
GMA User Guide

This document is the CONFIDENTIAL and PROPRIETARY information of INGENICO and may not be published or disclosed without INGENICO prior written permission. Duplication or transmission is permitted for internal purpose only, provided that any copy must bear this legend in full.

Table of contents

GMA USER GUIDE	1
1 INTRODUCTION	3
2 THE GMA DELIVERY	4
2.1 PLUG-INS	4
2.2 PACKAGES	5
2.3 SUPPORTED TERMINALS	5
3 PLUG-IN CONFIGURATION	6
3.1 SETTINGS PLUG-IN	7
3.1.1 Description	7
3.1.2 Settings plug-in menu	7
3.2 SMF PLUG-IN	8
3.2.1 Description	8
3.2.2 SMF plug-in menu	8
3.3 GSM PLUG-IN	10
3.3.1 Description	10
3.3.2 GSM plug-in menu	10
3.3.3 GSM plug-in icons	12
3.4 ETHERNET PLUG-IN	13
3.4.1 Description	13
3.4.2 Ethernet plug-in menu	13
3.5 WI-FI PLUG-IN	14
3.5.1 Description	14
3.5.2 Wi-Fi plug-in menu	14
3.5.3 Wi-Fi plug-in icons	14
3.6 RADIO PLUG-IN	15
3.6.1 Description	15
3.6.2 Radio plug-in menu	15
3.6.3 Radio plug-in Icons	16
3.7 POR PLUG-IN	17
3.7.1 Description	17
3.7.2 POR plug-in menu	17
3.7.3 POR plug-in Icons	17
3.8 PPP PLUG-IN	18
3.8.1 Description	18
3.8.2 PPP plug-in menu	18
3.9 IP CHANNEL SELECTION	19
3.9.1 Description	19
3.9.2 IP Channel plug-in menu	19
4 SETTINGS PLUG-IN CONFIGURATION FILE	20
4.1 FILE FORMAT	20
4.2 EXISTING FIELDS	20
4.3 FILE EXAMPLE	21
5 CUSTOM PART CONFIGURATION FILE	22
5.1 FILE FORMAT	22
5.2 EMV FALLBACK CONFIGURATION	22
6 GMA LIBRARIES	23

1 INTRODUCTION

This document describes the binaries in the GMA release, and the plug-ins contained in each binary. It lists the supported terminals and which binary should be used in a given terminal.

It also describes the plug-ins and the plug-in menus.

2 THE GMA DELIVERY

2.1 Plug-ins

The GMA contains optional components, called “plug-ins”. Each plug-in allows to use a specific functionality of the terminal, such as an Ethernet connection for instance.

Below is the list of the available plug-ins:

- **Settings:**
The Settings plug-ins allows the user to configure general settings such as contrast, backlight, beep, sleep mode, date/time, etc...
- **SMF:**
It is the maintenance plug-in. It uses the SMF library. Note that the IngeTrust server is supported.
- **GSM:**
This plug-in manages the GSM modem in the terminal (GPRS connection).
- **Wi-Fi:**
This plug-in manages the Wi-Fi connection.
- **ETH:**
This plug-in manages the Ethernet connection.
- **POR:**
This plug-in manages the battery.
- **RADIO:**
This plug-in manages the communication between the terminal and base in blue-tooth terminals
- **Manual card entry:**
This plug-in permits the user to type the PAM directly in the GMA idle screen. After it, it sends a transaction of type magnetic card to an application with the PAM number.
- **PPP:**
The PPP plug-in allows to configure a PPP connection, via a serial port or a modem.
- **IP Channel:**
The “IP Channel Selection” plug-in allows to select the default IP channel of the terminal, when several IP channels are available (e.g. Wi-Fi, Ethernet).

2.2 Packages

The GMA delivery contains several packages, each package being identified by its “terminal type” field.

The differences between the packages are in:

- The combination of plug-ins
- The look and feel of the GMA user interface

Terminal Type	Plug-ins	UI Look & Feel
0	Settings, POR, SMF	GMA-native
1	Settings, SMF	GMA-native
2	Settings, SMF, POR, RADIO	GMA-native
3	Settings, GSM, POR, SMF	GMA-native
4	Settings, SMF, ETH	GMA-native
5	Settings, Wi-Fi, SMF	GMA-native
6	Settings, Wi-Fi, SMF, POR	GMA-native
7	Settings, Wi-Fi, POR, RADIO, ETH, IP Channel	GMA-native
8	Settings, SMF, manual card entry	GMA-native
9	Settings, SMF, PPP	GMA-native
10	Settings, SMF, POR, PPP	GMA-native
11	Settings, SMF, ETH, PPP, IP Channel	GMA-native
34	Settings, SMF, ETH (special version for i9530 w/ card reading routed on the connected reader)	LAF library

2.3 Supported terminals

The following terminals are supported by the GMA:

Terminal Model	Terminal Type
i3070	1 or 8 (w/ manual card entry) or 9 (w/ PPP)
i5050	0 or 10 (w/ PPP)
i5100 / i5310	1 or 8 (w/ manual card entry) or 9 (w/ PPP)
i5100 / i5310 Ethernet	4 or 11 (w/ PPP)
i5100 / i5310 Wi-Fi	5
i6500 / i6550	4 or 11 (w/ PPP)
i6770	4 or 11 (w/ PPP)
i6780	4 or 11 (w/ PPP)
i7780	2
i7780 Ethernet	7
i7810	6
i7910	3
i8200	3
i8500	3
i8550	3
i9530	34

3 PLUG-IN CONFIGURATION

To enter in the plug-in menus explained below you must:

- In terminal with keyboard: press the key on the right of the '0' key (the key with a "#" or "00" text on it).
- In terminal with touch screen: touch the gear icon on the bottom left of the screen.

3.1 Settings plug-in

3.1.1 Description

The setting plug-in is used for the following tasks:

- Date/time set;
- Contrast and backlight configuration;
- Select an application to be waked up when the terminal is power on;
- Manage the sleep mode
- Send the menu icon and the date/time in the idle screen

3.1.2 Settings plug-in menu

Menu Item	Sub Menu Item	Action
General	----	General configuration
Date and time	----	Date and time settings
Startup App	----	Select an application to be waked up on power on
SleepMode	Active	Activate or deactivate the sleep mode
SleepMode	Sleep timeout	Set the timeout to enter in sleep mode
Security	Date/Time Passwd	Set a password to protect the Date/Time menu

- **General configuration**

This item permits a configuration of the following items:

- Contrast: Set the terminal contrast
- Beep: Activate or deactivate the key beep
- Back light: enable or disable the back light
- Back light time: the time the backlight stays on

- **Date and time**

Configure the date and/or time of the terminal.

- **Start-up app**

Choose an application to be automatically activated at startup, without needing to use the GMA menu. The default is to not activate any application at startup (i.e. normally start the GMA).

- **Sleep mode**

Configure the sleep mode functionality. Enable or disable the sleep mode and set the sleep mode timeout.

- **Date/Time Password**

Set a password to protect the Date/Time menu. If the chosen password is empty, no password will be asked to enter the Date/Time menu (this is the default behavior of the GMA). The password is stored non-encrypted in the 'pgSetFile' data file (see 4 for details).

3.2 SMF plug-in

3.2.1 Description

The SMF plug-in handles the maintenance functionality in the GMA. It supports connection to an IngEstate-like server.

There are 2 ways to start/configure a maintenance session, one is using the plug-in menu and the other is using the application to plug-in communication process handle by the GMA.

3.2.2 SMF plug-in menu

Below is a table with the menu options of the SMF plug-in

Menu Item	Sub Menu Item	Action
Start Maint.	----	Start a maintenance session
Gen. Options	----	General maintenance options
Conn. Settings	Connection Type	Choose the connection type
Conn. Settings	Options	Configure the connection
Conn. Settings	Line calibration	Telephone line calibration
Last Error	----	Shows in the screen a list of the last errors occurred during the SMF process.

Below we will describe each of the items above.

- **Start a maintenance session**

This item will start a maintenance session, using the chosen configuration.

- **General maintenance options**

This item will permit the edition of the maintenance specific parameters. The following parameters can be edited:

- Call Info: this field will be uploaded to the IngEstate in the logon frame. The IngEstate can use this field to choose what action to take with the terminal. Check the SMF documentation and/or the IngEstate documentation for more details.
- Reason: This field will be uploaded to the IngEstate in the logon frame. The IngEstate normally doesn't check this field.
- Retries: The number of tries. This number is masked by 0x7F, then 131 retries is the same as 3 retries.

- **Choose the connection type**

Choose the connection type. The following connections types are available:

- Modem: Modem asynchronous connection
- Serial: Serial RS232 connection
- Socket: A socket connection. It assumes that a communication plug-in is installed in the terminal (GSM, Ethernet or Wi-Fi plug-ins).

- **Configure the connection**

Configure the chosen connection. The entries depend on the selected connection type.

- **Telephone line calibration**

Perform a calibration in the OS thresholds to determine if the telephone line is connected, in use or ready for use. See the Unicapt32 documentation of the COM_LINE_IN_USE_THRESHOLD option of the comCfgAccess function.

- **Last Errors List**

Shows in the screen a list of the last errors occurred during the SMF process.

3.3 GSM plug-in

3.3.1 Description

The GSM plug-in handles the GSM modem functionality. It is responsible to initialize the GSM modem, send the PIN code to the GSM SIM card to unblock it, enter in the GPRS network if required.

3.3.2 GSM plug-in menu

Menu Item	Sub Menu Item	Action
Entry Pin	PIN	
Entry Pin	Change PIN	
Entry Pin	Enab/disab PIN	
Settings	GSM Module Shut.	
Settings	DHCP/IP Config.	
Settings	DNS1 ADDRESS	
Settings	DNS2 ADDRESS	
APN	APN	
APN	User	
APN	Password	
Print Status	-----	Print status information
GPRS timeout	Disc. T-out (s)	Set the GPRS connection timeout
GPRS timeout	Recon. Delay (s)	Set the GPRS reconnection delay
Extra	Print errors	Print the last plug-in errors
Extra	AT Commands	Send AT commands to the GSM modem
Options	Detach	Enables/Disables the automatic detach from GPRS
Options	PDP Activate	Enables/Disables the automatic PDP Activating
Options	PDP Deactivate	Enables/Disables the automatic PDP Deactivating
Advanced Options	Operator Config	Enables/Disables user operator selection depending of the selection mode.
Advanced Options	GPRS Conn TO	
Advanced Options	GPRS Conn Retries	
Advanced Options	GSM Sig. Tolerance	

- **Entry PIN**

Options to set the current PIN code, change the PIN code and/or enable or disable the PIN code.

- **PIN:** enter the PIN code to be used to unblock the GSM SIM card.
- **Change PIN:** change the current PIN code in the SIM card. To do it you will be asked to enter the PUK code and then the new PIN code.
- **Enab/disab PIN:** Set if the GSM plug-in will send the PIN code to the SIM card or not. Some SIM card don't require to be unblocked.

- **Settings**

- **GSM Module Shut.:** Ask if the module should be shut down when the terminal is shut down. It is a good idea to enable this option, but the shut down process takes more time.













- **DHCP/IP Config.:** Asks if you want to use DHCP in the GPRS connection process or if you want to set a local fix IP.e
 - **DNS1 ADDRESS:** Configures the first DNS Address.
 - **DNS2 ADDRESS:** Configures the second DNS Address.
- **APN**
SET the APN, user and password to connect to the GPRS network.
- **Print Status**
Print status information of the GSM plug-in and GSM modem.
- **GPRS timeout**
 - **Disc. T-out (s):** Set the timeout to stay connected to the GPRS network without open a socket. Some networks disconnect a GSM modem from the network after a period of inactivity. This timeout should be set to a timeout similar to the network timeout.
 - **Recon. Delay (s):** Set the delay in seconds to reconnect to the GPRS network. This allows the modem to have some rest before trying reconnection. Depending of the GPRS network performance this delay can increase the successful connection rates.
- **Extra**
Extra options:
 - **Print errors:** A list of the last errors that occurs inside the plug-in are printed
 - **AT commands:** The GSM plug-in will open the terminal COM1 and every data received in the COM1 will be sent to the GSM modem and every reply from the GSM modem will be sent to the COM1. The COM1 is opened with baud rate of 115200bps.
- **Options**
 - **Detach:** Disabled by default. Enables/Disables the automatic detach from GPRS.
 - **PDP Activate:** Disabled by default. Enables/Disables the automatic PDP Activating. This option allows more accurate debugging in PDP Activating troubles. In default mode the LNET processes the PDP Activation automatically.
 - **PDP Deactivate:** Disabled by default. Enables/Disables the automatic PDP Deactivating. This option allows more accurate debugging in PDP Deactivating troubles. In default mode the LNET processes the PDP Deactivation automatically.
- **Advanced Options**
 - **Operator Config:** "Smart" by default. Asks for a selection mode, and then displays an operator list for some of the modes (Manual and Manual/Auto). In this list, the operators allowed by the SIM card are displayed with a plus sign ("["+")", the forbidden operators are displayed with a minus sign ("[-]"). Note that connecting to a forbidden operator

might make sense: indeed the SIM card might be not up-to-date, therefore an operator could be shown as “forbidden”, but actually allowed. The available user selection modes are:

- **Automatic:** Explicitly selects automatically the SIMs default network.
 - **Manual:** Selects a specific network. When this option is selected, an Operator List menu is built for user selection.
 - **Manual/Auto:** Tries to select a specific network. If an error occurs, the automatic mode is activated. When this option is selected, an Operator List menu is built for user selection.
 - **Smart:** No operator selection is performed, the plugin execution depends of the current operator selected in the modem even if the terminal reboots. If any error occurs during the GPRS attach/PDP Activation, the plugin uses the “Smart mode” and builds automatically an internal operator list to try one-by-one sequentially.
- **GPRS Conn TO:** Configures the Timeout amount for the GPRS attach process. In seconds.
 - **GPRS Conn Retries:** Configures the number of retries for the GPRS attach process.
 - **GSM Sig. Tolerance:** Configures the minimum tolerance for the GSM Signal.

3.3.3 GSM plug-in icons

Below there is a list of all the icons this plug-in can show and the meaning of each one.

GSM		GPRS	
Big Icons GSM	Small Icons	Big Icons GSM	Small Icons
	Searching for network		
	Chip unknown		
	Entry the Pin number		
	Chip missing		
	Signal strong		
	Signal weak		
	No signal		

In the “Device error” case, the referred device may can be disconnected, damaged or there are two or more different versions of the GMA loaded in the terminal, causing device conflicts.

3.4 Ethernet plug-in

3.4.1 Description

The Ethernet plug-in handles the Ethernet connection. It starts and configures the LNET.

3.4.2 Ethernet plug-in menu

Menu Item	Sub Menu Item	Action
Settings	---	Configure DHCP, local IP, etc...
Print config	---	Prints the current configuration
tests	Ping	Send a PING frame

- **Settings**
 - Set if it will use DHCP or not. If not you will need to set the local IP and sub mask.
 - After it will ask the DNS servers and the gateway.
- **Print Config**
Prints the current configuration
- **Tests**
Actually the only implemented test is sending a PING.

3.5 Wi-Fi plug-in

3.5.1 Description

The Wi-Fi plug-in handles the Wi-Fi communication. It is responsible to initialize the Wi-Fi and the LNET.

3.5.2 Wi-Fi plug-in menu

Menu Item	Sub Menu Item	Action
Configuration	SSID	Enter the SSID
Configuration	Security	Set if security is required and asks for security configuration
Configuration	DHCP	Use or not DHCP, if not some configuration is required
Configuration	Print	Print the current configuration
Detect networks	---	Detect the Wi-Fi networks
Network test	Ping	Send a PING frame

- **Configuration**

Configures the Wi-Fi, the following submenus exists:

- **SSID:** Enter the SSID of the network to connect
- **Security:** set if want or not security in the network, if yes asks if use a WEP 64 bits or WEP 128 bits, then asks the WEP key.
- **DHCP:** asks if use or not DHCP. If not it will ask the local IP, IP sub-mask, DNS servers and the gateway.
- **Print:** will print the current configuration

- **Detect Networks**

It will show the networks detected.

- **Network test (Ping)**

It will send a ping frame to test the Wi-Fi network connection.

3.5.3 Wi-Fi plug-in icons

Below there is a table with the icons shown by the Wi-Fi plug-in.

Wi-Fi Icons

	No Signal		Wi-Fi Error
	Weak		Wi-Fi
	Strong		Wi-Fi

3.6 Radio plug-in

3.6.1 Description

The radio plug-in handles the communication between the radio base and the terminal on blue-tooth terminals. It shows the signal level and makes the base terminal synchronization.

The radio plug-in uses the OS radio peripheral to manage the communication between the terminal and base.

There are 3 modes of operation:

Radio Mode: In this mode the connection between the terminal and the base is done by radio (blue-tooth). In this case you have access to the serial ports and the modem. But the maximum connection speed that can be used in a serial port in this mode is 38400 bps. The terminal must be configured with the base serial number to the connection be established.

Contact Mode: This mode is very similar to the radio mode except that the terminal and the server must be in contact. By very similar it means that for the software there is no difference, you can open the serial ports and the modem respecting the same speed limit of the radio mode.






Transparent Mode: Only one COM port (COM2) is available in this mode. Application must change the Radio Mode to RADIO to access to COM1, COM2 and MODEM. This mode is useful for the maintenance and the download of the terminal. In fact, this mode does not limit the baud rate of the COM to 38400 but 115200 bps.

3.6.2 Radio plug-in menu

Menu Item	Sub Menu Item	Action
Radio Mode	---	Set the communication between the base and the terminal to radio (blue-tooth). See the OS documentation for more details.
Contact Mode	---	Set the communication between the base and the terminal to contact. In this mode the terminal must be put on the base. See the OS documentation for more details.
Transp. Mode	---	Set the communication between the base and the terminal to transparent. In this case only the COM2 can be used by the terminal. In this mode the terminal must be put on the base. See the OS documentation for more details.
Sync Base	---	Synchronize the base and the terminal. In this case the terminal must be put on the base.

3.6.3 Radio plug-in Icons

Below is a table with the icons shown by the Radio plug-in:

	Strong
	Weak Signal
	Minimum signal, about to lose contact with the base
	No signal, no contact with the base
	Terminal over the base

3.7 POR plug-in

3.7.1 Description

The POR plug-in checks the battery level and shows an icon in the GMA display with the battery level. If the battery level is almost zero it sends a warning message to all the applications and then turns off the terminal. This plug-in also handles the “cancel” key. When the “cancel” key is pressed twice and the terminal is not connected to a power supply the terminal shuts down.

If the Auto PowerOff feature is activated, and the terminal is not connected to a power supply, the plugin uses the Sleep TimeOut configuration to wait for an amount of seconds before the PowerOff the terminal. For Aqua terminals, the activation is default, for the others not.

3.7.2 POR plug-in menu

Menu Item	Sub Menu Item	Action
Active	-----	Activates or deactivates the automatic PowerOff
Sleep timeout	-----	Set the timeout to enter in automatic PowerOff

3.7.3 POR plug-in Icons

Below there is a table with the POR plug-in icons.



Battery Empty



Battery Full



Battery Error



To show that the battery is charging the POR plug-in show the icons cycling from the icon for “battery empty” to the icon for the “battery full”.

Battery Empty



Battery Full



Charging



Also, there is a different set of icons for Aqua terminals.

In this case, there is fixed icon to show the charging state, and there is no icon for battery error.

3.8 PPP plug-in

3.8.1 Description

The PPP plug-in allows configuring a PPP connection over modem or serial connection.

3.8.2 PPP plug-in menu

Menu Item	Sub Menu Item	Action
Conn. Type	PPP Serial	Configure the PPP to work over the serial port
Conn. Type	PPP Modem	Configure the PPP to work over the modem
Configure	---	PPP configuration parameters, depending on the chosen connection type
Connect	---	Start a PPP session
Disconnect	---	End the current PPP session

The configuration parameters are the following:

- **Common parameters (for serial and modem):**
 - LCP options: authentication protocol to use (CHAP, MS-CHAP, PAP, or all the protocols)
 - Timeout: connection timeout
 - User name: user name for the PPP session
 - Password: password for the PPP session
- **Parameters for PPP over serial only**
 - Baud rate: baud rate of the serial port
 - Parity: parity to use (none, odd, even)
 - Stop bits: number of stop bits to use (1 or 2)
 - Port name: name of the COM port to use
- **Parameters for PPP over modem only**
 - Country code: the selected country code value will be written in the modem before dialing, if different from the current country code.
 - Detect line: if set to yes, the modem will detect if the line is in use before dialing.
 - Detect Dial Tone: if set to yes, allows to dial whether or not the modem detects a dial tone.
 - Tone dialing: if set to yes, the tone dial mode is used. Otherwise, the pulse dial mode is used.
 - Modulation: type of modulation to use
 - Error correction: type of error correction to use
 - Data compression: type of data compression to use
 - Min BPS: the lowest rate at which modem may establish a connection
 - Max BPS: the highest rate at which modem may establish a connection
 - Telephone: phone number

3.9 IP Channel Selection

3.9.1 Description

The “IP Channel Selection” plug-in allows to select the default IP channel of the terminal, when several IP channels are available (e.g. Wi-Fi, Ethernet). The default IP channel is used by:

- The SMF plug-in, when the “socket” connection type is selected.
- User applications using the “socket communication” module of the GCL library (i.e. the “gclSockxxx” functions). In this case, sockets are opened on the IP channel selected in the GMA.

3.9.2 IP Channel plug-in menu

Menu Item	Sub Menu Item	Action
IP Channel	commGsm / commWifi / commPPP	Select the default IP channel of the terminal, between GSM / Wi-Fi / PPP.

4 SETTINGS PLUG-IN CONFIGURATION FILE

The settings plug-in stores its configuration in a text file called “pgSetFile”. This file is in text format to make it easy to be configurable. The idea of this file is permit the GMA to be pre-configured by this data file.

4.1 File Format

The file is in text format. It is composed of a series of fieldname and the value of the field inside quotations. A line that begins with “;” will be ignored (consider a comment in the file). But the file will be regenerated by the plug-in settings and the comments will disappear. Below there is an example:

```
field1 = "value1"  
field2 = "value2"  
field3 = "value3"
```

4.2 Existing fields

The supported configurations of the settings plug-in are shown in the table below.

Field name	Description
appstartname	The name of the logical application that will be started when the terminal is power on. If no application is set the GMA take control of the terminal in the startup.
sleepmodestatus	If “1” than the sleep mode is activated, “0” for not activate
sleepmodetimeout	The timeout in seconds before enter in the sleep mode.
beepstatus	If the key beep is activated or not. “1” activated, “0” not.
contrast	The display contrast. A number from 0 – 99.
backlightstatus	If the backlight is activated. “1” activated, “0” not.
backlighttimeout	The timeout before turn off the backlight in seconds.
menu_status	If the application menu appears when there is only one application. If “1” the menu is shown event if there is only one application. If “0” the menu is shown only if there is more than one logical application installed in the terminal.
pwd	Password protecting the Date/Time menu. If the string is empty (or the field is not present), no password is asked when entering the menu.

4.3 File example

```
appstartname=""  
sleepmodestatus="0"  
sleepmodetimeout="600"  
beepstatus="0"  
contrast="85"  
backlightstatus="1"  
backlighttimeout="10"  
menu_status="0"  
pwd="1234"
```

With this configuration, the GMA will take control of the terminal in the startup (no application will be automatically started), the sleep mode is not activated, the key beep is not activated, the contrast is 85, the backlight is on with a timeout of 10 seconds and the application menu will not be shown when there is only one logical application in the terminal.

5 CUSTOM PART CONFIGURATION FILE

There is a customization file called "GMACUST1.DAT" that is used to customize the GMA.

The format of this file is similar to the one used by the settings plug-in. It is used now only to configure the EMV fallback. More uses can be added in the future.

5.1 File Format

The file is in text format. It is composed of a series of fieldname and the value of the field inside quotations or without quotations if there is no space in the value. Below there is an example:

```
field1 = "value1"  
field2 = "value2"  
field3 = "value3"
```

5.2 EMV fallback configuration

The configuration of the EMV fallback consists in telling the GMA when the fallback will occur. It is done by saying to the GMA in which errors the fallback will occur. To do it the following fields can be used.

For each field you put in the value the return errors for which you want a fallback. The errors are separated by a space character. See the example below.

Field name	Description
SMC_FB_POWER_ON	Puts the errors that occurs in the SMC power on you want a fallback occurs.
SMC_FB_INIT_SELEC	Puts the errors in the return of the function amgInitPayment you want a fallback to occur.
SMC_FB_NO_APPS	Allow fallback when there is no applications, in this case put only the error -1 in the value.
SMC_FB_ASK_SELEC	Puts the errors in the return of the function amgAskSelection you want a fallback to occur.
SMC_FB_FINAL_SELEC	Puts the errors in the return of the function amgEmvFinalSelect you want a fallback to occur.

Example:

SMC_FB_POWER_ON = "-5400 -5395"

means SMC_CARD_MUTE and SMC_ATR_NOT_19200 return codes in the power on will cause a fallback.

6 GMA LIBRARIES

Below is a short description of the libraries delivered with the GMA.

Library Name	Description	Documentation
gmaLib	Contains functions that help writing a GMA compliant application or a plugin.	gmaLib.chm
gmaLibPgComm	Contains functions to talk to specific plug-ins (e.g., get the GSM signal level or set the SMF plug-in configuration).	gmaLibPgComm.chm
gmaCustomLib	Contains utility functions related to user interface.	gmaCustomLib.chm
gmaCustom	Contains the GMA's custom part. Can be used to build a GMA with a different combination of plugins.	gmaCustom.chm
menuLib	Contains functions to draw menus on the terminal.	menuLib.chm
editLib	Contains functions to display edition fields on the terminal.	editLib.chm