

125/134KHz Reader/Writer

D-Think 300 series

User Manual

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 6.5.1 READ ANIMAL TAG
 6.5.2 READ EM4001 CARD



1. GENERAL INFORMATION

- ♦ RS232 or USB Interface
- ♦ DC4.5V ~ DC5.5V VDD Operating
- ♦ Maximum 180MA Working Current
- ◇ Size : 110 x 81 x 26 mm
- \diamond Operating frequency : 100-150kHz
- ◇ Protocols : ISO11784/85,EM4001

TK4100, GK4100, EM4100 and compatible chip

TEMIC 5557, ATA5567, ATA5577

Hitag-S32, Hitag-S256, Hitag-S2048

M4469,EM4205,EM4305

- ♦ Windows 32 Operating Systems Compatibility
- \diamond Operating Temperature Range: -20°C ~ +50°C
- \diamond Storage Temperature Range: -25°C ~ +60°C
- ♦ Weight: 100g

2. TYPES AND EXPLANATION



D-Think300 series	D-Think300 series models support various protocols and chips classified as follows.					
	D-Think	D-Think	D-Think	D-Think	D-Think	
	302U	302T	302H	303U	303T	
EM4001	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
ISO 11784/85	\checkmark	~	✓	✓	~	
EM4305 and compatible chip		~		~	~	
ATA5577 and compatible chip	\checkmark			✓	~	
Hitag-S			\checkmark		~	

Table 2-1

3. CONNECTING TO PC

3.1 RS232

The USB port power to Reader



Figure 3-1

3.2 USB





Figure 3-2

D-Think 300-USB Reader is USB bridge to COM way. Connect D-Think 300 to the USB port of PC, after installing the driver will come out a virtual COM, the operations hereafter are as same as D-Think 300-RS232.

You can find the virtual COM number on the "Device Manager" as follows:

文件(27) 操作(24) 查看(27) 帮助(24)	
E KHAN	^
日 IDE KIK/KIKII 经制器	
E	
🕀 👼 Secure Digital host controllers	
• SM Driver	
🗉 🛴 调制解调器	
□ 🖉 端口 (COM 和 LPT)	
□	
■ 🧕 监视器	
□ >>> 確盘	
	_
	~

Figure 3-3

4. SDK



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Figure 4-1

퉬 UsbDriver

- D-Think 300 RFReader DEMO.exe
- D-Think-300Communication Protocol.chm

🚳 MasterCom.dll

🚳 MasterRD.dll

F	Figure 4-2
D-Think 300 RFreader DEMO.rar,	including the following content:
*\ UsuDriver	USB interface driver
*\D-Think 300 FReader DEMO.e	xe DEMO software
*\MasterRD.dll	Reader interface library with application
*\ MasterCOM.dll	Connect and transfer data with COM device.,
	Is MasterRD.dll call.

*\ D-Think-300Communication Protocol.chm DLL explanations at chm format

5. DEMO

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Double-click the D-Think 300 RFReader DEMO.exe enter DEMO.

In DEMO interface, the CPC library functions that are called buttons will appear in the bottom of the screen, and in the top right corner of the screen prompts Results

5.1 Port Settings

First select the correct serial number ,click [Connect] button to connect the Reader to PC.

Click [Read] button to get Product Information and see specific model readers and the supporting card.

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Trip Type Image: Second Sec	IS UP A PROVIDENCE AND A PROVIDA PROVIDENCE AND A PROVIDA		-
Port Setting Port Setting Port Setting Port Setting Port Setting Port Setting Port Setting Port Setting Port Setting Null Ver (2.00 Get Connect Fyre V 15557 V ATA5577 V ISO11784/85 V EM408 V EM4205 V EM4205 V EM4001 V HITAG-S226 V HITAG-S2068	Baud: 19200 ActionType: Port Setting	Tip:: Connect success	
		Port Setting Jacobian Setting Port COMBS P Connect Nodel P-Think-3003T Y DLL Ver [2:00 Get Type V 15557 V AIA5557 V AIA5577 V IS011784/85 V EM469 V EM4205 V EM4305 V EM4001 V HITAC-532 V HITAC-5256 V HITAC-52048	
iGetModel success! COMDLLVersion success!			

Figure 5-1

5.2 EM4001(EMID)

Select "Tools" \rightarrow "Write Em4001 Format" into the interface. Click [Read] key ,

you can get the card ID number. In the "Select" option box, select the correct chip type, in the "Input ID" box, enter the appropriate ID number, click [Write] button to write the new ID number.



Device 100 Objector 100 McG Note: 100 McG Next: 100 McG Note: 100 McG Next: 100 McG Note: 100 McG State: 100 McG Note: 100 McG <	Spectra 300 Docestre 100 Multi Image: Spectra 300 Docestre 100 Multi Nett: Extra 100 Multi 100 M			
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			Solen (\$1003 • F hermenf Change 20 Solen (\$1003 • F hermenf Change 20 Solen 20 • Sole Sole Advanced Optime Solen 20 • Sole F hermen 20 Sole Book F hermen 20	
		858		27

Figure 5-2

5.3 ISO11784/85

Select "Tools" \rightarrow "Write AnimalID Format" into the interface. Click [Read] key ,

you can get the animal tag number. In the "Select" option box, select the correct chip type, in the "National Code", "Country Code" and "User Code" box enter the appropriate number, click [Write] button to write the new animal number.

Figure 5-3

5.4 EM4205/EM4305

Select "Choose Card(s) " \rightarrow "EM4205/4305" into the interface.



Click [AllSelect] key can select all blocks.

Click [AllCancel] key, you can deselect all block numbers once.

Click [Read] key, select the block number can be read.

Click [Write] button, you can choose to write data block number.

Click [Clear] key, you can clear the data displayed in the interface plane.

10 Caves Curl (2) Tels (1) 2+(2) Maja (2) 11 COM3 Baad: 15280 ActionType: FM4305 Tips:
tr COM3 Baad: 19200 ActionType: FM4305 Tips:
Word0 Word8 AllSelect UD Word9 AllCancel Word3 Word8 Read Compt Word9 Word9 Word3 Word8 Read Compt Word9 Write Word5 Word9 Write Word6 F801 Clear
The parameter Product of Reed parameter Productor Produ

Figure 5-4

Note: The circle is that defined EM4205/EM4305 key and means of communication, please contact your card provider specific configuration.

5.5 T5557/ATA55X7

Select "Choose Card(s) " \rightarrow "T5557/ATA55X7" into the interface.

Data output area: Shows the read block data.

Data input area: used to input the data to be written.

Function keys: allows configuration block write, read and write ordinary blocks, direct_access reading, page selection, card reset functions.

Specific methods of operation, please refer to the relevant data sheet.

D-Think [®]	I

D-Think 300 RFReader DEMO V1.01	
file() Choose Card() Tools() Set() Help()	
Input	blocki bl
Output- data	Opencode 10 v Lock 0 v Block 1 v Parrword Configura
2/语	大耳 数子

Figure 5-5

5.6 Hitig-S

Select "Choose Card(s) " → "HTAG-S32/256/2048" into the interface. Click [Request] key, you can get PAGE0 (UID) Click [Select] key, you can get PAGE1 (configuration block) Click [Clear] key to clear the display interface data Click [Read] key, you can read the selected block Click [Write] button, you can write data on the selected block Selected "Read ALL?" Checkbox can be continuously read data.

Record and	PAGEO	PAGE16	PAGE32	PAGE48	
C 532 C 5256 C 52048	PAGE1	PAGE17	PAGE33	PAGE49	
	PAGE2	PAGE18	PAGE34	PAGE50	
Request Select	PAGE3	PAGE19	PAGE35	PAGE51	
En June Church	PAGE4	PAGE20	PAGE36	PAGE52	
Read ALLY Clear	PAGE5	PAGE21	PAGE37	PAGE53	
Vddress 0	PAGE6	PAGE22	PAGE38	PAGE54	
Read Write	PAGET	PAGE23	PAGE39	PAGE55	
	PAGE8	PAGE24	PAGE40	PAGE56	
	PAGE9	PAGE25	PAGE41	PAGE57	
	PAGE10	PAGE26	PAGE42	PAGE58	
	PAGE11	PAGE27	PAGE43	PAGE59	
	PAGE12	PAGE28	PAGE44	PAGE60	
	PAGE13	PAGE29	PAGE45	PAGE61	
	PAGE14	PAGE30	PAGE46	PAGE62	
	PAGE15	PAGE31	PAGE47	PAGE63	
	PAGE13 PAGE14 PAGE16	PAGE29 PAGE30 PAGE31	PAGE45 PAGE46 PAGE47 PAGE47	PAGE61 PAGE62 PAGE63 PAGE63	

Figure 5-6

6. DLL INFORMATION

All types of readers have System function

Specific models reader function on selective support specific functions, refer to Table 2.1.

6.1 SYSTEM FUNCTION

6.1.1 Open serial port

Function: Open serial port Prototype: BOOL (WINAPI* OpenComPort)(int nCom,

int baud)

Parameter: nCom: [IN] Serial No. baud: None, fixed at 19200 Return: return 0 if successful

6.1.2 Close perial port

Function: Close perial port Prototype: BOOL (WINAPI* CloseComPort)() Return: return 0 if successful 12

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6.1.3 Set Beep

Function: Beep Prototype: BOOL (WINAPI* SysBeep)(WORD icdev) Parameter: icdev: [IN] Device ID, the default is 0x0000 Return: return 0 if successful

6.1.4 Initial Serial Port

Function: Initial serial port Prototype: BOOL (WINAPI* SysSetCom)(WORD icdev) Parameter: icdev: [IN] Device ID, the default is 0x0000 Return: return 0 if successful

6.1.5 Get reader model

Function: Get reader model Prototype: BOOL (WINAPI* SysGetModel)(WORD icdev, BYTE *pVersion, BYTE * length) Parameter: icdev: [IN] Device ID, the default is 0x0000 pVersion: [OUT] Return data length: [OUT] The returned data length Return: return 0 if successful

6.1.6 Set antenna state

Function: Set antenna state Prototype: BOOL (WINAPI* SysAntennaSta)(WORD icdev, BYTE state) Parameter: icdev: [IN] Device ID, the default is 0x0000 State: [IN] 1:Open the antenna, 0: Close antenna Return: return 0 if successful

6.2 T55x7

6.2.1 Read T55x7 Function: Read T55x7 Prototype: BOOL (WINAPI* T55x7_Read)(WORD icdev, BYTE *length, BYTE *Data) Parameter: icdev: [IN] Device ID, the default is 0x0000 length: [OUT] The returned data length Data: [OUT] Return data



Return: return 0 if successful

6.2.2 T55x7 Standard write

Function: Standard write T55x7

Prototype: BOOL (WINAPI* Standard_Write)(WORD icdev,

BYTE opcode , BYTE lock , BYTE *Data,

		BYTE block)
Parameter: icdev:	[IN]	Device ID, the default is 0x0000
Opcode:	[IN]	Block access opcode, $10(B) = page 0$, $11(B) = page 1$
lock:	[IN]	Lock bit, when set 1, the contents of the block can not be
		modified
Data:	[IN]	4 byte write data
block:	[IN]	Block address
		-

Return: return 0 if successful

6.2.3 T55x7 Protected write

Function: Protected write T55x7 Prototype: BOOL (WINAPI* Protected_Write)(WORD icdev,

> BYTE opcode, unsigned char *PassWord, BYTE lock, BYTE *Data, BYTE block)

Parameter: icdev:	[IN] Device ID, the default is 0x0000		
Opcode:	[IN] Block access opcode,10(B) = page 0, 11(B) = page 1		
PassWord :	[IN] 4 bytes of the password and stored in the block 7 to		
	match the password in		
lock:	[IN] Lock bit, when set 1, the contents of the block can not be		
	modified		
Data:	[IN] 4 byte write data		
block:	[IN] Block address		
Return: return () if suc	cessful		

Return: return 0 if successful

6.2.4 Reset T55x7

Function: Reset T55x7 Prototype: BOOL (WINAPI* Reset_Command)(WORD icdev) Parameter: icdev: [IN] Device ID, the default is 0x0000 Return: return 0 if successful



6.2.5 Wake up T55x7

Function: Wake up T55x7 Prototype: BOOL (WINAPI* Wake_Up)(WORD icdev, BYTE *PassWord) Parameter: icdev: [IN] Device ID, the default is 0x0000 PassWord: [IN] 4 bytes of the password Return: return 0 if successful

6.2.6 T55x7 Direct access

Function: Direct access Prototype: BOOL (WINAPI* Direct_Access)(WORD icdev, BYTE opcode, BYTE block) Parameter: icdev: [IN] Device ID, the default is 0x0000 Opcode: [IN] Block access opcode,10(B) = page 0, 11(B) = page 1 block: [IN] Block address Return: return 0 if successful

6.2.7 T55x7 Direct access with password

Function: Direct access with password Prototype: BOOL (WINAPI* Direct_Access_PWD)(WORD icdev, BYTE opcode,

BYTE *PassWord,

BYTE block)

		2112010011)
Parameter: icdev:	[IN]	Device ID, the default is 0x0000
Opcode:	[IN]	Block access opcode, $10(B) = page 0$, $11(B) = page 1$
PassWord:	[IN]	4 bytes of the password
block:	[IN]	Block address
Return: return 0 if su	ccessful	1

6.2.8 T55x7 Select page

Function: Select page Prototype: BOOL (WINAPI* Page_Regular_Read)(WORD icdev, BYTE opcode) Parameter: icdev: [IN] Device ID, the default is 0x0000 Opcode: [IN] Block access opcode,10(B) = page 0, 11(B) = page 1 Return: return 0 if successful

6.2.9 Format T55x7 to ISO11784/85 form

Function: Format T55x7 to ISO11784/85 form



Prototype: BOOL (W	'INAPI*	ATA5567_WriteAnimalID)(WORD icdev,
		BYTE *AnimalID)
Parameter: icdev:	[IN]	Device ID, the default is 0x0000
AnimalID:	[IN]	14 bytes animal ID
		Animal ID format: National ID(5 Bytes) +
		Country ID(2 Bytes) +
		DataFlag(1 Byte) +
		AnimalFlag(1 Byte) +
		CRC(2 Bytes) +
		Trailer(3 Bytes)
		· · · ·

Return: return 0 if successful

6.2.10 Format T55x7 to EM4001 card

Function: Format T55x7 to EM4001 card Prototype: BOOL (WINAPI* ATA5567_WriteEM4001)(WORD icdev, BYTE *ID) Parameter: icdev: [IN] Device ID, the default is 0x0000 ID: [IN] 5 byte ID number Return: return 0 if successful

6.3 EM4305

6.3.1 Write EM4305 Function: Write EM4305 Prototype: BOOL (WINAPI* EM4305Write)(WORD icdev, BYTE addr, BYTE addr, BYTE *wdata) Parameter: icdev: [IN] Device ID, the default is 0x0000 addr: [IN] Block address wdata: [IN] 4 byte write data Return: return 0 if successful

6.3.2 Read EM4305

Function: Read EM4305 Prototype: BOOL (WINAPI* EM4305Read)(WORD icdev, BYTE addr, BYTE *rdata)

Parameter: icdev: [IN] Device ID, the default is 0x0000 addr: [IN] Block address rdata: [OUT] 4 byte return data



Return: return 0 if successful

6.3.3 login EM4305

Function: login EM4305 Prototype: BOOL (WINAPI* EM4305Login)(WORD icdev, BYTE *pw) Parameter: icdev: [IN] Device ID, the default is 0x0000 pw: [IN] 4 bytes of the password Return: return 0 if successful

6.3.4 Disable EM4305

Function: Disable EM4305 Prototype: BOOL (WINAPI* EM4305Disable)(WORD icdev) Parameter: icdev: [IN] Device ID, the default is 0x0000 Return: return 0 if successful

6.3.5 Protect EEPROM words 0 to 13 from being modified using Write Word command

Function:Protect EEPROM Prototype: BOOL (WINAPI* EM4305Protect)(WORD icdev, BYTE *proWord) Parameter: icdev: [IN] Device ID, the default is 0x0000 proWord: [IN] 4 bytes protect word Return: return 0 if successful

6.3.6 Format EM4305 to ISO11784/85 form

Function: Format EM4305 to ISO11784/85 form Prototype: BOOL (WINAPI* WriteAnimalID)(WORD icdev, unsigned char *id) Parameter: icdev: [IN] Device ID, the default is 0x0000 id: [IN] 14 bytes animal ID, format described in 6.2.9 Return: return 0 if successful

6.3.7 Set decode and data rate of reader

Function: Set decode and data rate of reader Prototype: BOOL (WINAPI* SysSetEncoderRate)(WORD icdev, BYTE enc_rte) Parameter: icdev: [IN] Device ID, the default is 0x0000 enc_rte: [IN] 0x05 =Manchester RF/64 0x0A = Bi-phase RF/32

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Return: return 0 if successful

6.3.8 Format EM4305 to EM4001

Function: Format EM4305 to EM4001 Prototype: BOOL (WINAPI* WriteEM4001)(WORD icdev, BYTE *id) Parameter: icdev: [IN] Device ID, the default is 0x0000 id: [IN] 5 byte ID number Return: return 0 if successful

6.4 HITIG-S

6.4.1 Read HITAG UID

Function: Read HITAG UID Prototype: BOOL (WINAPI* HITAG_Request)(WORD icdev, BYTE * pUID) Parameter: icdev: [IN] Device ID, the default is 0x0000 pUID: [OUT] 5 byte UID Return: return 0 if successful

6.4.2 Read HITAG Configuration

Function: Read HITAG Configuration Prototype: BOOL (WINAPI* HITAG_Select)(WORD icdev, TE * pConfig) Parameter: icdev: [IN] Device ID, the default is 0x0000 pConfig: [OUT] Return data Return: return 0 if successful

6.4.3 Read HITAG Page block

Function: Read HITAG Page block Prototype: BOOL (WINAPI* HITAG_ReadPage)(WORD icdev, YTE pAddr, YTE * pData) Parameter: icdev: [IN] Device ID, the default is 0x0000 pAddr: [IN] Block address pData: [OUT] 5 byte block data

Return: return 0 if successful

6.4.4 Write data to HITAG

Function: Write data to HITAG



Prototype: BOOL (WINAPI* HITAG_WritePage)(WORD icdev,

YTE pAddr,

YTE* pData)

Parameter: icdev: [IN] Device ID, the default is 0x0000 pAddr: [IN] Block address pData: [IN] 5 byte write data

Return: return 0 if successful

6.4.5 Format HITAG to EM4001

Function: Format HITAG to EM4001 Prototype: BOOL (WINAPI* HITAG_EM4001)(WORD icdev, BYTE * ID) Parameter: icdev: [IN] Device ID, the default is 0x0000 ID: [IN] 5 byte ID number Return: return 0 if successful

6.4.6 Format HITAG to ISO11784/85 form

Function: Format HITAG to ISO11784/85 form Prototype: BOOL (WINAPI* HITAG_AnimalTag)(WORD icdev, BYTE *AnimalID) Parameter: icdev: [IN] Device ID, the default is 0x0000 AnimalID: [IN] 14 bytes animal ID, format described in 6.2.9 Return: return 0 if successful

6.5 READ Anim/ID

6.5.1 Read animal tag
Function: Read animal tag
Prototype: iBOOL (WINAPI* ReadAnimalID)(WORD icdev, unsigned char *id)
Parameter: icdev: [IN] Device ID, the default is 0x0000 id: [OUT] 14 bytes animal ID, format described in 6.2.9
Return: return 0 if successful

6.5.2 Read EM4001 card

Function: Read EM4001 card Prototype: BOOL (WINAPI* ReadEM4001)(WORD icdev, BYTE *id) Parameter: icdev: [IN] Device ID, the default is 0x0000 id: [OUT] 5 byte ID number

Return: return 0 if successful

