

GSM Win32 Library

for GTM-201 series, GTM-203M-3GWA

User's Manual V1.0



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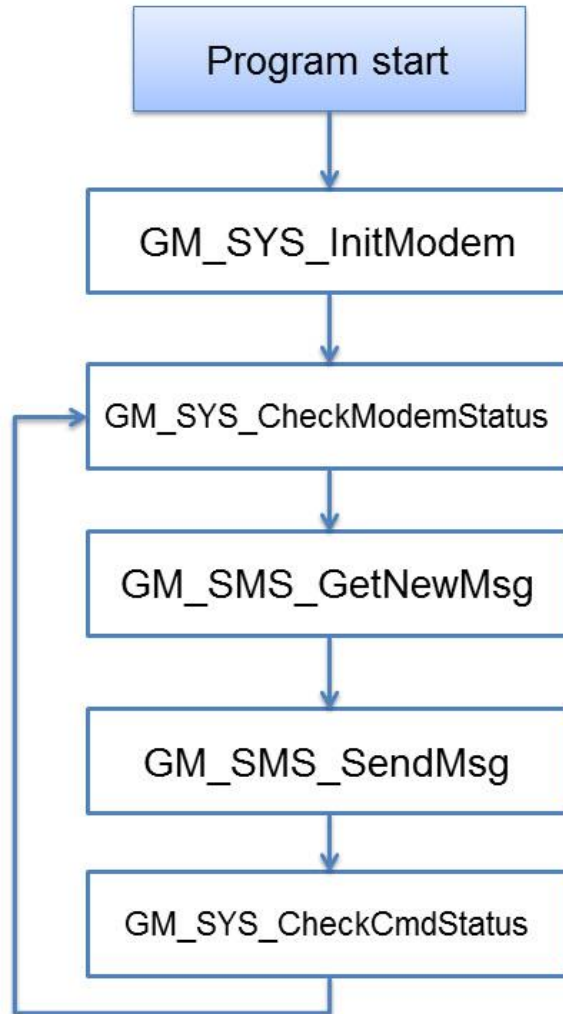
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1. Introduction

1.1 Design Flowchart



2. GSM Win32 Library

2.1 Data Structure Define

There are some data structure that is useful when you program with GSM library.

SMS :

//-- structure for sending/reading SMS

```
typedef struct STRENCODE_MSG{
    char phoneNumber[30];    //phone number
    char time[20];          //sms_time_stamp
    char msg[161];          //message's content
    unsigned char dataLen;  //Message's length
                           //Max length: 7-bit=160 words, UCS2=70 words(140 bytes)
    char mode;              //encode style: 0=GSM_7BIT, 8=GSM_UCS2(uni-code)
} strEncode_Msg;
```

SYSTEM :

//-- structure for setting system parameters

```
typedef struct SYS_PROFILE
{
    char PINCode[5];        //The pin code of SIM card, ex: "0000"
    int modemPort;         //modem port number.
    int hardware;          //hardware type. 0: GTM-201 series, GTM-203M-3GWA
}SYSProfile;
```

2.2 SYSTEM Function

Function definition	Description
GM_SYS_GetLibVersion	Get Library version
GM_SYS_GetLibDate	Get Library date
GM_SYS_InitModem	Initialize Modem
GM_SYS_CloseModem	Close the modem
GM_SYS_CheckModemStatus	Check modem status, and suggest you check it in your loop every time
GM_SYS_CheckCmdStatus	Get the status of the command you sent
GM_SYS_CheckSignal	Check signal quality
GM_SYS_CheckReg	Check register

2.2.1 GM_SYS_GetLibVersion

Get library version.

Syntax

```
int GM_SYS_GetLibVersion(void);
```

Parameters

None

Return values

Version format = A.BC

2.2.2 GM_SYS_GetLibDate

Get library date.

Syntax

```
void GM_SYS_GetLibDate(  
    char* libDate  
);
```

Parameters

libDate

a string of lib. date, format="Jul 21 2014"

Return values

None

2.2.3 GM_SYS_InitModem

Initialize Modem.

****must use GM_SYS_CheckModemStatus() to check modem status later**

Syntax

```
int GM_SYS_InitModem(  
    SYSProfile sysProfile  
);
```

Parameters

sysProfile
set system profile

Return values

GM_NOERROR : success
GM_COMERROR : comport error
GM_INITERROR : init fail error

2.2.4 GM_SYS_CloseModem

Close the modem.

**Please call GM_SYS_InitModem() to wake up modem after using GM_SYS_CloseModem(1) to shut down the modem.

Syntax

```
int GM_SYS_CloseModem(  
    int mode  
);
```

Parameters

mode

0 : close modem, but maintain it power on

1 : close modem and set it power off

Return values

GM_NOERROR : no error

GM_CMDERROR : command error

2.2.5 GM_SYS_CheckModemStatus

Check modem status, and suggest you check it in your loop every time.

Syntax

```
int GM_SYS_CheckModemStatus(void);
```

Parameters

None

Return values

GM_NOERROR : modem register success, can service

GM_NOREG : modem not registered, can't service

2.2.6 GM_SYS_CheckCmdStatus

Get the status of the command you sent.

Syntax

```
int GM_SYS_CheckCmdStatus(void);
```

Parameters

None

Return values

GM_BUSY : modem busy, you can't send other command

GM_NOERROR : success

GM_TIMEOUT : time out

GM_CMDERROR : command error

Other : please refer to error codes of GSM.h

2.2.7 GM_SYS_CheckSignal

Check signal quality.

Syntax

```
int GM_SYS_CheckSignal(void);
```

Parameters

None

Return values

signal quality

0	-113 dBm or less
1	-111 dBm
2...30	-109... -53 dBm
31	-51 dBm or greater

2.2.8 GM_SYS_CheckReg

Check register.

Syntax

```
int GM_SYS_CheckReg(void);
```

Parameters

None

Return values

Register flag

- 0 : not registered
- 1 : registered, home network
- 2 : not registered, and searching...
- 3 : registration denied
- 4 : unknown
- 5 : registered, roaming

2.3 SMS Function

Function definition	Description
GM_SMS_SendMsg	Send a message
GM_SMS_GetNewMsg	Get a new sms message

2.3.1 GM_SMS_SendMsg

Send a message.

****must use "GM_SYS_CheckCmdStatus()" to check status later**

Syntax

```
int GM_SMS_SendMsg(  
    strEncode_Msg* strMsg  
);
```

Parameters

strMsg

the message that will be sent.

Return values

GM_NOERROR : no error

GM_NOREG : not registered, or can't service

GM_BUSY : modem busy

2.3.2 GM_SMS_GetNewMsg

Get a new sms message.

Syntax

```
int GM_SMS_GetNewMsg(  
    strEncode_Msg* msg  
);
```

Parameters

msg
new sms message

Return values

0 : no new message
1 : new message coming

3. Revision History

Revision	Date	Author	Description
1.0	2015/07/03	William	Release version