

YT699

YT699

iKey172KU

1 .

2 [Syunew3D](#)

3 [SYUNEW3A](#)

iKey172KU

iKey

1i172KUU32K

2PHONEiPHONE

3UUU

4iKey

5iKeyUUU

6iKey OA

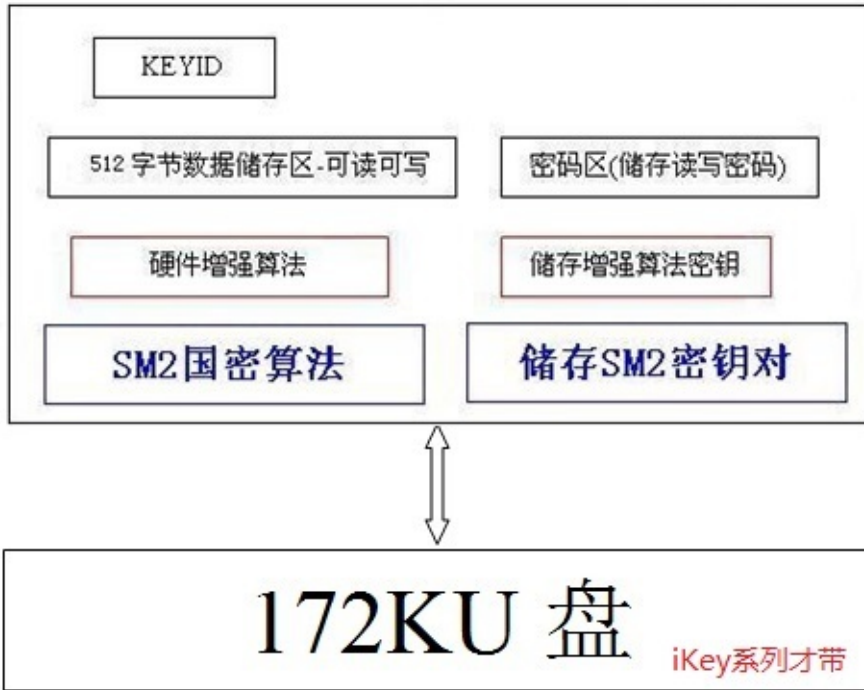
7

8iKey

1 .

2 .

3 .



1IDID

2TEA

3

4 SM233

5100010

638UiKey172K

1 [YReadExYWriteExYReadYWriteYReadString
YWriteStringSetReadPasswordSetWritePasswor](#)

2TEA() [SetCal_2CalEncString](#)

3SM2()SM2SM2
[SM2_EncBufSM2_DecBufSM2_EncStringSM2_DecString](#)

1TEA

2

3(TEA)

4SM233

1

AID

B

2

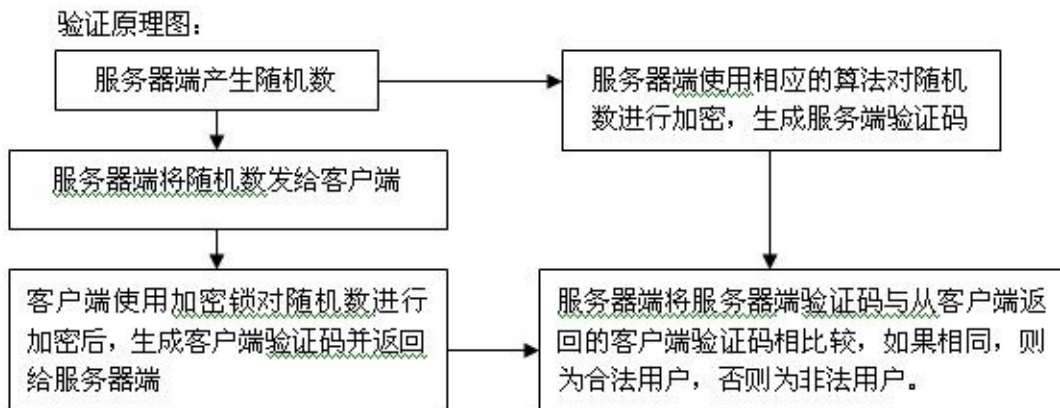
A ID

B

C

D

E



提示：只有在服务器的加密密钥与设置在锁中的加密密钥一致时，两边加密的结果才能相符，才能被合法验证。锁中的加密密钥可以由开发商自行设置。

3SM2

SM233

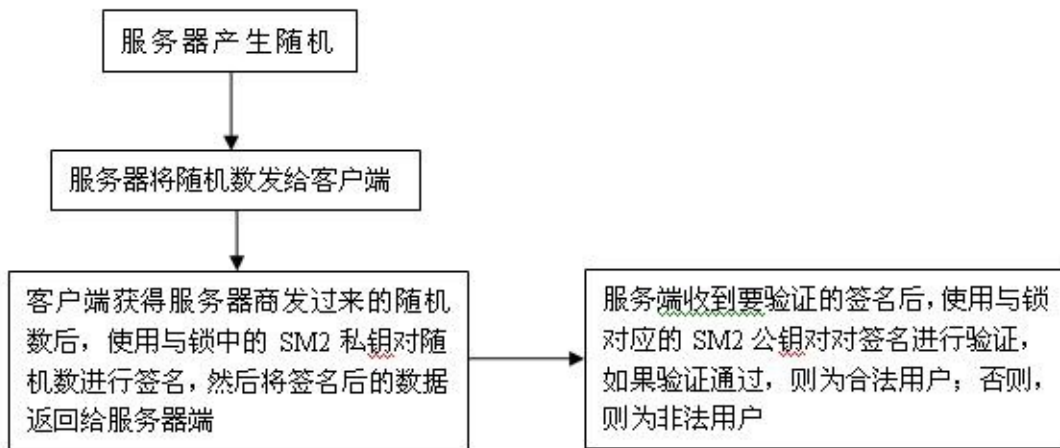
A

BSM2

CSM2

DSM2

SM2 国密算法验证原理图：



提示、只有在服务器的公钥与设置在锁中的私钥相对应时，签名才能验证通过。锁中的 SM2 私钥可以由开发商自行设置。

AiKeyU

B)

CCAB

D

Syunew3D

1 .

2 .

3 .

4 .

5 [SM2](#)

6 .

7 [U](#)

1 [FindPort](#)

FindPort

```
int FindPort( int start,char *OutPath);
```

N

1start(in) N start=0 start=1

2——OutPath(out)N

0 N

1FindPort(0OutPath)0FindPort(1,OutPath)FindPort(0OutPath)FindPort(1,OutPath)0
FindPort(2,OutPath)

- 1 [GetID](#)
- 2 [NT_GetIDVersion](#)
- 3 [NT_GetVersionEx](#)
- 4 [GetChipID](#)

GetID

```
int GetID( DWORD *ID_1,DWORD *ID_2,char*InPath);
```

ID ID8

ID_1 (out) 4ID

ID_2 (out) 4ID

3——InPath (in)

0

IDID

IDID16

GetChipID

```
int GetChipID( char *OutChipID,char *InPath);
```

```
    ID  
OutChipID (out)    ID33
```

```
2——InPath (in)
```

```
0
```

```
133
```

```
2 ID33
```

```
3 IDID
```

NT_GetIDVersion

```
int NT_GetIDVersion(int *Version,char *InPath);
```

1Version(out)

2——InPath (in)

0

189

233IDSM2

NT_GetVersionEx

```
int NT_GetIDVersion(int *Version,char *InPath);
```

1Version(out)

2——InPath (in)

0

[102SMID](#)

[2 38172KUiKey](#)

YT699494

100010

1 [YReadEx](#)

2 [YWriteEx](#)

3 [YRead](#)

4 [YWrite](#)

5 [YReadString](#)

6 [YWriteString](#)

7 [SetReadPassword](#)

8 [SetWritePasswor](#)

11ABC1A,2B,3434

20:ABC0ABC31A,2B,3434

3

YReadEx

```
int YReadEx(BYTE *OutBuf,short address,short len,char *Hkey,char  
*Lkey,char *Path );
```

1——OutBuf(out) len

2——address(in)

3——len(in)

4——HKey(in)

5——Lkey(in)

6——InPath (in)

0

“ FFFFFFFF”——“FFFFFFF”

YRead

```
int YRead(BYTE *OutData,short address,char *Hkey,char *Lkey,char *Path );
```

, [YReadEx](#)

1——OutData(out) OutData

2——address(in)

3——HKey(in)

4——Lkey(in)

5——InPath (in)

0

“ [FFFFFFFF](#)”——“[FFFFFFF](#)”

YWriteEx

```
int YWriteEx(BYTE *buf,short address, short len,char *Hkey,char *Lkey,char *Path );
```

,

1—buf(in) len

2——address(in)

3——len(in)

4——HKey(in)

5——Lkey(in)

6——InPath (in)

0

1 “FFFFFFFF”——“FFFFFFF”

2100010

YWrite

```
int YWrite(BYTE InData,short address, char *Hkey,char *Lkey,char *Path );  
    YWriteEx
```

1—InData(in)

2——address(in)

3——HKey(in)

4——Lkey(in)

5——InPath (in)

0

1 “FFFFFFFF”——“FFFFFFF”

2100010

YWriteString

```
int YWriteString(char *InString,short Address,char * HKey,char *LKey,char *Path );
```

1InString(in)

2——address(in)

3——HKey(in)

4——Lkey(in)

5——InPath (in)

0

1 “FFFFFFFF”——“FFFFFFFF”

2100010

SetReadPassword

```
int SetReadPassword(char *W_Hkey,char *W_Lkey, char *new_Hkey,char  
*new_Lkey,char *Path );
```

1W_Hkey(in)

2——W_Lkey(in)

3——new_Hkey(in)

4——new_Lkey(in)

5——InPath (in)

0

“”“”

“ FFFFFFFF”——“FFFFFFF”

SetWritePassword

```
int SetWritePassword(char *W_Hkey,char *W_Lkey, char *new_Hkey,char  
*new_Lkey,char *Path );
```

1W_Hkey(in)

2——W_Lkey(in)

3——new_Hkey(in)

4——new_Lkey(in)

5——InPath (in)

0

“ FFFFFFFF”——“FFFFFFF”

TEA

1 .

2 .

- 1 [SetCal_2](#)
- 2 [Cal](#)
- 3 [EncString](#)
- 4 [DecString](#)
- 5 [EncBySoft](#)
- 6 [DecBySoft](#)

SetCal_2

```
int SetCal_2(char *Key,char *InPath);
```

1—Key(in)

2——InPath (in)

0

320-F1234567890ABCDEF1234567890ABCDEF,320

Cal

```
int Cal( BYTE *InBuf,BYTE *OutBuf,char *Path);
```

1InBuf(in)

2——OutBuf(out)

3——InPath (in)

0

1TEACalTEA

2Cal88

EncString

```
int EncString( char *InString,char *OutString,char *Path);
```

1InString(in)

2——OutString(out)

3——InPath (in)

0

1TEA,EcnStringTEA

288088

3CAL16() 16

DecString

void DecString(char *InString,char *OutString,char *Key);()

Tea **Dll**

1InString(in)EncSring

2——OutString(out)

3——Key(in)

DLLTEADLL

1Dll

22

3

416CAL

EncBySoft

```
void EncBySoft( BYTE * aData, BYTE * aKey );
```

DLL

1aData(inout)

2——aKey(in)

DLL

DecBySoft

```
void _stdcall DecBySoft( BYTE * aData, BYTE * aKey );
```

DLL

1aData(inout)

2——aKey(in)

DLL

- 1 [HexStringToByteArray](#)
- 2 [ByteArrayToHexString](#)
- 3 [GetLen](#)

HexStringToByteArray

VOID HexStringToByteArray(char * InString, BYTE *out_data);

16

1—InString(in)

2——out_data(out)

21

ByteArrayToHexString

```
void ByteArrayToHexString(BYTE *in_data,char * OutString,int len);
```

16

1—in_data(in)

2——out_data(out)16

3--len(in)

len2+1()

GetLen

```
int GetLen(char *InString);
```

```
( )
```

```
1—InString(in)
```

```
--( )
```

SM2

SM2SM2

1 .

2 .

3 .

4 [PIN](#)

SM233

1 [YT_GenKeyPair](#)

2 [Set_SM2_KeyPair](#)

3 [Get_SM2_PubKey](#)

SM233

YT_GenKeyPair

```
int YT_GenKeyPair(char* PriKey,char *PubKeyX,char *PubKeyY,char  
*InPath);
```

1PriKey(out)

2——PubKeyX(out)X

3——PubKeyY(out)Y

4——InPath (in)

0

Set_SM2_KeyPair

```
int Set_SM2_KeyPair(char *PriKey,char *PubKeyX,char *PubKeyY,char  
*sm2UserName,char *InPath )
```

1PriKey(in)

2——PubKeyX(in)X

3——PubKeyY(in)Y

4——sm2UserName(in)

5——InPath (in)

0

[sm2UserName](#)

Get_SM2_PubKey

```
int Get_SM2_PubKey(char *PubKeyX,char *PubKeyY,char  
*sm2UserName,char *InPath);
```

1——PubKeyX(out)X

2——PubKeyY(out)Y

3——sm2UserName(out)

4——InPath (in)

0X,Y

[sm2UserName](#)

1 [SM2_EncBuf](#)

2 [SM2_DecBuf](#)

3 [SM2_EncString](#)

4 [SM2_DecString](#)

SM233

SM2_EncBuf

```
int SM2_EncBuf(BYTE *InBuf,BYTE *OutBuf,int inlen,char *InPath);
```

SM2

1InBuf(in)

2——OutBuf(out)

3——inlen(in)

4——InPath (in)

0 OutBuf

1OutBuf

2 outlen=(inlen/128+1)*97+inlen

SM2_DecBuf

```
int SM2_DecBuf(BYTE *InBuf,BYTE *OutBuf,int inlen,char* pin,char  
*InPath)
```

SM2

1InBuf(in)

2——OutBuf(out)

3——inlen(in)

4——pin(in)PinPin

5——InPath (in)

0 OutBuf

1

2 outlen=inlen-(inlen/225+1)*97

SM2_EncString

```
int SM2_EncString(char *InString,char *OutString,char *InPath);
```

SM2

1InString(in)

2——OutString(out)16

3——InPath (in)

0 OutString

116

2OutString

3 outlen=((inlen/128+1)*97+inlen)*2+1, SM2_EncBuf16

SM2_DecString

```
int SM2_DecString(char *InString,char *OutString,char* pin,char *InPath)
```

SM2

1InString(in)

2——OutString(out)

3——pin(in)PinPin

5——InPath (in)

0 OutString

1

2 outlen=inlen-(inlen/225+1)*97 inlen

1 [YtSign](#)

2 [YtVerfiy](#)

3 [YtSign_2](#)

SM233

YtSign

```
int YtSign(char *msg,char *OutSign,char* pin,char *InPath );
```

1——msg(in)

2——OutSign(out)

3——pin(in)PinPin

4——InPath (in)

0 OutSign

SM2msg

1msgSM3HASHHS

2hash(msg)

3hashZ

4HSZhashE

5E

YtSign_2YtSignID

U

1 [FindU](#)

1iKey

2iKeyU

YtSign_2

```
int YtSign_2(char *msg,char *OutSign,char* pin,char *InPath );
```

ID

1——msg(in)

2——OutSign(out)

3——pin(in)PinPin

4——InPath (in)

0 OutSign

SM2IDmsg

1msgSM3HASHHS

2hash(msg)

3IDhashZ

4HSZhashE

5E

YtSign_2YtSignID

Pin

1 [YtSetPin](#)

SM233

IsUReadOnly

```
int _stdcall IsUReadOnly(BOOL *IsReadOnly, char *InPath);
```

iKeyU

1 IsReadOnly (out)

2 ———InPath (in) iKeyFindU_xx

0

[1iKey](#)

1 [ReSet](#)

ReSet

```
int ReSet(char *InPath);
```

1——InPath (in)

0

19

2000000000-0000000FFFFFFF-FFFFFFF

3

U

UiKey

1 [U](#)

2 [U](#)

U

1 [FindU](#)

1iKey

2iKeyU

FindU

```
int FindU( int start,char *OutPath);
```

```
    NiKeyiKey,U
```

```
1start(in) NiKey    start=0iKey    start=1iKey
```

```
2——OutPath(out)    N iKeyiKey
```

```
0    NiKey
```

```
1iKey
```

```
2iKeyU
```

```
3iKeyFindU(0OutPath)0FindU(1,OutPath)iKeyFindU(0OutPath)FindU(1,OutPath)0  
FindU(2,OutPath)
```


U

- 1 [SetHidOnly](#)
- 2 [SetUReadOnly](#)
- 3 [IsUReadOnly](#)

SetHidOnly

```
int _stdcall SetHidOnly( BOOL IsHidOnly,char *InPath);
```

iKeyU

1IsHidOnly(in)

2——InPath (in)FindPort_xxFindU_xx

0

UNumLock

28

SetUReadOnly

```
int _stdcall SetUReadOnly( char *InPath);
```

```
iKeyU
```

```
2——InPath (in)FindPort_xxFindU_xx
```

```
0
```

IsUReadOnly

```
int _stdcall IsUReadOnly(BOOL *IsReadOnly, char *InPath);
```

iKeyU

1IsReadOnly(out)

2——InPath (in)iKeyFindU_xx

0

[1iKey](#)

SYUNEW3A

VBVC++

VBVC++Syunew3A1.0 type library

VFP

vfp,“” --“” --“” Active“ S_simnew3 class”,“”“
” Syunew3A Syunew3A“”“ Active”“ S_sir
class” ,S_simnew3 class

DEPHI

delphi,“ component”--“import activex control” Syunew3A 1.0 type library,,,,,
Syunew3A activex, S_simnew3 class,

1 .

2 .

3 .

4 .

5 [SM2](#)

6 .

7 .

8 [U](#)

1 [FindPort](#)

FindPort

N

1start N

start=0

start=1

LastError0

LastError

1iKeyFindPort(0)FindPort(1)iKeyFindPort(0)FindU(1)
FindPort(2)

- 1 [GetVersion](#)
- 2 [GetID_1](#)
- 3 [GetID_2](#)
- 4 [GetVersionEx](#)
- 5 [GetChipID](#)

GetVersion

Integer GetVersion (InPath As String)

1——InPath (in)

LastError0 LastError

[189](#)

[233IDSM2](#)

GetVersionEx

Integer GetVersionEx (InPath As String)

1——InPath (in)

LastError0 LastError

[1102SMID](#)

[2 38172KUiKey](#)

GetID_1

Long GetID_1(InPath As String)

ID4 ID8

1——InPath (in)

LastError0 ID4 LastError

IDID

2IDID16

GetID_2

Long GetID_2(InPath As String)

ID4 ID8

1——InPath (in)

LastError0 ID4 LastError

IDID

2IDID16

GetChipID

String GetChipID(InPath As String)

ID,

1——InPath (in)

LastError0 IDLastError

133

2 ID33

3 IDID

YT699494

100010

1 [YReadEx.](#)

2 [YRead.](#)

3 [YwriteEx.](#)

4 [YWrite.](#)

5 [GetBuf.](#)

6 [SetBuf.](#)

7 [YReadString](#)

8 [YWriteStirng](#)

9 [SetReadPassword](#)

10 [SetWritePassword.](#)

11ABC1A,2B,3434

20:ABC0ABC31A,2B,3434

3

YReadEx

YReadEx (Address As Integer, m_len As Integer, Hkey As String, Lkey As String, InPath As String) As Integer

1—Address

2—m_len

3—HKey

4—Lkey

5—InPath (in)

0 **GetBuf**

1“ **FFFFFFFF**”—“**FFFFFFFF**”

2 **YReadEx,GetBuf**

YRead

YRead (Address As Integer Hkey As String, Lkey As String, InPath As String)As Integer

1—Address

2—HKey

3—Lkey

4—InPath (in)

LastError0 address LastError

1“ FFFFFFFF”——“FFFFFFF”

YWriteEx

YWriteEx(Address As Integer, m_len As Integer, Hkey As String, Lkey As String, InPath As String)

1——address

2——m_len

3——HKey

4——Lkey

5——InPath (in)

0

1“ FFFFFFFF”——“FFFFFFF”

2 YwriteEx SetBuf **YwriteEx**

3100010

YWrite

YWrite(InData As Integer, Address As Integer, Hkey As String, Lkey As String, InPath As String)

1——InData

2——address

3——HKey

4——Lkey

5——InPath (in)

0

1“ FFFFFFFF”——“FFFFFFF”

2100010

GetBuf

GetBuf(pos As Integer) As Integer

YReadEx,

1—

0

SetBuf

SetBuf(Data As Integer, pos As Integer) As Integer

YWriteEx

1——

2——

0

YWriteString

YWriteString(InString As integer, Address As IntegerHkey As String, Lkey As String, InPath As String) AS Integer

InString

2——address

3——HKey

4——Lkey

5——InPath (in)

LastError0 YreadSting

1“ FFFFFFFF”——“FFFFFFF”

2100010

SetReadPassword

SetReadPassword (W_Hkey As String, W_Lkey As String, new_Hkey As String, new_Lkey As String, InPath As String) As Integer

1 W_Hkey

2 — W_Lkey

3 — new_Hkey

4 — new_Lkey

5 — InPath (in)

0

SetWritePassword

SetWritePassword (W_Hkey As String, W_Lkey As String, new_Hkey As String, new_Lkey As String, InPath As String) As Integer

W_Hkey

2——W_Lkey

3——new_Hkey

4——new_Lkey

5——InPath (in)

0

“”“”

- 1 [SetCal_2](#)
- 2 [Cal](#)
- 3 [EncString](#)
- 4 [DecString](#)
- 5 [SetEncBuf](#)
- 6 [GetEncBuf](#)

SetCal_2

SetCal_2(Key As String, InPath As String) As Integer

1—Key(in)

2——InPath (in)

0

320-F1234567890ABCDEF1234567890ABCDEF,320

Cal

Cal(InPath As String) As Integer

1——InPath (in)

0

1CalSetEncBuf,

2CalGetEncBuf

3TEACalTEA

4Cal88

EncString

EncString(InString As String, InPath As String) As String

1——InString

2——InPath (in)

LastError0 LastError

1TEA,EcnStringTEA

288088

3CAL16() 16

DecString

DecString(InString As String, Key As String) As String()

Tea **Dll**

1——InStringEncSring

2——Key (in)

LastError0 LastError

DLLTEADLL

1Dll

22

3

416CAL

SetEncBuf

SetEncBuf(Data As Integer, pos As Integer) As Integer

Cal

1——

2——

0

8pos7pos0

GetEncBuf

GetEncBuf(pos As Integer) As Integer

Cal,

1—

0

8pos7pos0

SM2

SM2SM2

1 .

2 .

3 .

4 [PIN](#)

SM233

- 1 [StarGenKeyPair](#)
- 2 [GenPriKey](#)
- 3 [GenPubKeyX](#)
- 4 [GenPubKeyY](#)
- 5 [Set_SM2_KeyPair](#)
- 6 [GetPubKeyX](#)
- 7 [GetPubKeyY](#)
- 8 [GetSm2UserName](#)

SM233

StarGenKeyPair

StarGenKeyPair(InPath As String) As Integer

,

1——InPath (in)

0 GenPubKeyYGenPubKeyXGenPubKeyYXY

1GenPubKeyYGenPubKeyXGenPubKeyYXY

Set_SM2_KeyPair

Set_SM2_KeyPair(PriKey As String, PubKeyX As String, PubKeyY As String, sm2UserName As String, InPath As String) As Integer

1PriKey(string)

2——PubKeyX(string)X

3——PubKeyY(string)Y

4——sm2UserName(string)

5——InPath (string)

0LastError0

[sm2UserName](#)

GetPubKeyX

GetPubKeyX(InPath As String) As String

X

1——InPath (string)

LastError0 X LastError0

GetPubKeyY

GetPubKeyY(InPath As String) As String

Y

1——InPath (string)

LastError0 Y LastError0

GetSm2UserName

GetSm2UserName(InPath As String) As String

1——InPath (string)

LastError0 LastError0

[sm2UserName](#)

1 [SM2_EncString](#)

2 [SM2_DecString](#)

SM233

SM2_EncString

SM2_EncString(InString As String, InPath As String) As String

SM2

1 InString(string)

2 — InPath (string)

LastError0 LastError0

116

SM2_DecString

SM2_DecString(InString As String,Pin As String,InPath As String) As S

SM2

1InString(string)

2——pin(string)PinPin

3——InPath (string)

LastError0 LastError0

1 [YtSign](#)

2 [YtVerfiy](#)

3 [YtSign_2](#)

SM233

YtSign

YtSign(msg As String,Pin As String,InPath As String) As String

1——msg(string)

2——Pin(string)PinPin

3——InPath (string)

LastError0 LastError0

[SM2msg](#)

[1msgSM3HASHHS](#)

[2hash\(msg\)](#)

[3hashZ](#)

[4HSZhashE](#)

[5E](#)

[YtSign_2YtSignID](#)

YtVerfiy

YtVerfiy(id As String,msg As String,PubKeyX As String,PubKeyY As String,VerfiySign As String,InPath As String) As Boolean

1id(string)

2——msg(string)

3——PubKeyX(string)X

4——PubKeyY(string)Y

5——VerfiySign(string)

6——InPath (string)

LastError0

YtSign_2

YtSign_2(msg As String,Pin As String,InPath As String) As String

ID

1——msg(string)

2——Pin(string)PinPin

3——InPath (string)

LastError0 LastError0

[SM2IDmsg](#)

[1msgSM3HASHHS](#)

[2hash\(msg\)](#)

[3IDhashZ](#)

[4HSZhashE](#)

[5E](#)

[YtSign_2YtSignID](#)

Pin

1 [YtSetPin](#)

SM233

YtSetPin

YtSetPin(OldPin As String,NewPin As String,InPath As String) As Int

PIN

1OldPin(string)PIN

2——NewPin(string)PINPIN16

3——InPath (string)

0LastError0

1PIN

2PIN123

3PIN16

- 1 [LastError](#)
- 2 [GenPriKey](#)
- 3 [GenPubKeyX](#)
- 4 [GenPubKeyY](#)

LastError

LastError 0 LastError

-21

-22

-23

-24 PIN

-82

-81

-47

-88

-92

-93

-94

-83

-46

-198 GetEncBufGetBuf

-199 SetEncBufSetBuf

-3000

-51 USB(iKey

GenPriKey

GenPriKey

StarGenKeyPair

GenPubKeyX

GenPubKeyX x

StarGenKeyPair

GenPubKeyY

GenPubKeyY Y

StarGenKeyPair

1 [ReSet](#)

ReSet

Integer ReSet(InPath As String)

1——InPath (in)

LastError0 LastError

18

19

2000000000-0000000FFFFFFFF-FFFFFFFF

3

U

UiKey

1 [U](#)

2 [U](#)

U

1 [FindU](#)

1iKey

2iKeyU

FindU

String FindU(start AS Integer,)

NiKey iKey,U

1start NiKey start=0 iKey start=1 iKey

LastError0 iKey LastError

1iKey

2iKeyU

3iKeyFindU(0)FindU(1)iKeyFindU(0)FindU(1)FindU(2)

U

- 1 [SetHidOnly](#)
- 2 [SetUReadOnly](#)
- 3 [IsUReadOnly](#)

SetHidOnly

SetHidOnly(IsHidOnly As Boolean, InPath As String) As Integer

iKeyU

1—IsHidOnly(in)

2 ——— InPath (in) FindPort_xxFindU_xx
0

UNumLock

SetUReadOnly

SetUReadOnly(InPath As String) As Integer

iKeyU

1 — InPath (in) FindPort_XXFindU_XX

0

•

-82

-81

-47

-88

-92

-93

-94

-83

-46

-51 USB(iKey

YreadString

YreadString (Address As Integer, Len As Integer, Hkey As String, Lkey As String, InPath As String) As String

1——Address

2——Len

3——HKey

4——Lkey

5——InPath (in)

LastError0 address LastError

“ FFFFFFFF”——“FFFFFFF”