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|  | SPECIFICATION                        | Model No. | CRT-286/288/310/386 |
|                                                                                   |                                      | Date      | 2005/10/1           |
|                                                                                   | CRT Card Reader DLL<br>Specification | Ver.      | 3.0                 |
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# CRT Card Reader DLL Specification

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/////////////////CRT Card Reader DLL Instruction ///////////////////

Document Name: CRT\_R1.dll

Version: V20060207

Function: Developed for CRT Reader Series products, can read/write RF card, several kinds of contact IC cards and CPU card, and read magnetic card.

Card Standard:

- Philips M1 RF Card
- SLE4428, SLE4442
- 24C01, 24C02, 24C04, 24C08, 24C16, 24C32, 24C64
- AT88SC102, AT88SC1604, AT88SC041
- Contact CPU Card (T=0/T=1)
- SAM/SIM Card (T=0/T=1)
- Magnetic Card

Note: The document is to specify CRT card reader communication and card transportation function, for card operation function, please refer to **CRT Card DLL Specification**.

|                                                                                   |                                      |           |                     |
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## ////////// Basic Com Operation Function //////////

### 1. HANDLE APIENTRY CommOpen(char \*Port);

//function:

//Open COM

//eg.: CommOpen("Com1");

//parameter:

//Port: Character string of COM No.

//return:

// handle of COM

//remark: Please use this function and get the handle of appointed COM before using other functions.

// Can open several COMs and the handle of COM at same time, but can not open one COM Port several times.

// Use CommClose() to close the COM after using it.

### 2. int APIENTRY CommClose(HANDLE ComHandle);

//function:

//close the appointed COM

//parameter:

//...

//return:

// Success: 0.

//remark: Commclose() function used together with CommOpen() function. Please use this function to close the COM after using it.

### 3. int APIENTRY CommSetting(HANDLE ComHandle,char \*ComSeting)

//Function:

//Host Comm port Baud rate seting

//Parameter:

// ComSeting: Info character string setting. Format "9600,n,8,1"

//Return:

// Success: 0.

// Failure: not 0.

|                                                                                   |                                      |           |                     |
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## //////////////////////////////////// Card Reader General Function //////////////////////////////////////

To obtain the card reader version

**1. int APIENTRY GetSysVerion(HANDLE ComHandle, char \*strVerion);**

//function:

//attain the version information

//parameter:

// strVerion: the string of version information

//return:

// Success: 0.

// Failure: not 0.

## //////////////////////////////////// //////////////////////////////////////

**2. int APIENTRY CRT\_R\_SetComm(HANDLE ComHandle, unsigned int \_data);**

//function:

//baud rate setting

//parameter:

// \_data: baud rate=1200, 2400, 4800, 9600, 19200, 38400.

//return:

// Success: 0.

//Failure: not 0.

**Note:** When setting success, comm. Port need to be closed, then open the comm. Port with the correspond baud rate, Otherwise, reader can not communicate with the host.

|                                                                                   |                                      |           |                     |
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## //////////////////// **CRT-286/288 Function** //////////////////////

//Reader reset

**1. int APIENTRY CRT286\_Reset(HANDLE ComHandle, BYTE \_Eject);**

//parameter:

// \_Eject: card ejection option. 0=do not eject card; 1= eject card

//return value:

// Success: 0.

// Failure: not 0.

////////////////////

//Get status from card reader

**2. int APIENTRY CRT286\_GetStatus(HANDLE ComHandle, BYTE \*\_bATR);**

//parameter:

// \_bATR

character pointer, point to status strings attained from card reader.

0= No card in the reader; 1= With card in the reader

//return value:

// if function used successfully, return value is 0 and content of \_bATR is status strings attained from card reader

// If failure: return value is not 0.

////////////////////

//Eject card from card reader.

**3. int APIENTRY CRT286\_Eject(HANDLE ComHandle);**

//parameter:

// none

//return value:

// Success: 0.

// Failure: not 0.

|                                                                                   |                                      |           |                     |
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## //////////////////////////////////// **CRT-386 Function** //////////////////////////////////////

//Reader reset

**1. int APIENTRY CRT286\_Reset(HANDLE ComHandle, BYTE \_Eject);**

//parameter:

// \_Eject: card ejection option. 0=do not eject card; 1= eject card

//return value:

// Success: 0.

// Failure: not 0.

////////////////////////////////////

//Get status from card reader

**2. int APIENTRY CRT386\_GetStatus(HANDLE ComHandle, BYTE \*\_bATR, BYTE8\_Insetting);**

//parameter:

// \_bATR

character pointer, point to status strings attained from card reader.

0= No card in the reader; 1= With card in the reader, 2= with card in the front of reader

// \_Insetting: 1= Permit card in, 0= Prohibit card in

//return value:

// if function used successfully, return value is 0 and content of \_bATR is status strings attained from card reader

// If failure: return value is not 0.

////////////////////////////////////

//Card in control

**3. int APIENTRY CRT386\_CardSetting(HANDLE ComHandle, BYTE \_CardIn);**

//parameter:

// \_CardIn: card in permit setting. 0=permit; 1=prohibit.

//return value:

// Success: 0.

// Failure: not 0.

////////////////////////////////////

//Eject card from card reader.

**4. int APIENTRY CRT386\_Eject(HANDLE ComHandle);**

//parameter:

// none

//return value:

// Success: 0.

// Failure: not 0.

|                                                                                   |                                                           |           |                     |
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## //////////////////// CRT-310 Function //////////////////////

//Reader reset

**1. int APIENTRY CRT310\_Reset(HANDLE ComHandle, BYTE \_Eject );**

//parameter:

// \_Eject: Eject selection. 0x30=not eject 0x31=eject to the front side 0x32=eject to the rear side.

//return value:

// success: 0

// failure: not 0

////////////////////  
// Card in control

**2. int APIENTRY CRT310\_CardSetting(HANDLE ComHandle, BYTE \_CardIn, BYTE \_EnableBackIn)**

//parameter:

// \_CardIn: card in from front side setting

0x31=prohibit card in;

0x32=magnetic signal mode (magnetic signal +switch) card in enable, just permit shutter open, magnetic card in from front side;

0x33= enable card in switch signal mode, by switch signal, permit magnetic card, IC card, M1 RF card, dual interface card in.

0x34=enable card in by magnetic signal, for thin magnetic paper card.

// \_EnableBackIn: permit card in from rear side. 0x30=permit; 0x31=prohibit

//Return:

// success: 0

// failure: not 0

////////////////////  
// Card stop position setting

**3. int APIENTRY CRT310\_CardPosition(HANDLE ComHandle, BYTE \_Position)**

//parameter:

// \_Position: =0x30 card stop on front side, not hold card

=0x31 card stop on front side, hold card

=0x32 card stop inside the reader, but IC card contact is not connected with IC card, do M1 RF card R/W

=0x33 card stop inside the reader, but IC card contact is connected with IC card, do IC card R/W

=0x34 card stop on rear side, hold card

=0x35 card stop on rear side, not hold card



|                                                                                   |                                      |           |                     |
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KSW=0X31 card in the shutter is detected

//return value:

// success: 0

// failure: not 0

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

// Card move setting

## 6. int APIENTRY CRT310\_MovePosition(HANDLE ComHandle, BYTE \_Position)

//parameter:

|                |       |                                                                                                                               |
|----------------|-------|-------------------------------------------------------------------------------------------------------------------------------|
| // _ Position: | =0x2E | card moves inside again, and do M1 RF card R/W                                                                                |
|                | =0x2F | card moves inside again, IC card contract connects with IC card, and do IC card R/W                                           |
|                | =0x30 | card moves to front side, not hold card                                                                                       |
|                | =0x31 | card moves to front side, hold card                                                                                           |
|                | =0x32 | card moves to rear side, hold card                                                                                            |
|                | =0x33 | card moves to rear side, not hold card                                                                                        |
|                | =0x34 | eject abnormal card out of the reader from rear side, for shorter card eject, normal card is needed to do assistant operation |

//return value:

// success: 0

// failure: not 0

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

// LED setting

## 7. int APIENTRY CRT310\_LEDSet(HANDLE ComHandle, BYTE \_ONOFF)

//parameter:

|             |       |         |
|-------------|-------|---------|
| // _ ONOFF: | =0x30 | LED on  |
|             | =0x31 | LED off |

//return value:

// success:0

// failure: not 0