

SiPass integrated MP2.70

Enrolment Reader for Web Client

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www.siemens.com/buildingtechnologies

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1. Introduction

With the HID OMNIKEY 5427 CK we have the possibility to use the Keyboard Wedge support. The Reader retrieves data from a card and insert the read information directly to any application by emulating keyboard strokes. The following document describe how to read out the UID/CSN from MIFARE Classic and Mifare DESfire cards.



To configure the HID OMNIKEY 5427 CK you have to install the HID Global USB-CDC-EEM Driver. You can Download the Driver form HID Global Website.

www.hidglobal.com/drivers

1.1 OMNIKEY 5427 CK Reader Configuration

Connect the OMNIKEY 5427 CK Reader via USB to your Client and open the following IP via a Web browser: <u>http://192.168.63.99/</u>



1.1 OMNIKEY 5427 CK Reader Configuration

Select Keyboard Wedge-> Enable the Keyboard Wedge and select your Keyboard Layout on the General Configuration.

OMNIKEY ® 5427	CK Reader Management	Power up Reset 0: 0 days, 00:
General Keyboard Rea Overview Wedge Inform	ader Contactless Host System nation Config Interfaces Config	System About Consoles
General Card Data Card Data Config Selection Manipulation		
Keyboard Wedge Enable 🧹	Tech order after error 🥑	Â
Output Type Kayboard Wedge 💌	MIFARE Ultralight	
Death Infordance	Seos	
Bootimenace	HID ICLASS	
Card Out Event Keystrokes	MIFARE Classic	
	MIFARE Desfire	
Error Keystrokes	MIFARE Desfire EV1	
Allow prestrokes and poststrokes for errors	MIFARE Plus	
	FeliCa	
Keyboard Layout DE	PIV	
Hex Output Case Lower	CEPAS	
Inter Kovetreko Delavijen	ESK Prox (e.g. HID Prox, AWID)	

1.2 Read the UID/CNS from MIFARE Classic / DESfire cards

On Card Data Selection Enable MIFARE Classic and the CSN Data Filed. Additional you have to disable the PACS option.

	General	Keyboard	Reader	Contactless	Host	System	System	About
General Ca	rd Data Card Data	Wedge	mormation	Coning	Interfaces	Connig	Consoles	
Card Type	MIFARE Classic	-	6					
Cours tibe (
Ena	able MIFARE Classic 🛛 👻	Card	In Event Keystr	okes (LED_BU	IZZ]			
Data Field	Dreateshaa	Koy			122203			
Data Heiu	Prestrokes	ney	Key type Se	ector Block	Offset	Length	Poststrokes	8
	Prestrokes	Ney	Key Type Se	ctor Block	Offset	Length	Poststrokes	
	Prestrokes		Key lype Se	ector Block	Offset	Length	Poststrokes	
PACS	Prestrokes	0	Key lype Se	ector Block	Offset	Length	Poststrokes	
PACS	PIESUORES	0	A V 0	ector Block	Offset	Length	Poststrokes	

On Card Data Manipulation select the CSN, Change the Format to DEC (decimal) and Enable the Reverse option.

_								
	General Overview	Keyboard Reader Wedge Information	Contactless Config	Host Interfaces	System Config	System Consoles	About	
General Config	Card Data Selection Manipulation	n						
Card Ty	vpe MIFARE Classic	PAC	S Leading Byte		Hex Out	put Case Low	rer	<u>^</u>
Datafield	Filtering	Forma	t Reverse		1	Padding		
CSN	Char 0 Directio	DEC		Cha	r ₀ Direct	tion Leading	- Length (D
PACS	Char 0 Directio	on Leading x HEX		Cha	r ₀ Direct	tion Leading	- Length (5 ≣
Custom 1	Char 0 Directio	on Leading Y HEX		Cha	r ₀ Direct	tion Leading	Length (D
Custom 2	Char 0 Directio	n Leading * HEX		Cha	r 0 Direct	tion Leading	Length (C
Custom 3	Char 0 Directio	on Leading * HEX		Cha	r ₀ Direct	tion Leading	Length (2
PACS	Filtering	Forma	at Reverse		1	Padding		
1	Char 0 Directio	n Leading - HEX		Cha	r 0 Direct	tion Leading	Length (0

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1.2 Read the UID/CNS from MIFARE Classic / DESfire cards

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If you also want to read Mifare DESfire cards your have to configure the Card Type for Mifare DESfire the same way.

	Ge Ove	neral rview	Keyl We	board dge	Rea Inform	ider nation	Contactles: Config	Host Interface	s Syster Config	n Syst Cons	em Ab oles	out
General Card Da Config Selection	ta Ca on Man	rd Data ipulatio	n									
Card Type MIFAF	RE Desfire	EV1		*								
Enable MIFA	RE Desfire	EV1 S		Card In	Event ł	Keystro	kes [LED_I	BUZZ]				
Data Field Prestrol	es Appl	D File	Star	t Len	Card	Rdr A	uth File T	ype File C	omms En	cryption	AV1 Diversify	Post-
		Nun	1		Key	Key			chine Li	orjpaon		strokes
CSN 🗹		Nun	n		кеу	Key				or J priori		strokes
CSN 🗹 PACS 🗌		Nun	1		Key	Key				on j paron		strokes
CSN V PACS	1	Nun	0	0	Key 0 :	кеу 240	Standa	rd 💌 None		3DES -	<u>None</u> 🔻	strokes
CSN V PACS	1	0	0	0	0 : 0 :	240 240	Standa	d × None		13DES - 13DES -	None 🔻	strokes

To finish the configuration you have to select System Configuration-> Click Apply Changes-> Store Changes-> Reboot System

HID	OMNI	KEY ® :	5427 CH	(Reade	' Manag	jement	Poweru	Power 15: 0 up Reset 0: 0	days, 00:24:13 days, 00:24:13
	General Overview	Keyboard Wedge	Reader Information	Contactless Config	Host Interfaces	System Config	System Consoles	About	
Update Firmware	Durchsuchen	Keine Date	i ausgewählt.					Apply Cl	nanges
Upgrade SDR	Durchsuchen	Keine Date	i ausgewählt.					Reset C	hanges
Upload Config	Durchsuchen	Keine Date	i ausgewählt.					Restore	Default
Encrypt Firmware	Durchsuchen	Keine Date	i <mark>ausgewähl</mark> t.					8 Reboot	System
Load Key Layout	Durchsuchen	Keine Date	i ausgewählt.						

Now the OMNIKEY 5427 CK Reader is configure and ready to use.

Note: You only have to configure the reader ones. The configuration is stored in the reader and it can be used on every Windows PC.

With the OMNIKEY 5427 CK you can also Read out Sector/Block from a MIFARE Classic card or Application/File from a DESfire card. To enter the Mifare/DESfire Key to the reader you have to order a License called the "OMNIKEY 5x27CK Developer Center" from <u>HID</u>. With this license you can download the "Key Loading Tool".

Without this tool it is not possible to apply any keys to the reader.

OMNIKEY ® 542	7 CK Reader Management	Power 24: 0 days, Software Reset 18: 0 days,
General Keyboard Re Overview Wedge Infor	ader Contactless Host System mation Config Interfaces Config	System About Consoles
General Card Data Card Data Config Selection Manipulation		
Keyboard Wedge Enable 📋	Tech order after error 🗹	<u>^</u>
Output Type Keyboard Wedge 💌	MIFARE Desfire EV1	
Boot Interface	MIFARE Classic	
	Seos	
Card Out Event Keystrokes	HID ICLASS	E
Frror Keystrokes	MIFARE Ultralight	
	MIFARE Desfire	
Allow prestrokes and poststrokes for errors	MIFARE Plus	
Keyboard Layout	FeliCa	
	PIV	
Hex Output Case Lower 💌	CEPAS	
Inter Keystroke Delay 30	FSK Prox (e.g. HID Prox, AWID)	

Connect to the reader and Disable the Keyboard Wedge.

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Go to System Configuration-> Click Apply Changes-> Store Changes-> Reboot System.

HID	OMNI	Power 15: 0 days, KEY ® 5427 CK Reader Management Power up Reset 0: 0 days,	00:24:13 00:24:13
	General Overview	Keyboard Reader Contactless Host System System About Wedge Information Config Interfaces Config Consoles About	
Update Firmware	Durchsuchen	Keine Datei ausgewählt.	5
Upgrade SDR	Durchsuchen	Keine Datei ausgewählt. Reset Changes	s
Upload Config	Durchsuchen	Keine Datei ausgewählt. Restore Defaul	lt
Encrypt Firmware	Durchsuchen	Keine Datei ausgewählt.	n]
Load Key Layout	Durchsuchen	Keine Datei ausgewählt.	

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Open the HID OMNIKEY 5x27 CK Key Loading Tool.

Take care that the correct reader is selected in the drop down filed.

Select the Key Type (DESfire or Mifare), Select the Key Number (this will be need in the configuration tool of the reader), enter the key at the Key Value filed, check "Select" and click on Load.

HID	OMNIKEY 5x27CK Key Loading Tool 2.0.0.1	- 0	x
File	Edit Options Load Help		
Load	Selected Load All HID OMNIKEY 5427 CK CL 0		
	Key Type Key Number Key Value	Select	Load
	DESFIRE - 240 - +++++++++++++++++++++++++++++++++++	V	Load
*	(Select) 🔽 🔽		Load
			*
			-
J			

Note: If the Keyboard Wedge is enabled the reader will not be shown in the drop down filed.

Connect to the reader -> select Keyboard Wedge-> Enable the Keyboard Wedge and select your Keyboard Layout on the General Configuration.

OMNIKEY ® 542	7 CK Reader Management	Power 15: 0 days, 00:13 Power up Reset 0: 0 days, 00:13
General Keyboard Re Overview Wedge Infor	ader Contactless Host System mation Config Interfaces Config	System About Consoles
General Card Data Card Data Config Selection Manipulation		
Keyboard Wedge Enable 🥑	Tech order after error 🥁	Â
Output Type Keyboard Wedge 🔫	MIFARE Ultralight	
Post Interface	Seos	
Bootimenace		
Card Out Event Keystrokes	MIFARE Classic	E
	MIFARE Desfire	
Error Keystrokes	MIFARE Desfire EV1	
Allow prestrokes and poststrokes for errors	MIFARE Plus	
	FeliCa	
Keyboard Layout DE	PIV	
Hex Output Case	CEPAS	
Inter-Keystroke Delay 20	FSK Prox (e.g. HID Prox, AWID)	

On Card Data Selection Enable MIFARE Classic/MIFARE DESfire EV1 and disable the CSN Data Filed and PACS option.

		OTCITICA	weage	mormation	comg	menaces		naoica	
General Config	Card Data Selection	Card Data Manipulation		1					
Card Ty	pe (MIFARE D	esfire EV1	•						
Ena	able MIFARE D	esfire EV1 🧹	Card In	n Event Keystrok	es [LED_BUZ	Z]			
Enable MIFAI Data Field	RE Desfire EV Prestrokes	App ID File	Start Len	Card Rdr Au	th File Type	File Comms	Encryption	AV1 Diversify	Post-
CSN		Num		Key Key					attores
PACS									

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Enable the Custom 1 Field-> Enter the Application ID, the File number, the length and the Card Key as in the SiPass Profile configuration.

Check that the Reader Key is the same as in the Key Loading Tool.

The Encryption must be the same as from the SiPass Key configuration.

General Card Data Card Data Config Selection Manipulation			
Card Type [MIFARE Desfire EV1 *			
Enable MIFARE Desfire EV1 S Card In Event Keystrokes [LED_BUZZ]			
Data Field Prestrokes App ID File Start Len Card Rdr Auth File Type Fil	e Comms Encryption	AV1 Diversify si	Post- trokes
CSN CSN			E
PACS PACS			
Custom 1 🗹 2 1 0 32 1 240 🗹 Standard 🔨 N	one 💌 AES	Vone 🔻	
	one 🔻 DES/3DES	Vone V	
	one 🔻 DES/3DES	v None v	
Data Field Prestrokes Offset Length Poststrokes			
			•)
		© HID Global Cor	poration 2011-14
Profile Configuration	_	© HID Global Cor	poration 2011-14
Profile Configuration Profile Definition Profile Name: DES2 Card Type: DESF	Fire	© HID Global Cor	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile Name: Profile verified on DESPire 4K Card Master Key: Card Master Key:	Fire	© HID Global Cor	poration 2011-14
Profile Configuration Profile Definition Profile Name: DES2 Card Type: DES1 Profile verified on DES1 ire 4K Card Master Key: Non	Fire he>	© HID Global Cor	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile Assignment Card Type: DESP Card Type: DESP Fo	Fire le> prmat Before Encoding	© HID Global Cor	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile Assignment Image: Profile Assignment	Fire ie> srmat Before Encoding Data Type	© HID Global Cor	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile Assignment Image: Image: Profile Assignment Image:	Fire ie> ormat Before Encoding Data Type Database Field	© HID Global Cor	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile Name: Profile Assignment View All Applications All 000001	Fire Ire> ormat Before Encoding Data Type Database Field Database Field	© HID Global Cor New Data Base:CardNumber Base:CardNumber	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile Assignment View All Applications Application File Length Output Access Control 1 2 4 Card Master Key: AD Former All O00001 File K	Fire Ire> ormat Before Encoding Data Type Database Field Database Field	© HID Global Cor New Data Base:CardNumber Base:CardNumber	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile Name: Profile Assignment ✓ Card Type: Card Type: Card Type: Card Type: Card Master Key: ✓ Non ✓ Fo Profile Assignment ✓ View All Applications ✓ 1 Second Second	Fire e> prmat Before Encoding Data Type Database Field Database Field	© HID Global Cor New Data Base:CardNumber Base:CardNumber	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile verified on DESPire 4K Card Master Key: View All Applications View All Applications All 000001 = * * Encypted Comm	Fire re> ormat Before Encoding Data Type Database Field Database Field	© HID Global Cor New Data Base:CardNumber Base:CardNumber	poration 2011-14
Profile Configuration Profile Definition Profile Name: DESP Profile verified on DESPire 4K Profile Assignment View All Applications ↓ 1 1 32 ASCII Mifare Facility ↓ 1 32 ASCII Mifare Facility ↓ 1 32 ASCII None ★	Fire ie> ormat Before Encoding Data Type Database Field Database Field	© HID Global Cor New V Data Base:CardNumber Base:CardNumber	poration 2011-14
Profile Configuration Profile Definition Profile Name: DESP Profile verified on DESPire 4K Profile Assignment View All Applications ↓ 1 1 32 ASCII Mifare Facility ↓ 1 32 ASCII Mifare Facility ↓ 1 32 ASCII None ★	Fire ie> ormat Before Encoding Data Type Database Field Database Field	© HID Global Cor New V Data Base:CardNumber Base:CardNumber	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile verified on DES/ire 4K Profile Assignment View All Applications ↓ 1 1 32 ASCII Mifare Facility ↓ 1 1 32 ASCII Mifare Facility ↓ 1 1 32 ASCII None ★ ↓ 1 1 32 ASCII None	Fire ie> ormat Before Encoding Data Type Database Field Database Field	© HID Global Cor New V Data Base:CardNumber Base:CardNumber	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile verified on DES/ire 4K Card Type: Card Type: Card Type: Card Master Key: View All Applications View All Applications All 000001 All 000001 Encypted Comm 1 1 32 ASCII Mifare Facility None *	Fire ie> prmat Before Encoding Data Type Database Field Database Field	© HID Global Cor New V Data Base:CardNumber Base:CardNumber	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile Verified on DES/ire 4K Card Master Key: View All Applications View All Applications AllD 000001 File Encypted Comm Table Des Tab	Fire ie> prmat Before Encoding Data Type Database Field Database Field	© HID Global Cor New V Data Base:CardNumber Base:CardNumber	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile verified on DES/ire 4K Profile Assignment View All Applications All 000001 Encypted Comm All 000001 All 000002 All 0000002 All 000002 All 000002 All 000002 All 000002 All 0000002 All 0000002 All 0000002 All 0000002 All 000002 All 000002 All 000002 All 0000002 All 0000002 All 0000002 All 0000002 All 0000002 All 0000002 All 0000002 All 0000002 All 0000000 All 0000000 All 0000000 All 000000 All 00000 All 000000 All 00000 All 000000 All 000	Fire re> prmat Before Encoding Data Type Database Field Database Field	© HID Global Cor New V Data Base:CardNumber Base:CardNumber	poration 2011-14
Profile Configuration Profile Definition Profile Name: Profile Name: Profile Verified on DES/ire 4K Card Master Key: Non Profile Assignment Vew All Applications All 000001 All 000002 All 00002 Al	Fire me> prmat Before Encoding Data Type Database Field Database Field	© HID Global Cor New Data Base:CardNumber Base:CardNumber	poration 2011-14

Note: The SiPass Mifare Facility is encrypted written to the card. It is not possible to read the card number from this file. It is necessary to create a second application/file where the card number is written ASCII formatted with Access Control None.

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On Card Data Manipulation select the Custom 1 Field and Change the Format to ASCII (as in SiPass).

Card T	ype MIFARE Desfire EV1	F	ACS Leading Byte		Hex Output Case	Lower	
Datafield	Filterin	g For	mat Reverse		Padding		
C SN	Char 0 Direc	tion Leading V DEC		Char	0 Direction Lea	ling v Length ₀	
PACS	Char 0 Direc	tion Leading * HEX		Char	0 Direction Lead	ing - Length o	
Custom 1	Char 0 Direc	tion Leading - ASC		Char	0 Direction Lead	ling 🔻 Length ₆	
Custom 2	Char 0 Direc	tion Leading - HEX		Char	0 Direction Lead	ling - Length ₀	
Custom 3	Char 0 Direc	tion Leading MEX		Char	0 Direction Lead	<u>Sing - Length o</u>	
PAC S Custom	Filterin	g For	mat Reverse		Padding		
1	Char Direc	tion Leading y		Char	0 Direction	Length 0	

To finish the configuration you have to select System Configuration-> Click Apply Changes-> Store Changes-> Reboot System

HID	OMNII	KEY ® :	5427 CK	Reade	r Manag	ement	Powert	Power 15: (up Reset 0: () days, 00:24:13) days, 00:24:13
	General Overview	Keyboard Wedge	Reader Information	Contactless Config	Host Interfaces	System Config	System Consoles	About	
Update Firmware	Durchsuchen	Keine Datei ausgewählt.					1 Apply C	hanges	
Upgrade SDR	Durchsuchen	Keine Datei ausgewählt.					Reset C Store C	hanges	
Upload Config	Durchsuchen	Keine Datei ausgewählt.					Restore	Default	
Encrypt Firmware	Durchsuchen	Keine Datei ausgewählt.					B Reboot	System	
Load Key Layout	Durchsuchen	Keine Datei ausgewählt.							

Now the OMNIKEY 5427 CK Reader is configure and ready to use.

Note: You only have to configure the reader ones. The configuration is stored in the reader and it can be used on every Windows PC.

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2. Enrolment in SiPass Web Client

To enroll a card via the SiPass Web Client add a new Credential -> select the Card Number field and show the card on the OMNIKEY 5427 CK reader.

The Card number will be automatically typed by the Keyboard Wedge function.

Definition Advanced Personal Tracking Siemens	Corporate Card Imaging Printing	Extended Controls				
Cardholder Identification		Credentials				
Last Name Mo First Name Kai GID / Employee Number ZOO Add Credential	1K73V	6498747250569065302 R5485 Validity: May 19, 2017 to May 19, 2117 Add Edit Delete				
Card Number 3708318111 Revision Number 0	×	Private Access Control				
Credential Profile RS485 PIN	• Ider	No matching records found				
Start Date May 19, 2017	ze					
End Date Jul 3, 2117	:lusion					
Void Card PIN Error Disabled Ad	Id Cancel					



3. Contact page

BT CPS S&C MK&B CSFS MCH- Customer Support Center

Technical support for the SiPass integrated software and associated firmware is managed by the CPS FS Customer Support Center. For support relating directly to the hardware you will need to contact Vanderbilt.

 Hotline Europe

 Phone: +49 89 9221 8000

 Fax: +49 89 9221 6000

 fs.support.sbt@siemens.com

 Hours of operation:

 Monday - Friday: 08:00 A.M. - 05:00 P.M. CET

Hotline South & North America Phone: +1 800 877 7545 <u>https://support.industry.siemens.com/my/WW/en/requests#createRequest</u> Hours of operation: Monday - Friday: 08:00 A.M. - 05:00 P.M. Central Time