

Please install the software correctly, and copy the file spoem.dll to bin directory. (for example c:\WINSP8K\bin)

1. The class is exported from the spoem.dll (defined in spoem.h)

```
class SPOEM_API CSpoem {
public:
    CSpoem(void);
    // TODO: add your methods here.
    void InitParameter(char* chSPDir);
    void ExitSpDll();

    BOOL SP8KCommunication();
    BOOL SelectDevice(char* chMFG, char* chDEV);

    BOOL LoadDataFile(LPDATAFILEPARA lpDataFilePara);
    BOOL LoadDataDirectly(LPLOADDATAPARA LoadDataPara);

    BOOL BeginProgram(char* chAuto);
    void GetProgramStatus(LPPROGRAMSTATUS ProgramStatus);
    unsigned int GetCheckSum(BOOL bRecalc);
    unsigned char CheckPin();
    void GetError(LPOPERATIONERROR OperationError);
    void OperationOption(LPOPERATIONOPTION OperOption);

    void SetSP8Module(char chMasterModule, char chActiveModule);
    char GetFunctionString(char* chFunStr);
};
```

2. Demo(Test.exe)

1. Introduce how to use class : Compiling the demo needs "spoem.h" and "spoem.lib".
Running the demo needs "spoem.dll".
2. VC++ project of "Test" supposes the software of SP8K installed in the directory "c:\WINSP8K" and "spoem.dll" in the directory "c:\WINSP8K\bin".
3. Running the demo: Communication first,
Select Device -> Load Data File -> Program

3. Discuss details

1. Initialize ----- InitParameter(char* chSPDir)
Parameter: chSPDir = the directory which the file "spoem.h" is in
Return : no
Note : Call one time and only one time
Before exiting, call ExitSpDll().
Demo: BOOL CTestDlg::OnInitDialog()

2. Communication ----- SP8KCommunication ()

Parameter: no
Return : BOOL

Error: See GetError(LPOPERATIONERROR OperationError)

Step: 1
Type: 0 No error or unknown error

Demo: void CTestDlg::OnButtonTest()



3. Select Device ----- SelectDevice(char* chMFG, char* chDEV)

Parameter : Manufacturer , Device

Return : BOOL

Error :

Step: 2

Type: 0 No error or unknown error

1 directory is error(chSPDir) or lack of nessary files

2 Communication first or no programmer

3 chMFG error

4 chDEV error

Note : chMFG, chDEV must be correct, including space character . If not sure, please see the file "Device.txt" in the directory "Lib"



and copy chMFG, chDEV.

ATMEL-WM ----- chMFG

MICROCONTROLLER

T89C51AC2-P44 [SA244]

T89C51CC01-P44 [SA244]

T89C51RD2

TSC87251A1@PLCC44 [SA244]

TSC87251G1@PLCC44 [SA244]

TSC87251G1A@PLCC44 [SA244]

TSC87251G2D@PLCC44 [SA244]

T89C51AC2-Q44 [SA245]

T89C51CC01-Q44 [SA245]

T89C51RD2-P44 [SA244]

TSC87251G1

TSC87251G1A

TSC87251G2D

TSC87251G2D@TQFP44 [SA245]

BRIGHT ----- chDEV

EPROM & EEPROM

BM29F040

BM29F400-T48 [SA247]

BM29F400-P44 [SA244]

Demo: void CTestDlg::OnButtonSelect()



4. Load Data File ----- LoadDataFile(LPDATAFILEPARA lpDataFilePara)

Parameter :

```
typedef struct _DATAFILEPARA{
```

```
  char chFileName[256];
  char chType;      //0  binary
                   //1  Intel hex
                   //2  Motorola
                   //3  Tek
                   //4  Extend Tek
                   //5  pof
                   //6  jed
                   //remain error
```

```
  int nBufferAddress;
```

```
  int nFileAddress;
```

```
  char chFileMode;  //0 normal
                   //1 Even[1st of 2]
                   //2 Odd[2nd of 2]
                   //3 1st byte of 4
                   //4 2nd byte of 4
                   //5 3rd byte of 4
                   //6 4th byte of 4
                   //7 1st 2_byte of 4
                   //8 2nd 2_byte of 4
                   //remain error
```

```
  BOOL bInitBuffer; // 1, fill buffer with initvalue before load file
```

```
}DATAFILEPARA, *LPDATAFILEPARA;
```

Return : BOOL

```
Checksum : GetChecksum(BOOL bReCalc);
```

```
          if bReCalc=TRUE, recalculate and return CheckSum
```

```
          FALSE, return CheckSum
```

Error :

Step: 3

Type: 0 No error or unknown error

1 Communication first or no programmer

2 Select device first

3 Porgrammer is busy

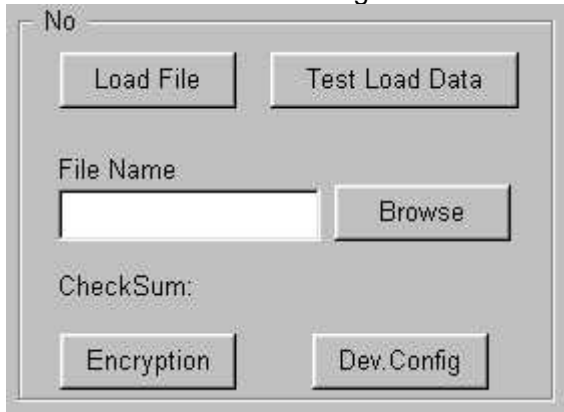
4 File format error , only POF or JED file valid (PLD) (chType)

5 POF error or unmatched

6 FileMode, 0---8 valid

- 7 Can't open file
- 8 File format value must be 0---4 (chType)
- 9 Can't load file according to format (chType)

Demo: void CTestDlg::OnButtonLoadfile()



Load file with the name in the "File Name".

5.Program ----- BeginProgram(char* chAuto)

Parameter : string of Functio

('1'=Program,'2'=Read,'3'=Verify,'4'=Blank_check....)

'1' denote the first function after "Auto" in "Device Operation Window"

"1"----"9", "A"----"F" valid

Note : string (chAuto) ,

Example 1: "413" , is "Blank_Check" , "Program" , "Verify".

Example 2: "5413" , is "Erase", "Blank_Check" , "Program" , "Verify".

Return : BOOL

Check Status : GetProgramStatus();

```

struct {
        BOOL bProgramming; //1=Programming ,0=Ready
        BOOL bResult;      //if bProgramming==0, 1=Success , 0=Failure
                           else invalid
        char   chFunction; //if bProgramming==1, which
                           function is
                           executed
                           else invalid
        char   chProcess;  //if bProgramming==1, value of
                           process
                           else invalid
}

```

Cancel: CancelProgram();

Return : BOOL , 1=Success , 0=Failure

Error:

Step: 4

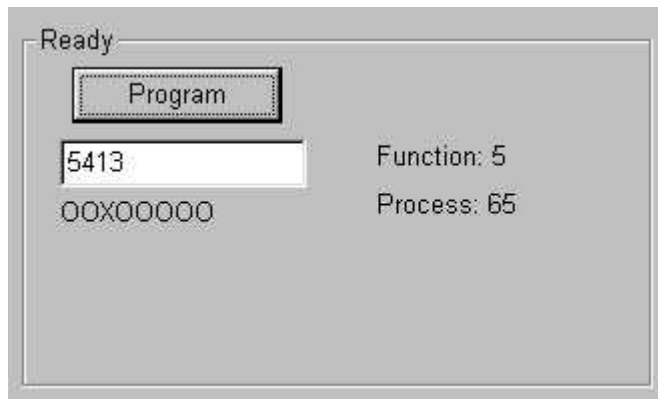
Type: 0 No error or unknown error

1 Communication first or no programmer

2 Select device first

3 Programmer is busy

Demo: void CTestDlg::OnButtonProgram()



Note: Call BeginProgram(char* chAuto) will return immediately, not waiting end of programming. Call GetProgramStatus() to check programming status. In demo, using SetTimer() to status .

O = Success
X = Failure

5. Insertion Test ----- CheckPin();

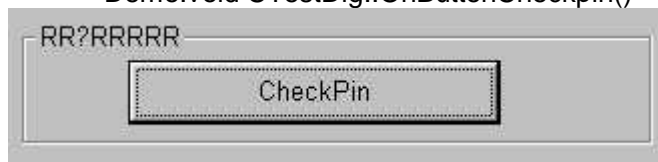
Parameter : no
Return : BOOL

Error:

Step: 5

Type: 0 No error or unknown error
1 Communication first or no programmer
2 Select device first
3 Programmer is busy

Demo: void CTestDlg::OnButtonCheckpin()



R = Chip insert OK
? = Chip insert Error

6. Load Data into Buffer directly ----- LoadDataDirectly(LPLOADDATAPARA LoadDataPara)

Parameter :

```
typedef struct _LOADDATAPARA{
    unsigned int nStartAddress;
    unsigned int nEndAddress;
    char chDataType; //0 Data
                    //1 EncrypTion
                    //2 Dev.Config (64 Bytes)
    unsigned char* chData;
}LOADDATAPARA,*LPLOADDATAPARA;
```

Return : BOOL ; FALSE = out of range

Note : Data Buffer (EPROM and FUSE) (chDataType=0)
Encryption Buffer (chDataType=1)

Dev.Config Buffer (chDataType=2)
 When chDataType=2, chData is pointer to the array which size is 64 , nStartAddress and nEndAddress invalid.The data of array comes form the file generated by SP3000.exe.(See how to generate Dev.Config file)

Error :

Step: 6
 Type: 0 No error or unknown error
 1 Communication first or no programmer
 2 Select device first
 3 Porgrammer is busy

Demo: void CTestDlg::OnButtonTestLoaddata()
 void CTestDlg::OnButtonEncry()
 void CTestDlg::OnButtonDevconfig()

7.Set Operation Option ----- OperationOption(LPOPERATIONOPTION OperOption)

```
typedef struct _OPERATIONOPTION{
    char chEnable; //bit0 = 1, Reserved
                                     //bit1 = 1, bBeeper Enable
                                     //bit2 = 1, Reserved
    BOOL bIDCheck; //Reserved
    BOOL bBeeper;
    unsigned int nStartAddress; //Reserved
    unsigned int nEndAddress; //Reserved
}OPERATIONOPTION,*LPOPERATIONOPTION;
```

Return:no

Note: Set when valid

Demo:

void CTestDlg::OnButtonBeeperoff()
 void CTestDlg::OnButtonBeeperon()

8.Check Error ----- GetError(LPOPERATIONERROR OperationError)

Parameter:

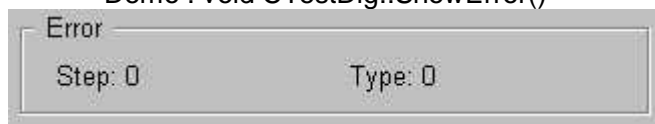
```
typedef struct _OPERATIONERROR{
    char chStep;
    char chType;
```

```
}OPERATIONERROR,*LPOPERATIONERROR;
```

Return: no

Note : See Demo

Demo : void CTestDlg::ShowError()



9. How generate the Configuration file : when save the project file ,will also generate the Configuration file with extended name “dcf” which save the content of Configuration.