

Installation Note

VASCO DIGIPASS CCID Filter Driver

Date of Issue: Version: 15-11-2013 2.1



Disclaimer of Warranties and Limitation of Liabilities

All information contained in this document is provided 'as is'; VASCO Data Security assumes no responsibility for its accuracy and/or completeness.

In no event will VASCO Data Security be liable for damages arising directly or indirectly from any use of the information contained in this document.

Copyright

© VASCO Data Security 2013. All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of VASCO Data Security.

Trademarks

DIGIPASS and VACMAN are trademarks of VASCO Data Security. All other trademarks referenced are trademarks of their respective owners.

Copyright © 2013 VASCO Data S	ecurity		
15-11-2013	INS-CCIDFilter-v2.1.doc	2.1	



Contents

Relate	d doci	uments	4
1	Introd	uction	5
	1.1	System Requirements	5
	1.2	Known Limitations	5
2	Driver	Installation	6
	2.1	Preparing for installation	6
	2.2	Installing the VASCO DIGIPASS CCID Filter Driver	6
3	Apper	ndix A: Installing the Microsoft CCID driver on Windows XP1	0

Table of Figures

Figure 1 – Installation welcome page	.6
Figure 2 – Installation folder selection	.7
Figure 3 – Ready to install	.7
Figure 4 – UAC Confirmation Prompt for administrator accounts	.8
Figure 5 – UAC Confirmation Prompt for restricted user accounts	.8
Figure 6 – Device driver signature confirmation	.9
Figure 7 – Setup complete	.9
Figure 8 – New Hardware Wizard	10
Figure 9 – Installation source selection	10
Figure 10 – Successful CCID driver installation	11

Copyright © 2013 VASCO Data Se	ecurity		
15-11-2013	INS-CCIDFilter-v2.1.doc	2.1	Page 3 of 11



Related documents

The following documents are referred to within this document and are considered to be included portions of this document. In those cases where this document differs from a document referenced here, this document takes precedence.

Ref	Title	Publisher	Date of issue	Version
1	Interoperability Secification for ICCs and	PC/SC	04-2010	2.02.08
	Personal Computer Systems – Part 10	Workgroup		
	IFDs with Secure PIN Entry Capabilities			
2	Specification for Integrated Circuit(s) Cards	USB.org	22-04-2005	1.1
	Interface Devices	_		

Copyright © 2013 VASCO Data Se	ecurity		
15-11-2013	INS-CCIDFilter-v2.1.doc	2.1	Page 4 of 11



1 Introduction

In order to standardize interaction with secure card readers (card readers facilitating secure PIN entry), the PC/SC 2.0 standard [1] defines a set of features and control codes that can be used to interact with the reader directly through I/O control commands.

The Microsoft USB CCID class driver used by VASCO secure card readers however discard these I/O control commands rather than forwarding them to the CCID equivalents (as defined in [2]), effectively hiding any provided secure reader functionality from PC/SC 2.0 enabled software.

The VASCO DIGIPASS CCID filter driver circumvents this shortcoming by filtering I/O control commands before they are processed by the driver itself. This approach allows the filter driver to "re-map" the control commands to APDU calls that can be interpreted by the VASCO DIGIPASS card reader.

The following commands and features as defined by [1] are forwarded by the VASCO DIGIPASS CCID filter driver:

- GET_FEATURE_REQUEST
- FEATURE IFD PIN PROPERTIES
- FEATURE VERIFY PIN DIRECT
- FEATURE_MODIFY_PIN_DIRECT

- see [1] paragraph 2.2

- see [1] paragraph 2.6.8
- see [1] paragraph 2.6.4
- see [1] paragraph 2.6.4

PLEASE NOTE:

Screen shots in this manual may show specific readers such as the VASCO DIGIPASS 865; installation steps are however applicable to all supported readers.

1.1 System Requirements

The following hard- and software is required for using the VASCO DIGIPASS CCID filter driver:

- Microsoft Windows XP (32 bit only), Microsoft Windows Vista, Windows 7, Windows 8 or Windows 8.1 (32 or 64 bit).
- Microsoft USB CCID driver;
- VASCO DIGIPASS 855, 865, 870 or 920 card reader.

1.2 Known Limitations

 Installation of the VASCO DIGIPASS CCID filter driver requires the Microsoft USB CCID driver to be present on the system.

Copyright © 2013 VASCO Data S	ecurity		
15-11-2013	INS-CCIDFilter-v2.1.doc	2.1	Page 5 of 11



2 Driver Installation

2.1 Preparing for installation

The VASCO DIGIPASS CCID Filter Driver requires the Microsoft CCID driver to be installed on the system. Connect your VASCO DIGIPASS reader to initiate the installation process; once the reader is set up with the Microsoft USB CCID driver, you can install the filter driver as described in the next paragraph.

Note for Windows XP users: Installation of the Microsoft CCID driver on Windows XP requires access to Windows Update. Before installing, make sure that you have a working internet connection. A detailed overview of the CCID driver installation procedure can be found in Appendix A.

2.2 Installing the VASCO DIGIPASS CCID Filter Driver

Extract the downloaded files to a folder and run **setup.exe**. The installer will verify that the Microsoft CCID driver is present on your system and launch the installer best fitted for your Windows version.

Note: Windows may display additional warning messages if **setup.exe** is run from a network location.



Figure 1 – Installation welcome page

Click 'Next' in the welcome page to start the installation. Setup will now ask you where to install the filter driver files:

Copyright © 2013 VASCO Data Se	ecurity		
15-11-2013	INS-CCIDFilter-v2.1.doc	2.1	Page 6 of 11



😸 VASCO DIGIPASS Secure Card Reader Driver Setup
Select Installation Folder
This is the folder where VASCO DIGIPASS Secure Card Reader Driver will b
To install in this folder, dick "Next". To install to a different folder, enter it below or dick "Browse".
Eolder: C:\Program Files\VASCO Data Security\VASCO DIGIPASS Secure Car Browse
Advanced Installer

Figure 2 – Installation folder selection

Click 'Browse' to select a specific location or 'Next' to accept the default suggestion and continue. Setup is now ready to install the filter driver:

授 VASCO DIGIPASS Secure Card Reader Driver Setup	×
Ready to Install The Setup Wizard is ready to begin the VASCO DIGIPASS Secure Card Reader Dri	
Click "Install" to begin the installation. If you want to review or change any of your installation settings, click "Back". Click "Cancel" to exit the wizard.	
Advanced Installer	
< <u>B</u> ack Car	ncel

Figure 3 – Ready to install

Copyright © 2013 VASCO Data S	ecurity		
15-11-2013	INS-CCIDFilter-v2.1.doc	2.1	Page 7 of 11



Click 'Install' to start the installation. Depending on your Windows version and user account type, you may be prompted to confirm installation and/or to provide administrator credentials:

😗 User Accou	t Control
Do y softv	u want to allow the following program to install are on this computer?
	Program name: 4f68a.msi Verified publisher: Vasco Data Security International GmbH File origin: Hard drive on this computer
Show <u>d</u> ef	ils <u>Y</u> es <u>N</u> o
	Change when these notifications appear

Figure 4 – UAC Confirmation Prompt for administrator accounts

😚 User Account Control			
Do you want to allow the following program to make changes to this computer?			
	Program name: 4837bfa.msi Verified publisher: Vasco Data Security International GmbH File origin: Hard drive on this computer		
To continue, type an administrator password, and then click Yes.			
	User name Password Domain: VASCO		
	Insert a smart card		
Show <u>d</u> etails	s <u>Y</u> es <u>N</u> o		

Figure 5 – UAC Confirmation Prompt for restricted user accounts

Enter the requested administrator credentials if necessary, and click 'Yes' to continue.

Copyright © 2013 VASCO Data Security			
15-11-2013	INS-CCIDFilter-v2.1.doc	2.1	Page 8 of 11



Note: On Windows 7 and 8 an additional window may be displayed to confirm the driver installation:



Figure 6 – Device driver signature confirmation

Setup will now install the filter driver. After completion, click 'Finish' to close the installer.



Figure 7 – Setup complete

If so prompted, reboot the system to finalize installation. The VASCO DIGIPASS reader is now ready for use with PC/SC 2.0 enabled applications.

Copyright © 2013 VASCO Data S	ecurity		
15-11-2013	INS-CCIDFilter-v2.1.doc	2.1	Page 9 of 11



3 Appendix A: Installing the Microsoft CCID driver on Windows XP

Connect the VASCO DIGIPASS reader and wait for the "Found New Hardware Wizard" dialog:

Found New Hardware Wizard			
	Welcome to the Found New Hardware Wizard Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission). <u>Read our privacy policy</u>		
	Can Windows connect to Windows Update to search for software?		
	Click Next to continue.		
	< Back Next > Cancel		

Figure 8 – New Hardware Wizard

Make sure you have a working internet connection and select "Yes, this time only" for searching Windows Update:



Figure 9 – Installation source selection

Select "Install the software automatically (Recommended)".

Copyright © 2013 VASCO Data Security			
15-11-2013	INS-CCIDFilter-v2.1.doc	2.1	Page 10 of 11



Found New Hardware Wizard		
	Completing the Found New Hardware Wizard The wizard has finished installing the software for: USB Smart Card reader	
	Click Finish to close the wizard.	

Figure 10 – Successful CCID driver installation

The Microsoft CCID driver is now installed. The reader will be listed in the device manager as "USB Smart Card reader". You can open the Computer Management console by right-clicking "My Computer" in the Start menu and selecting the "Manage" menu option.

Copyright © 2013 VASCO Data S	ecurity		
15-11-2013	INS-CCIDFilter-v2.1.doc	2.1	Page 11 of 11