GSM Win32 Library

for GTM Modem series

User's Manual V1.1

High Quality, Industrial Data Acquisition, and Control Products

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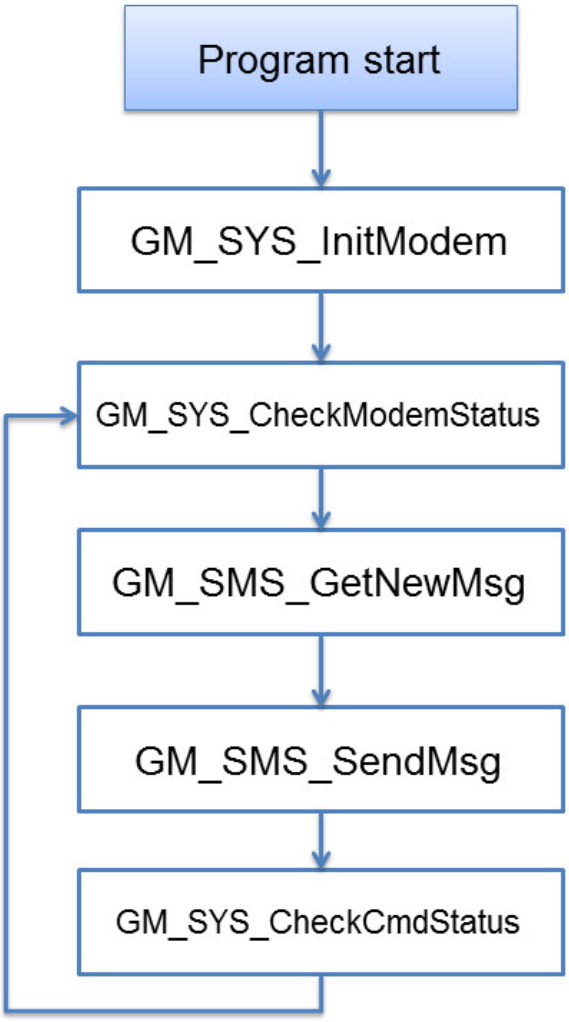
1.1 Design Flowchart



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 Modem series
}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
1.1	2016/07/07	Eddie	Modify