

# **ZK Sensor Image development Manual**

ZKsoftware.Inc

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# 1. About on-line development

This manual is specialized to that provide images interfaces for user whose own fingerprint recognition algorithm, the completion of the process for capture image from the fingerprint sensor, if users need the complete identification algorithm, please use ZKFinger Software Development Kits. The used DLL name is zkDevCtl.dll, with the drive is installed by default to the system directory, the main function :

- 1, Opened for fingerprint equipment.
- 2, Closed for fingerprint equipment.
- 3, Beginning capture fingerprint image.
- 4, stopping capture fingerprint image.
- 5, Get the related information of equipment.
- 6, Setting password for Sensor communications.
- 7, modify equipment communications.

## 2. Folder Contents

\ZkDevCtl.dll

ZkDevCtl.lib

Sensor.h

## 3. Function

### 3.1 FT\_OpenReader

**[Agreement]**

HANDLE FT\_OpenReader (int DeviceId)

**[Function]**

Create and return handle the fingerprint sensor equipment, through handle to achieve any operation for the equipment application .

**[Parameters Used]**

DeviceId

Equipment number, starting from 0.

**[Return]**

If successful the function return value greater than zero, or failed return value less than zero.

**[Example]**

HANDLE handle;

Handle = FT\_OpenReader (0);

If (handle <= 0)

(

Printf ( "open reader failed");

Return;

)

## 3. 2 FT\_CloseReader

**[Agreement]**

Int FT\_CloseReader (HANDLE handle)

**[Function]**

Close equipment handle and release associated resources.

**[Parameters Used]**

Handle

FT\_OpenReader function created by the handle.

**[Return]**

The return value of zero on success, or else return values <0.

**[Example]**

Int status = FT\_CloseReader (handle);

If (status == 0)

(

Printf ( "closer reader Success");

)

## 3. 3 FT\_BeginCapture

**[Agreement]**

Int FT\_BeginCapture (HANDLE handle, void \* pParam, TProceImage proc)

### **[Function]**

Start to capture fingerprint image, when capture the fingerprint image , call the functions which is designated by the parameters proc for handling processing.

### **[Parameters Used]**

Handle

Open the handle created by the equipment.

PParam

Transmission parameters, usually use NULL.

Proc

The callback function that is used to handle after capturing fingerprints.

### **[Return]**

Success Returns > 0, or else return <= 0.

When handle = 0:00, return values = - 2

After modified the initial password of the equipment, open equipment, communications password has not been set or is wrong ,than return values = - 1;

### **[Example]**

```
Int begin = FT_BeginCapture (handle, NULL, Proc);
```

The callback function examples:

```
Int __cdecl Proc (void * p, int w, int h, int dp, byte * buff)
```

```
(
```

```
Unsigned char * mybuff = buff;
```

```
/// Following users of image processing can be
```

```
Return 0;
```

```
)
```

## **3. 4 FT\_StopCapture**

**[Agreement]**

Int FT\_StopCapture (HANDLE handle)

**[Function]**

Stop collecting fingerprint image.

**[Parameters Used]**

Handle

Open the equipment generated equipment handle.

**[Return]**

Success Returns > 0, or else return <= 0.

**[Example]**

```
Int ret = FT_StopCapture (handle);
```

```
If (ret > 0)
```

```
Printf ( "stop capture success");
```

### **3. 5 FT\_GetReaderInfo**

**[Agreement]**

Int FT\_GetReaderInfo (HANDLE handle, int itemindex, char \* Buffer)

**[Function]**

Obtain the relevant information of the fingerprint equipment, including width, height, gray, DPI, equipment names, and other information.

**[Parameters Used]**

Handle

Open the equipment to get the handle.

Itemindex

No. function depend on the following information received equipment

INFO\_IMAGE\_WIDTH 201

INFO\_IMAGE\_HEIGHT 202

INFO\_IMAGE\_GRAY 203

INFO\_IMAGE\_DPI 204

INFO\_FP\_DEVICENAME 206

INFO\_FP\_SN 207

INFO\_FP\_DEVICENUM 208

INFO\_FP\_PARAMSOK 209.

Buffer

When itemindex = INFO\_FP\_DEVICENAME, INFO\_FP\_SN, necessary to pre-allocate Buffer to 255 Byte

in other cases, the need to pre-assign 10 Byte to Buffer .

**[Return]**

Success Returns > 0, or else return <= 0

**[Example]**

Char temp [10];

Int ret = FT\_GetReaderInfo (handle, INFO\_IMAGE\_WIDTH, temp);

If (ret > 0)

Printf ( "Width:% s", temp);

### **3. 6 FT\_SetCommPassword**

**[Agreement]**

Int FT\_SetCommPassword (HANDLE handle, char \* Password)

**[Function]**

Setting the codes for Sensor communications, the initial password is 000000, when the password is the initial value , it is not necessary to execute this function.

**[Parameters Used]**

Handle

Open the equipment to get the handle.

Password

The pointer of the password string.

**[Return]**

Success Returns > 0, or else return <= 0.

**[Example]**

FT\_SetCommPassword (handle, "000000");

Note

Password length of the largest is six Byte.

If the password set up is wrong, will be unable to capture the images

### **3. 7 FT\_ModifyPassword**

**[Agreement]**

Int FT\_ModifyPassword (HANDLE handle, char \* oldPassword, char \* newPassword)

**[Function]**

Laws communications equipment password.

**[Parameters Used]**

Handle

When opened equipment function ,create the handle.

OldPassword

the pointer that point to the old password character

NewPassword

the pointer that point to the new password character.

**[Return]**

Success Returns > 0, or else return <0.

**[Example]**

```
Int ret = FT_ModifyPassword (handle, m_old.GetBuffer (0), m_set.GetBuffer (0));
```

```
If (modi > 0)
```

```
(
```

```
Printf ( "Modify password success." );
```

```
)
```

**[Note]**

Password length of the largest is six Byte.