User Manual

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SKH300 iButton Reader Configuration Utility

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1. iButton reader general characteristics

The iButton reader supports both RS232 and PS/2 interfaces. The iButton reader currently has no support for international keyboard layouts (firmware revision v1.30 and earlier). A US keyboard layout is assumed.

2. iButton reader factory default settings

Interface:	RS232
Baud Rate:	9600
Data bits:	8
Parity:	even
Stop bits:	1

3. Software installation

Connect the iButton reader to the POS system. Start the POS system.

Double-click on the **CIDTestApSetup** file icon and follow the on screen instructions to install the utility on your system.

Note: The reader is not a plug and play device. Always connect the iButton reader to the POS system first and then only power up the system to ensure that the device is detected by the POS system correctly.

4. Utility Main Window Description

This configuration utility was designed for several different devices, including magnetic card reader and iButton reader. However, only the part relevant to the configuration of the iButton reader will be described here.



0	Connect	Click on this button to select the device and interface parameters, and to establish the connection between the reader and the utility	
Disconnect Click on this button the reader. This is		Click on this button to release the connection between the utility and the reader. This is the last action before closing the program	
6 Command Select the reader command from the drop down box. Used to access the iButton reader configuration window.		Select the reader command from the drop down box. Used to access the iButton reader configuration window.	
4	Response	Shows the reader response to a command	
6	Auto clear previous response Place new response on top	Display options for the Response window	
6	Clear button	Button to clear the response window	
7	Information area	Shows program version information	
-			

Note: the other items in this window are not used for the iButton reader

5. Checking the firmware version

This command should always be executed first before attempting to modify any of the reader's configuration parameters, because it allows you to check that the communication with the reader is working correctly.

- 1. Start the utility
- 2. Click on the connect button $oldsymbol{0}$

.	ID Uti	ility		
File	View	Device	Help	
				-Issue Comma Command:
		1		Options:
		Conne	t	Arguments:
				Assist

If your device is configured with a **serial**

interface (default)

3. Select the iButton reader parameters as shown below and click on the OK button:

Connect to		Connect to	× ×
Device:	SKH300 (Serial)	Device: Interface:	SKH300 (PS2)
Baudrate	9600	Baudrate	9600
Parity:	Even 💌	Pany.	Cancel

TIP: If your iButton reader is in serial mode and you access the reader in PS/2 mode, you can still check the firmware version and the configuration of the reader. This is useful if you can not

If your device is configured with a $\ensuremath{\text{PS/2}}$ interface

remember the baud rate and parity settings of your device.

4. Select the **GET VERSION O** command in the command window.

Click on the Send ² button.

The firmware version is displayed in the **Response 3** window

Note: if you get an error message at this point, it means either the iButton reader module is not installed correctly on the system, or, in the case of RS232 interface, the wrong COM port or communication parameters.

-	CID Utility		×
File	View Device Help	k	
	Connect	Issue Commands Command: GET VERSION 1 Image: Command in the second se	
	Disconnect	Auto clear previous response Clear	
	Information Status: Connected Library version: 1.0 Application Version 0.81	Manual Input Data:	
	RTS/CTS Reset Device CTS Check Device Status: Ready	Add checksum at tail of data Add checksum at tail of data Send Place new response on top Clear Options Baudrate: 9600 Data Bits: 8 Parity: Even Stop Bit: 1 Miscellaneous Show "Response received" message in response boxs	
Conr	nection established		

6. Reading and changing the iButton reader configuration

1. Follow the steps in Chapter 5.

2. Choose the **GET CONFIGURE WORD** or the **SET CONFIGURE WORD** command from the command window. Both commands are equivalent.

🚜 CID Utility File View Device Help Issue Commands Response GET VERSION GET VERSION GET VERSION GET CONFIGURE WORD GET CONFIGURE WORD GET SYSTEM STATUS GET SYSTEM STATUS CARD FEED CONTROL ICC SELECTION ICC SELECTION ICC ACTIVATION ICC DEACTIVATION ICC COLOCATIVATION ICC AUTO ATR CONTROL ICC AUTO ATR CONTROL ICC AUTO ATR CONTROL ICC AUTO ATR CONTROL MSC WRITE MSC READ BUFFER MSC READ BUFFER MSC READ BUFFER MSC READ BUFFER MSC READ DISPENSE SET BAUD ICC SLE4428 IO ICC SLE4428 IO ICC SLE4442 IO Command: [Get version information] hardware version:1.4 software version:1.30 Options: Arguments Assist Disconnect Auto clear previous response Clear Place new response on top Information Manual Input Response Status: Data: Connected Library version: 1.0

Note: Only the first three commands in the list are used for the iButton. All the other commands are for other devices.

3. Click OK

CIDTest	AP 📐 🔀
⚠	الالا If baud rate or parity has been changed, you should re-enter this utility for proper operation
	OK

Note: This message is displayed every time you choose the Configure command.

If you have just changed the baud rate or the parity (for RS232 interface), the Configure command will fail and display an error message. In that case, you need to exit the utility and re-start it with the new baud rate or parity.

4. The Configuration Window is displayed

itigure Word			
1 Get Configure Word	Configure Word Track 1 (JIS II) Enable Upper Case Track 2 Enable Track 3 Enable Track 3 Enable Tracks Spearator/Terminator Enable Tracks Error Report Enable	 Head/Tail Track 1 (JIS II) Head Track 2 Head Track 3 Head IButton Head 	 Track 1 (JIS II) Tail Track 2 Tail Track 3 Tail IButton Tail
2 Set Configure Word	Tracks Sentinel Enable Replaceabl ✓ Head/Tail Enable ✓ IButton Enable Track1 (JIS II) Request	IButton OnMove Input Method Key Code	O Hex Code
Information AP Ver. 0.81 Lib Ver. 1.0	Track2 Request Track3 Request Tracks Sequence Request: Track1,2,3	6	5
RS232 Conf: Baud Rate: 3 9600 V Parity: Even V	Track 1 (JIS II) Start Sentinel: % Track 2 Start Sentinel: ; Track 3 Start Sentinel: ; Tracks End Sentinel: ?		
8 Close	Tracks Separator: CR Terminator: None No		

0	Get Configure Word	Click on this button to read the current iButton reader configuration into the configuration utility.
2	Set Configure Word	Click on this button to write the iButton reader configuration from the utility into the reader.
₿	RS232 Conf.	Baud rate and parity of the reader can be displayed and set here (RS232 mode only).
4	iButton Head/ Tail / OnMove	Used to check and modify the iButton Head, Tail, and onMove settings.
6	Head/Tail Enable iButton enable	Used to enable the iButton (should always be set). Used to enable/disable the Head and Tail.
6	Input Method	This area is used to configure the Head/ Tail and OnMove characters.
7	iButton Auto Response Port	Used to change the reader mode from RS232 to PS/2 modes and back.

5. Click on the Get Configure Word to read the current iButton configuration into the reader. The reader will beep once if the configuration has been read in correctly. If the reading fails, you will get a message error. 6. Click on the respective radio buttons 4 to check the Prefix, Postfix and OnMove settings.

Head/Tail Track 1 (JIS II) Head Track 2 Head Track 3 Head IButton Head IButton OnMove	 Track 1 (JIS II) Tail Track 2 Tail Track 3 Tail IButton Tail 	Head/Tail Track 1 (JIS II) Head Track 2 Head Track 3 Head IButton Head IButton OnMove	 Track 1 (JIS II) Tail Track 2 Tail Track 3 Tail IButton Tail 	Head/Tail Track 1 (JIS II) Head Track 2 Head Track 3 Head IButton Head IButton OnMove	 Track 1 (JIS II) Tail Track 2 Tail Track 3 Tail IButton Tail
Key Code	O Hex Code	 Key Code 	O Hex Code	 Key Code 	◯ Hex Code
h e a d -		-tail		- m o v e -	

7. To change any of the settings, click in the input window $oldsymbol{0}$.

A keyboard **2** will appear under the input window, which you can use to enter data. You can also use a normal keyboard if you have one connected to your system.

Under input method **3**, you can choose **Key Code** to enter characters directly from the keyboard, or **Hex Code**, to enter hexadecimal character codes. If you enter hex codes, they will be displayed in the input window enclosed in square brackets (for example [45] [78] [A8])

⊂Head/Tail		
C Track 1 (JIS II) Head	🔿 Track 1 (JIS II) Ta	a 🛛 🔹
O Track 2 Used	O Track 1 (010 h) 10	"
U Frack 2 Head	O Frack Z Fail	
🔘 Track 3 Head	🔘 Track 3 Tail	
 IButton Head 	🔘 lButton Tail	
O IButton OnMove		
Input Method		
🔘 Key Code 🛛 3	💿 Hex Code	
11111		
	1	
	•	
F1 F2 F3 F4 F5	6 F7 F8 F9	F10 F11 F12
CODOR		
QWER		JUUU
Caps A S D F	GHJK	
	Space	

8. To save your new settings into the reader, click on the **Set Configure** button. The reader will beep if the settings were written to it successfully. If the settings can not be written, you will get an error message after a few seconds.



9. Close the Configuration window by clicking on Close button, and then in the main window, click on the Disconnect button.

7. Checking the iButton output (PS/2 + RS232)

7.1 PS/2 interface

You can check the iButton reader output by opening any program or utility that accepts keyboard input, such as a text editor or word processing program.

7.2 RS232 interface

You can check the output of the RS232 interface iButton reader with any terminal program. You will have to set the communication parameters to be the same as the iButton reader interface.

8. Changing the interface settings (RS232)

To change the RS232 interface baud rate and/or parity settings follow the steps below: 1. In the main window, click on the **Connect** button, and select the Device (SKH300(Serial)), Interface (COM6), Baudrate (9600) and Parity (Even).

2. Verify that the communication with the reader works correctly by clicking on the **Send** button. The Response window will show the hardware and firmware versions.

3. Select the GET CONFIGURE WORD command from the command drop-down list, and click OK.

4. In the RS232 Configuration area, change the parameters as desired.

5	RS232 Conf: -	
	Baud Rate:	
	38400	*
	Parity:	
	Odd	*
	Close	

5. Click on the Set Configure Word button to save the new settings, and click on the Close button to close the configuration window.

6. Click on the Disconnect button in the main window.

9. Changing the iButton reader interface

- 1. Follow the steps in Chapter 8, item 1-3.
- 2. In the iButton Auto Response Port drop-down box, select the desired interface mode.

Configure Word		
📃 Track 1 (JIS II) Enable 📃 Upper Case	Head/Tail	
Track 2 Enable	💿 Track 1 (JIS II) Head	🔿 Track 1 (JIS II) Tail
Track 3 Enable	🔘 Track 2 Head	🔘 Track 2 Tail
Tracks Spearator/Terminator Enable	🔘 Track 3 Head	🔘 Track 3 Tail
Tracks Error Report Enable	🔘 IButton Head	🔘 lButton Tail
Tracks Sentinel Enable 📃 Replaceable	🔘 IButton OnMove	
🗹 Head/Tail Enable	Input Method	
🗹 IButton Enable	Key Code	O Hex Code
Tracki (UC II) Decision	0.1.0, 0000	
Track2 Request		
I rack3 Request		
Tracks Sequence Request:		
Track1,2,3 💌		
MSR Auto Response port: Serial 🗸		
iButton Auto Response port: Covial		~
Serial		
Track 1 (JIS II) Start Sentinel: %		
Track 2 Start Sentinel: ;		
Track 3 Start Sentinel: +		
Tracks End Sentinel: ?		
Tracks Separator: CR 🗸		
Terminator: None 💌		

- 3. Click on the **Set Configuration** button, then click on **Close** to exit the Configuration settings.
- 4. In the main window, click on the **Disconnect** button.

10. Updating the firmware

WARNING: To update the firmware, the iButton reader **MUST** be set to **RS232 mode**. You can not update the firmware in PS2 mode. Updating in PS2 mode will corrupt the firmware.

- Make sure your reader is set to RS232 mode. If you are not sure, follow the steps described in the previous chapters to go to the Configuration window, and check the iButton Auto Response port setting: If it shows Serial, the reader is set to RS232. If not change the interface as described in chapter 9.
- 2. In the menu, click on Device and select Update Firmware.



3. Click on the Select button and select the firmware file. Note: the firmware file has a '**skx**' extension

Update firmware	▶ 🗵
Firmware Select File F:\Temp\SKH3	V30.skx
Program Start Update Procedure	Warning! Don't remove power while update is in progress. Do not move mouse or press keyboard while code update is in progressing
Status:	
Progress:	0%
	Close

4. Click on the Start Update Procedure button. The update procedure starts:

Update firmware		×
Firmware Select File F:\Temp\SKH3	V30.skx	
Start Update Procedure	Warning! Don't remove power while update is in progress. Do not move mouse or press keyboard while code update is in progressing	
Status: In Progress		
Progress:	26%	

WARNING: Do not move the mouse or press the keyboard during firmware upgrade. Do not exit the program or remove power during the update or the firmware may be corrupted, and you will not be able to use the iButton reader anymore. 5. The firmware update is finished. Click on the **Close** button.

Update firmware	X
Firmware	
Select File F:\Temp\SKH3	√30.skx
Program) ((seeing)
Start Update Procedure	warning: Don't remove power while update is in progress
	Do not move mouse or press keyboard while code update is in progressing
Status: Complete, firmware up	odated.
Progress:	100%
	Close

- 6. Click on the Disconnect button in the main window.
- 7. To verify the iButton reader works well, follow the steps described in Chapter 5 to display the firmware version.

[Get version information] hardware version:1.4 software version:1.30	
	~
	Clear
Auto clear previous response	-