개발 PROGRAM\F lutput (stdout + stderr) D:\07.개발 PROGRAM\F,1.u.1.d 55.Project\FINDIO\SOFTWARE\F 0050884.a.m0"	h Global settings Optional I.u.id\Fluid_V2.3.3\fluid.exe -p3-b921 Command line help Elapsed = 7.1 Sec.	-v -o0 -e+* f'D:\05.Proje Debug help ✔ Erase/Program b921 -V -o0 -e+ ) 정석 버리\bin\F	ct/FIN010/S0FTWARE List devices
Erase/Program flash Read flas command line: D:\07.개발 PROGRAM\F lutput (stdout + stderr): D:\07.개발 PROGRAM\F,1.u.i.d D5.Project\FINDio\SOFTWARE\F col050818a.m0" Fluid Version 2.3.3, (26 Aug teading image file: 'D:\05.P 정식 버 적 Lotin\FINDio_BEKC_T	h Global settings Optional I.u.i d\Fluid_V2.3.3\fluid.exe -p3-b921 Command line help Elapsed = 7.1 Sec. \Fluid_V2.3.3\fluid.exe -p3 INO10_T_050818a_El 71 % (BEKC 2005). Updated by Bellwave roject\FINO10\S0FTWARE\FINC c550818a.m0' (14249KE) ok	·v·oD·e+* f'D:\05.Proje Debug help ✔ Erase/Program b921 -V -00 -e+ ) 정식 버린\bin\F 2005/08/03. 10_T_050618▲터키	Ct/FIN010/S0FTWARE List devices S Abort * -f**0:\ IN010_BEK0_T_054
Erase/Program flash Read flas command line: D:\07.개발 PROGRAM\F lutput (stdout + stderr): D:\07.개발 PROGRAM\F.1.u.i.d D5.Project\FIND10\SOFTWARE\F coSOFTWARE\F coSOFTWARE\F coSOFTWARE\F fluid Version 2.3.3, (26 Aug teading image file: 'D:\05.P 3/4 버 d/bin(FIND10_BERC)_T (11 Process terminated 111	h Global settings Optional I.u.i d\Fluid_V2.3.3\fluid.exe -p3-b921 Command line help Elapsed = 7.1 Sec. \Fluid_V2.3.3\fluid.exe -p3 INO10_T_050818a_Fl 71 % [BEKC 2005]. Updated by Bellwave roject\FIND10\SOFTWARE\FINC _050818a.m0' (14249KB) ok	v •00 •e+* f'D:\05.Proje Debug help ✓ Erase/Program -b921 -V -00 -e+ ) 정식 버린\bin\F 2005/08/03. 10_T_050618a_터키	ct/FIN010/SOFTWARE List devices & Abort * -f*D:\ IN010_BEK0_T_051 * (BEK0)
Erase/Program flash Read flas Command line: D:V07개발 PROGRAMVF Nutput (stdout + stderr): D:V07.개발 PROGRAM\F.1.u.i.d J5.Project\FIND10\SOFTWARE\F CoSOFTWARE\F CO	h Global settings Optional .luid/Fluid_V2.3.3\fluid.exe -p3-b921 Command line help Elapsed = 7.1 Sec. \Fluid_V2.3.3\fluid.exe -p3 INO10_T_050818a_Fl 71 % (BEKC 2005). Updated by Bellwave roject\FIND10\SDFTWARE\FINC 050818a.m0' (14249KB) ok	v •00 •e+* f'D:\05.Proje Debug help ✔ Erase/Program -b921 -v -00 -e+ ) 경식 버립\bin\F 2005/08/03. 10_T_050618a_터키	ct\FIN010\SOFTWARE List devices S Abort * -f"D:\ IN010_BEK0_T_051 S+(BEK0)

<Figure 4>

6. As the following window show in <Figure 5> is displayed, connect this phone to the download cable, (Interface JIG) and press power on key of the phone. If the connection succeeded, the following screen will show the contents as shown in <Figure 6>.

😽 F.L.U.I.D. Graphics User I	Interface (Texas Instrum	ients)	
Input hex file(s). Highlight the one(s) you	want to download:		
D:\05.Project\FIN010\S0FTWARE\FI	NO10_T_050818a_터키향(BEKO) (	왕석 버젼\bin\FINO10_BEK	0_T_05 Add <u>R</u> emove
Programming options:			
<ul> <li>□Dry run" i.e. test only, nothing is pr</li> <li>☑ Erase entire flash device (including</li> <li>☑ Write magic number for Calypso RC</li> <li>○ Boot in ROM</li></ul>	ogrammed Disable ( FFS) Disable ( M code Other option * Auto detect (Unstable!!)	data <u>c</u> ompression delta download using check- s: [	sum
Erase/Program flash Read flash	n   Global settings   Optional	]	
Command line: [D:\U7.개말 PRUGHAM\F.]	.u.i.d\Fluid_V2.3.3\fluid.exe -p3 -b92	21 -v -oU -e+* -f"D:\U5.Proje	Style International Style Styl
	Lommand line help	Debug help	List devices
Dutput (stdout + stderr):	Elapsed = 18.4 Sec.	V Erase/Program	X Abort
Process completed 오권 10:48: 	27 Fluid_V2.3.3\fluid.exe - NO10_T_OSO818a_EI7I ℃(BE 2005). Updated by Bellwa oject\FINO10\SOFTWARE\FI 050818a.m0' (14249kB) ok	p3 -b921 -V -oO -e+ KD) 경식 버린\bin\F ve 2005/08/03. NOIO_T_050818a_터키	* -f"D:\ INO10_BEK0_T_05 *(BEKO)
<			

<Figure 5>

Input hey file(s). Highlight the ope(s) -	you want to download:		
D:\05 Project/SIN010\S05T\(APE	VEINO10 T OF0010 - FIRITREVOL	저신 비겨나라도마이10.0도마	0 T 01 A 44
D. 103. HOJECT HING TO 15 OF T WARE			<u>Add</u>
			<u>R</u> emove
Programming options:			
T "Dry run" i.e. test only, nothing	is programmed 🛛 🔽 Disable	e data <u>c</u> ompression	
🔽 Erase entire flash device (includ	ding FFS) 🦵 Disable	e delta download using check-	sum
Write magic number for Calypso	o ROM code Other optio	ins:	
C Boot in BOM @ Boot in Flash	C Auto detect (Unstable!!)		
Deed4	lash Olahalashiran Ostinas	1	
rase/Program flash j Peau ii	lash Giobal settings Optiona	<u>'</u>	
mmand line: D:\07.개발 PROGRAM	1\F.I.u.i.d\Fluid_V2.3.3\fluid.exe -p3 -b9	921 -v -o0 -e+* -f"D:\05.Proje	t\FIN010\SOFTWAR
	Command line belo	Debug help	List devices
	-		
utput (stdout + stderr);	Elapsed = 115.6 Sec.	S/ Erase/Program	X Abort
		• • • • • • • • • • • • • • • • • • • •	
		cececee	
	******		

7. If the downloading procedure is succeeded, then the following window is shown.

😻 F.L.U.I.D. Graphics User	Interface (Texas Instrum	nents)						
Input hex file(s). Highlight the one(s) you	u want to download:							
D:\05:Project\FIN010\S0FTWARE\F	'INO10_T_050818a_터키항(BEKO) :	성적 버젼\bin\FINO10_BEK	Add					
1000 MA			Heneve					
Programming options:		Ka						
Try run" i.e. test only, nothing is programmed     Disable data compression     Erase entire flack davice (including EES)     Disable delta download using about sum								
Write magic number for Calypso R	OM code Other option	2°	sum					
C Boot in BDM C Boot in Flash C Auto detect (Unstable!!)								
, Doctimition to Doctimition								
Erase/Program flash Read flas	sh Global settings Optional							
Command line: D:\07개발 PB0GBAM\6	Lu i d\Eluid V2.3.3\fluid exe -n3 -b9	/ 21 -v -o0 -e+* -f"D:\05 Proier						
	Command line help	Debug help	List devices					
Output (stdout + stderr):	Elapsed = 420.6 Sec.	Erase/Program	🔀 Abort					
		ccccccccccccccccc.						
Flash Detect: (0×01, 0×227E,	0x2221, 0x2200) AMD Am75	PDL193CHHa. ok						
Program: (410 sectors, 1785* Used time: (compressed to 68 Resetting target: ok	8k=14280k) (*************** %) 303.85 ok	*****) ok						
Process completed 오전 11:55	:26							
/			×					
<u>N</u>			×					

<Figure 7>

#### 5.1 Power-on Trouble



#### 5.2 MIC Trouble



#### 5.3 Receiver Trouble



5-3

#### 5.4 Melody & MP3 Trouble (Handset Speaker)



#### 5.5 LCD Trouble





## 5.6 Charge Trouble

#### 5.7 Vibrator Trouble



#### 5.8 Keypad LED Trouble



#### 5.9 Flash LED Trouble



#### 5.10 SIM Detection Trouble



#### **5.11 Ear Phone Receiver Trouble**



## 5.12 Camera Image Trouble


### 5.13 Ear Phone MP3 trouble



### 5.14 USB Mass Storage trouble





### 5.15 TX Power Trouble (EGSM)





### 5.16 TX Power Trouble (DCS)





### 5.17 TX Power Trouble (PCS)





### 5.18 RX Sensitivity Trouble (EGSM)





### 5.19 RX Sensitivity Trouble (DCS)





### 5.20 RX Sensitivity Trouble (PCS)





### 5.21 Bluetooth Trouble



## 6. Block Diagram

### 6.1 BaseBand Block Diagram



Block Diagram



6.2 RF Block Diagram

# 7. Schematic Diagram

## 7.1 KEY Pcb



## 7.2 Main pcb

### 7.2.1 RF PAM



7-2



### 7.2.2 RF Transceiver (Infineon)

Schematic Diagram

#### 7.2.3 CONNECTOR



#### 7.2.4 MEMORY & POWER





### 7.2.5 BaseBand Main IC (TI)

### 7.2.6 Multimedia IC (AIT811T)



#### 7.2.7 AUDIO



7-8

### 7.2.8 Bluetooth / Camera Flash LED / Slide Switch



# 8. PCB Diagram

## 8.1 Key PCB



PCB Diagram



**Bottom View** 

8.2 Main PCB



Top View

PCB Diagram



**Bottom View** 

### 9.1.1 Electrical Parts List (Main PCB)

Electrical Parts List REF NO. DESCRIPTION PART NUMBER U500 Digital BASEBAND (Calypso C035) D751992GHHR U501 Analog BASEBAND (IOTA-A07) TWL3025BGGMR S99PL193JC0BAWUB / U402 MCP 192(FLASH)×64(pSDRAM) S99PL193JCOBAWFC0 U405 NAND FLASH 512 K9K1208D0C-D/JIB0 U702 MELODY IC, 64Poly (MA-5si) YMU783B ANT801 **Bluetooth Antenna** AMAN542012BW01 U801 Bluetooth Module (Class2) ABM-450-2CSP U601 MULTIMEDIA CHIP **AIT811T** U201 RF MAIN CHIP (SMARTISD2) PMB6271 U103 POWER AMP MODULE SKY77328 U101 Front End Module LMSP65HA-294 ANT101 Coaxial Connectors with switch MM8430-2600RB3 U301 U303 U305 U307 CHIP EMI FILTER LC COMBINED LFA24-2A1A144M U308 U309 ARRAY TYPE U203 LDO (1.5V / 2.6V) XC6401FFC3MRN U403 DUAL LDO (3.0V / 3.3V) XC6401FF26DR U404 DUAL LDO (1.8V / 2.85V) XC6401FF59ER U802 CHARGE PUMP CAT3200TDI-TE7

Electrical Parts List REF NO. DESCRIPTION PART NUMBER U502 U701 U705 U711 ANALOG SWITCH DG9411DL-T1 U712 U703 COMPARATOR DUAL TC75W56FK(TE85L) U504 U505 DECODER SN74LVC1G19DCKR BJT DUAL(PNP+PNP) TYPE, Built in U102 EMB9-T2R Resistor BJT DUAL(NPN+PNP) TYPE, Built in U204 EMD9-T2R Resistor Q301 P-ch MOSFET (Pb-free) Si1305DL-T1-E3 Q802 BJT (NPN, 12V, 500mA) 2SC5585 U401 CHARGER IC Si7703EDN RD800 HALL SWITCH A3212EEHLT X201 X-TAL 26MHz 10ppm (3.2\*2.5\*0.6) NX3225DA X501 X-TAL 32.768KHz 30ppm (4.1\*1.5\*0.9T) CC5V-T1 CN301 SYSTEM I/O CONNECTOR (24Pin) 4124R-21A00 B2B Connector (51pin, 0.9T, One-Touch CN302 04-6295-051-000-883 LOCK) CN303 SIM CONNECTOR (1.5T) 1318-723-6 Camera Connector (24pin, 1.5T, CN304 14-5602-024-000-829 Header, without Boss) Key Connector (20pin, 1.5T, Socket, CN305 24-5602-020-000-829 0.4pitch, without Boss) BATTERY CONTACT HB-3P0220 CN401 CN802 T-FLASH SOCKET G6174B243-004 YMUVG30312-C / EAR1 8-POLE\_EARJACK USBFS-00810-TP00 BLM11P300SPT F401 F402 FERRITE BEADS, (1608) BLM18PG300SN1D

Electrical Parts List

REF NO.	DESCRIPTION	PART NUMBER
F301 F302 F500 F501 F701 F702 F708 F709 F710 F711 F712 F713 F714 F715 F716	FERRITE BEADS, (1005)	BLM15BB121SN1D
V300 V301	VARISTOR 1005 SIZE(50pF)	AVLC14S02050
V302 V811 V812	VARISTOR 1005 SIZE (50pF)	AVLC5S02050
D101	TVS Diode	RSB6.8S
D701	PIN Diode (for antenna switching)	HVD142KRF
LED801	Camera FLASH White LED	LH-1214IT3-W2-CC2-01 / NSW-166X
C518 C519 C521	TAN_CAP 4.7uF/10V (P_2012)	TMCRP1A475MTRY
C222 C223 C410 C411 C413 C416 C419 C420 C517 C520 C721	TAN_CAP 10uF/6.3V (P_2012)	TMCRP0J106MTRY
C401	TAN_CAP 33uF/10V (A_3216)	TMCMA1A336MTRF
C701 C702	TAN_CAP 33uF/6.3V (P_2012)	TLJR336M006R3000
C724	TAN_CAP 47uF/6.3V (A_3216)	TMCMA0J476MTRF
C101	TAN_CAP 100uF/6.3V (A_3216)	F950J107MAAAQ2
L103	CHIP INDUCTOR (1005) 1.5nH	HK1005 1N5S
L104	CHIP INDUCTOR (1005) 1.8nH	HK1005 1N8S
L204 L205	CHIP INDUCTOR (1005) 5.1nH	0402CS-5N1XJBW
L201	CHIP INDUCTOR (1005) 18nH	0402CS-18NXJBW

REF NO. DESCRIPTION PART NUMBER GRM1555C1H1R0CZ01E C110 CAP CERAMIC CHIP 1.0pF GRP1555C1H1R0CZ01E GRM1555C1H2R0CZ01E C820 CAP CERAMIC CHIP 2.0pF GRP1555C1H2R0CZ01E GRM1555C1H3R0CZ01E C213 C214 C810 C811 CAP CERAMIC CHIP 3.0pF GRP1555C1H3R0CZ01E GRM1555C1H4R0CZ01E C819 CAP CERAMIC CHIP 4.0pF GRP1555C1H4R0CZ01E GRM36C0G 4R7C 50PN C104 CAP CERAMIC CHIP 4.7pF GRP1555C1H4R7CZ01E GRM36C0G 6R0C 50PN C208 C209 CAP CERAMIC CHIP 6.0pF GRP1555C1H6R0CZ01E GRM36C0G 9R0C 50PN C719 C727 CAP CERAMIC CHIP 9.0pF GRP1555C1H9R0CZ01E GRM36C0G 120J 50PN C115 C502 C503 C506 CAP CERAMIC CHIP 12pF GRP1555C1H120JZ01E GRM36C0G 150J 50PN C720 C725 C728 CAP CERAMIC CHIP 15pF GRP1555C1H150JZ01E C201 C202 C301 C302 GRM1555C1H220JZ01E CAP CERAMIC CHIP 22pF C310 C311 C312 C313 GRP1555C1H220JZ01E GRM36C0G 270J 50PN C111 CAP CERAMIC CHIP 27pF GRP1555C1H270JZ01E GRM36C0G 330J 50PN C105 CAP CERAMIC CHIP 33pF GRP1555C1H330JZ01E GRM36C0G 470J 50PN C114 C217 CAP CERAMIC CHIP 47pF GRP1555C1H470JZ01E GRM36C0G 101J 50PN C305 CAP CERAMIC CHIP 100pF GRP1555C1H101JD01E GRM36C0G 151J 50PN C304 CAP CERAMIC CHIP 150pF GRP1555C1H151JD01E GRM36C0G 181J 50PN C116 C704 C713 CAP CERAMIC CHIP 180pF GRP1556C1E181JD01E

**Electrical Parts List** 

REF NO. DESCRIPTION PART NUMBER GRM36X7R 221K 50PN C224 C225 CAP CERAMIC CHIP 220pF GRP155R71H221KD01E GRM36X7R 102K 50PN C504 C706 CAP CERAMIC CHIP 1nF GRP155R71H102KA01E GRM36X7R 562K 25PN C204 C206 CAP CERAMIC CHIP 5.6nF GRP155R71E562KD01E C103 C106 C107 C215 GRM36X7R 103K 16PN CAP CERAMIC CHIP 10nF C220 C221 GRP155R71C103KA01E GRM36X7R 153K 16PN C303 CAP CERAMIC CHIP 15nF GRP155R71C153KA01E GRM36X7R 223K 16PN C402 CAP CERAMIC CHIP 22nF GRP155R71C223KA01E GRM36X7R 473K 10PN C601 C703 C705 CAP CERAMIC CHIP 47nF GRP155R71A473KA01E C203 C205 C207 C219 C306 C308 C403 C404 C405 C406 C407 C409 C412 C414 C415 C417 C418 C501 C505 C507 GRM36Y5V 104Z 16PN C508 C509 C510 C511 CAP CERAMIC CHIP 100nF GRP155F51C104ZA01E C512 C513 C514 C522 C523 C602 C603 C707 C709 C710 C714 C715 C718 C722 C723 C726 C801 C802 C806 C807 GRM36Y5V 105Z 6.3PN CAP.CERAMIC CHIP 1uF C212 C711 GRM155F50J105ZD02E C307 C309 C515 C516 CAP CERAMIC CHIP Y5V / 16V / 1uF GRM188F51C105ZC01D C712 C812 C813 (1608)

**Electrical Parts List**
REF NO.	DESCRIPTION	PART NUMBER
C814	CAP CERAMIC CHIP X5R / 16V / 1uF (1608)	GRM188R61C105KA12D
C102 C708	CAP CERAMIC CHIP X5R / 6.3V / 4.7uF (1608)	GRM188R60J475KE19D
R101 R202 R205 R206		
R209 R212 R319 R320		
R326 R327 R328 R404		
R406 R410 R415 R416		
R418 R424 R426 R427		
R442 R444 R445 R446	$PES_{CHIP} 0 \text{ obm} + 5\%(1) 1/16W$	
R447 R516 R517 R520	1005(0402)	
R526 R527 R528 R529	1005(0402)	MCRUTWZPJUUU
R530 R531 R532 R533		
R535 R536 R609 R611		
R612 R701 R729 R745		
R746 R747 R748 R804		
R809		
R308 R309 R311 R312	$DES_{1} = 0.000 \pm 0.0000 \pm 50(10.0000000000000000000000000000000000$	
R313 R314 R315 R321	RES. CHIP 10 0HHI +-5%(J) 1/1000	
R322 R323	1005(0402)	MCRUTWZPJTUU
R303 R304	RES. CHIP 27 ohm +-5%(J) 1/16W	MCR01MZPJ270
	1005(0402)	MCR01MZSJ270
R204 R207 R310 R737	RES. CHIP 1 Kohm +-5%(J) 1/16W	MCR01MZSJ102
R742	1005(0402)	MCR01MZPJ102
R305	RES. CHIP 1.5 Kohm +-5%(J) 1/16W	MCR01MZPJ152
	1005(0402)	MCR01MZSJ152
R739 R741	RES. CHIP 1.8 Kohm +-5%(J) 1/16W	MCR01MZSJ182
	1005(0402)	MCR01MZPJ182
D711	RES. CHIP 3.3 Kohm +-5%(J) 1/16W	MCR01MZPJ332
	1005(0402)	MCR01MZSJ332
D224 D225	RES. CHIP 4.7 Kohm +-5%(J) 1/16W	MCR01MZPJ472
R324 R325	1005(0402)	MCR01MZSJ472

Electrical Parts List

REF NO.	DESCRIPTION	PART NUMBER
R307	RES. CHIP 7.5 Kohm +-5%(J) 1/16W	MCR01MZSJ752
	1005(0402)	MCR01MZPJ752
D540	RES. CHIP 8.2 Kohm +-5%(J) 1/16W	MCR01MZSJ822
ROIZ	1005(0402)	MCR01MZPJ822
R111 R112 R405 R501	RES. CHIP 10 Kohm +-5%(J) 1/16W	MCRO1MZSJ103
R514 R515 R803	1005(0402)	MCR01MZPJ103
D109	RES. CHIP 11 Kohm +-5%(J) 1/16W	MCR01MZSJ113
R IUO	1005(0402)	MCR01MZPJ113
D712 D710	RES. CHIP 27 Kohm +-5%(J) 1/16w	MCR01MZSJ273
R/13 R/19	1005(0402)	MCR01MZPJ273
D000	RES. CHIP 47 Kohm +-5%(J) 1/16w	MCR01MZSJ473
Rouo	1005(0402)	MCR01MZPJ473
D719 D720	RES. CHIP 68 Kohm +-5%(J) 1/16W	MCR01MZSJ683
R/ 10 R/ 20	1005(0402)	MCR01MZPJ683
D201 D610	RES. CHIP 75 Kohm +-5%(J) 1/16W	MCR01MZPJ753
K301 K010	1005(0402)	MCR01MZSJ753
R213 R503 R508 R510		
R511 R513 R704 R705	RES. CHIP 100 Konm +-5%(J) 1/16VV	MCR01MZSJ104
R738 R810 R813 R814	1005(0402)	MCRU1MZPJ104
D700	RES. CHIP 120 Kohm +-5%(J) 1/16W	MCR01MZSJ124
R733	1005(0402)	MCR01MZPJ124
	RES. CHIP 180 Kohm +-5%(J) 1/16W	MCR01MZSJ184
R730 R734	1005(0402)	MCR01MZPJ184
D202	RES. CHIP 200 Kohm +-5%(J) 1/16W	MCR01MZPJ204
R302	1005(0402)	MCR01MZSJ204
DEAD	RES. CHIP 220 Kohm +-5%(J) 1/16W	MCR01MZSJ224
R502	1005(0402)	MCR01MZPJ224
	RES. CHIP 300 Kohm +-5%(J) 1/16W	MCR01MZPJ304
0167	1005(0402)	MCR01MZSJ304
D201	RES. CHIP 220 ohm +-1%(F) 1/16W	MCR01MZSF2200
R201	1005(0402)	MCR01MZPF2200

Electrical Parts List

REF NO.	DESCRIPTION	PART NUMBER
R500	RES. CHIP 100 Kohm +-1%(F) 1/16W	MCR01MZSF1003
K309	1005(0402)	MCR01MZPF1003
D402 D402	RES. CHIP 10 ohm +-5%(J) 1/10W	MCR03EZHJ100
	1608(0603)	MCR03EZPJ100
D911	RES. CHIP 39 ohm +-5%(J) 1/10W	MCR03EZHJ390
	1608(0603)	MCR03EZPJ390
R401	RES. CHIP 0.2 ohm +-1%(F) 1/4W 2012(0805)	RLC20R20FTP
R306	4-RESISTOR ARRAY	MNR04M0ABJ103
C108 C109 C216 C218 C524 C525 C803	CAP CERAMIC CHIP	N.C
R203 R208 R210 R211 R601 R801 R807 R815	RES. CHIP	N.C
L100 L102	CHIP INDUCTOR	N.C
	MAIN PCB	FINO10_MAINpcb_Rev3.0
	Camera module	TOMBF10
	MIC	OBG-415P44-C1033
	Vibration Motor (Cylinder type)	LA4-460AD
	Antenna (Intenna)	?
	LCD module(Board-to-Board FPCB 포함)	OGM-B500-RF050
	Speaker (Only Speaker, Ø15 / 4.2T)	U1508S50
	Receiver (Dual Speaker, Ø15 / 4.2T)	U1508S49
	Back-up Battery (Ø4.8 / 1.2T)	MS412FL26E

## 9.1.2 Electrical Parts List (KEY PCB)

Electrical Parts List

REF NO.	DESCRIPTION	PART NUMBER
U102	VIBRATOR IC	MDC3105LT1
CN101	Key Connector (20pin, 1.5T, Header, 0.4pitch, without Boss)	14-5602-020-000-829
F101 F102 F103	FERRITE BEADS, (1005)	BLM15BD102PN1
V101 V102 V103 V104 V106 V107 V108 V109 V110 V111 V112	VARISTOR 1005 SIZE (50pF)	AVLC5S02050
D101 D102 D103 D104 D105 D106	KEY LED (DEEP BLUE, 1608)	BL-HB336G-TRB-BLUE
C102	CAP CERAMIC CHIP 15pF	GRM36C0G 150J 50PN GRP1555C1H150JZ01E
C101	CAP CERAMIC CHIP Y5V/1uF/16V (1608)	GRM188F51C105ZA01A
R101	RES. CHIP 0 ohm +-5%(J) 1/16W 1005(0402)	MCR01MZSJ000 MCR01MZPJ000
R103 R104 R105	RES. CHIP 39 ohm +-5%(J) 1/16W 1005(0402)	MCR01MZSJ390 MCR01MZPJ390
R102	RES. CHIP	N.C
	KEY PCB	FINO10_KEYpcb_Rev3.0

## 9.2 Mechanical Part List

CODE NO.	DESCRIPTION	SPECIFICATION
BH900005301	TOTAL ASS'Y	
BH800038901	ASS'Y FRONT-COVER	
BH800039101	ASS'Y SLIDE	
BH850029401	SUB SLIDE-UPPER	
BH720045701	SLIDE-UPPER	PC
BH750038401	MAIN-WINDOW TAPE (A)	3M HK9448
BH750038501	MAIN-WINDOW TAPE (B)	3M HK9448
BH850029501	SUB SLIDE-LOWER	
BH720045801	SLIDE-LOWER	PC
BH730018701	STOPPER-R	URETHANE
BH730018801	STOPPER-L	URETHANE
BH710022501	MAGNET	10X2X1,Nd-Fe-B
BH750039301	TAPE-MIRROR	3M HK9448
BH710022201	MIRROR	
BH850029601	SUB MAIN-WINDOW	
BH720045901	MAIN-WINDOW	inmold
BH750038601	TAPE DECO-SPEAKER	3M HK9448
BH750038701	TAPE-SPEAK-FILTER	3M HK9448
BH710022001	DECO-SPEAKER	
BH710022301	SPEAK-FILTER	
BH710022401	SLIDE MODULE	SUS
BS61211420S	SCREW	M1.4X1.5, 0.3P, +
BH720046001	SLIDE KEYPAD	
BH710022701	SLIDE DOME	Ø5.0 , 170gf
BS63111730B	SCREW	T1.7X3,0.35P,+,NI
BH750038801	SCREW-COVER	PC SHEET 0.3T
BH740031401	LCD-CUSHION(A)	SRS PORON

Mechanical Part List

Mechanical Part List

CODE NO.	DESCRIPTION	SPECIFICATION
BH740031501	LCD-CUSHION(B)	SRS PORON
BH850029701	SUB FRONT-CASE	
BH720046101	FRONT-CASE	PC
BH720046201	EAR-COVER	PC,URETHANE
BH750039401	TAPE-DUMMY-FRONT	3M HK9448
BH720046301	DUMMY-FRONT	POM
BH720046401	SIDE-KEY	ABS+URETHANE
BH850029801	SUB REAR-CASE	
BH720046501	REAR-CASE	PC
BH750038901	TAPE-DECO-CAMERA	3M HK9448
BH750039001	TAPE-CAMERA-WINDOW	3M HK9448
BH720046601	IO-COVER	PC,URETHANE
BH720046701	T_FLASH-COVER	PC,URETHANE
BH740031601	CUSHION-CAMERA	SRS PORON
BH740031701	SHIELDFOAM-IO	
BH710022101	DECO-CAMERA	
BH720046801	BATT-CASE	PC
BS61111415B	SCREW	M1.4X1.5, 0.3P, +
BH720046901	KEY-PAD-MAIN	
BH730018901	RUBBER-MIC	SILICON RUBBER
BH740031801	SPONGE-MIC	SRS PORON
BH730019001	RF-COVER	SILICON RUBBER
BS61111440B	SCREW	M1.4X4,0.3P,+
BH720047001	WINDOW-CAMERA	ACRYL FILTER
BH730019101	SCREW-COVER	SILICON RUBBER
BH720047101	SIDE KEY-F/PCB	Ø5.0 , 170gf
BH710022601	MAIN-DOME	Ø5.0 , 170gf
BH750039101	CAPTON-KEYPCB	
BH750039201	CONDUCTIVE SHEET-KEYPCB	
BH740031901	SHIELDFOAM-FRONT	

## Mechanical Part List

CODE NO.	DESCRIPTION	SPECIFICATION
BH740032001	SHIELDFOAM-FEM	
BH740032101	SHIELDFOAM-EARJACK	