



# CIR415A Bluetooth® Contactless Smart Card Reader

**User Manual** 



#### **Driver installation Procedure**

\* Driver signed by Microsoft and WHQL, user can install the driver with Window Update. In case that cannot install via Window Update, please process the below steps to Manual installation

Hardware requires:

- ✤ CIR415A
- PC with OS windows 7 or above

Software requires:

CIR415 Driver Package

Steps:

3.

4.

- 1. Connect CIR415A to PC
- 2. On PC, open "Control Panel > System"

oncorrance + System and Sect	urity	~ Ū	Search Control Pane
Review your Troubleshoe	and Maintenance computer's status and resolve issues   👳 Change Use it common computer problems	r Account Control setting	IS
Windows Check firewa	Defender Firewall all status   Allow an app through Windows Firewall		
System View amoun See the nam	it of FAM and processor speed   🌍 Allow remote acce <u>e of t</u> his computer	ss   Launch remote assi	istance
Power Op Change batt	otions ery settings   Change what the power buttons do   C	Change when the comput	ter sleeps
File Histo Save backup	ry copies of your files with File History   Restore your file	es with File History	
Open "Device M	anager"		
🔜 System			
← → × ↑ 🗹 > Contre	D Panel > System and Security > System		
Control Panel Home	View basic information about your co	omputer	
Device Manager	Windows edition		
	Windows Edition		
V Remote settings	Windows 10 Home		
Kemote settings     System protection	Windows 10 Home © 2019 Microsoft Corporation, All rights rese	nved	
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System protection System protection Advanced system settings Device Manager File Action View Help Pile Action View Help Pile Processors Processors Smart card readers Microsoft Usbo	Windows 10 Home © 2019 Microsoft Corporation. All rights rese "Smart card readers" — □ × 	rved.	
System protection System protection Advanced system settings Device Manager File Action View Help File Action View Help Printers Printers Processors Processors Smart card readers Smart card readers Software component	Windows 10 Home © 2019 Microsoft Corporation. All rights rese "Smart card readers" — □ × 	rved.	
<ul> <li>Kemote settings</li> <li>System protection</li> <li>Advanced system settings</li> <li>Select and open</li> <li>Device Manager</li> <li>File Action View Help</li> <li>File Action View Help</li> <li>Processors</li> <li>Processors</li> <li>Processors</li> <li>Smart card readers</li> <li>Microsoft Usbc</li> <li>Software componence</li> <li>Software devices</li> </ul>	Windows 10 Home © 2019 Microsoft Corporation. All rights rese "Smart card readers" — □ × I I I I I I I I I I I I I I I I I I I	rved.	
<ul> <li>Kemote settings</li> <li>System protection</li> <li>Advanced system settings</li> <li>Select and open</li> <li>Device Manager</li> <li>File Action View Help</li> <li>Software compone</li> <li>Software devices</li> <li>Sound, video and s</li> </ul>	Windows 10 Home © 2019 Microsoft Corporation. All rights rese "Smart card readers" — □ × 	rved.	
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if it is shown "Microsoft Usbccid ... (WUDF)", please continue with step 5)

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## Circlc ■ Device Manager – – × File Action View Help ■ ■ ■ ■ ■ ■ ■ ■ Security devices ■ Smart card readers ■ CIR415 CL & 1S > ■ Software components > ■ Software devices

- > I Sound, video and game controllers
- Storage controllers
   System devices
- Universal Serial Bus controllers
   Universal Serial Bus devices
   WSD Print Provider
- if it is shown "CIR415 CL & 1S" mean driver install completed

٨

5. Right click then select "Update driver"



- 6. Select "Browse my computer for driver software..."  $\times$ 
  - Update Drivers Microsoft Usbccid Smartcard Reader (WUDF)

How do you want to search for drivers?

→ Search automatically for updated driver software
Windows will search your computer and the Internet for the latest driver software
for group device, unless you've disabled this feature in your device installation
settings.

→ Browse my computer for driver software
Locate and install driver software manually.

Cancel

7. 選擇 "Let me pick from a list …"

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circlo	
Update Drivers - Microsoft Usbccid Smartcard Reader (WUDF)	
Browse for drivers on your computer	
Search for drivers in this location:           Project\CIR315\Production Package\CIR315A-01ENG\TL_DRIVER         Browse           Include subfolders         Include subfolders	
Let me pick from a list of available drivers on my computer     This list will show available drivers compatible with the device, and all drivers in the     same category as the device.	
Next Cancel	
Select "Have Disk"	
← 및 Update Drivers - Microsoft Usbccid Smartcard Reader (WUDF)	
Select the device driver you want to install for this hardware.	
Select the manufacturer and model of your hardware device and then click Next. If you hardware disk that contains the driver you want to install, click Have Disk.	ve
Show compatible bardware	

Show compatible hardware	
Model	
G CIR115 ICC Version: 2.0.0.0 [24/9/2019]	
CIR115 ICC Version: 2.0.0.0 [26/9/2019]	
GMicrosoft Usbccid Smartcard Reader (UMDF2)	
GMicrosoft Usbccid Smartcard Reader (WUDF)	
This driver is digitally signed. Tell me why driver signing is important	Have Disk
	Next Cancel

 $\times$ 

9. Select "Browse..."

8.



Select "CIR415.inf", then press "Open" and "OK"

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#### 10. Select "CIR415 CL & 1S" then "Next"

← 📱 Update Drivers - Microsoft Usbccid Smartcard Reader (WUDF)

Select the device driver you want to install for this hardware.

	Select the manufacturer and model of your hardware device and then click Next. If you have a
~	disk that contains the driver you want to install, click Have Disk.

×

Show compatible hardware	
Model	
🔄 CIR415 CL & 1S	1
This driver has an Authenticode(tm) signature.	Have Disk
Tell me why driver signing is important	
	Next Cancel

11. Waiting until below screen shown, Press "Close" to complete



12. Double click to ensure the device changed to "CIR415 CL & 1S"

Close

#### circle 🛔 Device Manager $\times$ \_ File Action View Help 🗢 🔿 📅 🔽 🖬 💭 > P Security devices ٨ Smart card readers × 📳 CIR415 CL & 1S Software components > Software devices > Sound, video and game controllers

Storage controllers
 System devices
 Universal Serial Bus controllers
 Universal Serial Bus devices
 WSD Print Provider



#### **Operation Example**

Hardware requires:

- ✤ CIR415A
- PC with OS windows 7 or above
- Mifare 1k Test Card

Software requires:

Any PCSC Application (e.g. APDU.exe)

Steps:

1. Plug in the reader into the PC

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#### 2. Open "APDU.exe"

circle

Open APDU.exe				
🛕 TAPDUDemoCard demo app		_		×
File Spawn Help				
Demo Info				
<u>1</u> . Select reader	☐ <u>A</u> uto reset			
2. Connect	Connection - share mode C Direct		]	
	Connection - protocol C Undefined I Default C T <u>0</u> C I 1 C Raw			
Message to the card:	A0 A4 00 00 02 3F 00		*	
<u>3</u> . Transmit	⊡ <u>S</u> tress Interval(ms) 500 ♀			
Answer from the card:				
4. Disconnect	Disposition on disconnecting C Leave		]	
Circle CIR415 CL & 1S PICC 0 There is no card in the reader.				

3. Click "1. Select reader", Chose "Circle CIR415 CL & 1S PICC 0", then click "OK"

Select reader		~
Reader	ATR	
Circle CIR415 CL & 1S PICC 0		
Circle CIR415 CL & 1S SAM 0		
1		
<u> </u>	<u><u>C</u>ancel</u>	

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#### 4. Tag ISO14443 Test card on CIR415A

TAPDUDemoCard demo app		-	×
Demo Info			
<u>1</u> . Select reader	uto reset		
2. Connect	nnection - share mode Djrect		
	nnection - protocol Undefined © Default © TI © Raw		
Message to the card A0 A	44 00 00 02 3F 00		
<u>3</u> . Transmit	tress Interval(ms) 500 🚔		
Answer from the card:			
4. Disconnect	position on disconnecting Leave で <u>R</u> eset C U <u>n</u> power		
[			
Circle CIR415 CL & 1S PICC 0 There is a card in the reader. 3B 8F 80 01 80 4F 0C A0 00 00 03 06 03	00 01 00 00 00 6A		

Select "T1", Message = "90 0a 00 00 01 00 00"

#### 5. Press "2. Connect"

🛕 TAPDUDemoCard demo app		_		×
File Spawn Help				
Demo Info				
<u>1</u> . Select reader	Auto reset			
2. Connect	Connection - share mode C Direct · C Ex <u>c</u> lusive			
[	Connection - protocol CUndefined CDefault CT0CT1CRa <u>w</u>			
Message to the card:	182 00 00 06 #######			
<u>3</u> . Transmit	Stress Interval(ms) 500			
Answer from the card:				
4. Disconnect	Disposition on disconnecting C Leave		]	
Circle CIR415 CL & 1S PICC 0 There is a card in the reader. 3B 8F 80 01 80 4F 0C A0 00 00 03 0	6 03 00 01 00 00 00 00 6A			

6	Drace	"3	Transmit"
<b>ю</b> .	Press	J.	Transmit

🛕 TAPDUDemoCard demo app		_		×
File Spawn Help				
Demo Info				
<u>1</u> . Select reader	□ <u>A</u> uto reset			
2. Connect	Connection - share mode C Direct  C Shared C Exclusive			
	Connection - protocol C Undefined C Default C T0 © T1 C Raw			
Message to the card:	#82 00 00 06 #######		-	
<u>3</u> . Transmit	□ <u>S</u> tress Interval(ms) 500 🗲			
Answer from the card:				
<u>4</u> . Disconnect	Disposition on disconnecting C Leave			
Circle CIR415 CL & 1S PICC 0 There is a card in the reader. The 3B 8F 80 01 80 4F 0C A0 00 00 03	e card is connected to in share mode. 06 03 00 01 00 00 00 00 6A			

7. Result will be shown on the "Answer from the card:"

TAPDUDemoCard demo app	_		×
File Spawn Help			
Demo Info			
<u>1</u> . Select reader □ <u>A</u> uto reset			
2. Connect         Connection - share mode           C Direct         Image: Share diagonal content of the state diagon			
Connection - protocol C Undefined C Default C T0  で <u>T</u> 1 C Ra <u>w</u>			
Message to the card: #82 00 00 06 #######		-	
<u>3. Transmit</u> <u>Stress</u> Interval(ms) 500			
Answer from the const: Answer:90 00[\$9000]		_	
<u>4</u> . Disconnect <u>C</u> Leave <u>Reset</u> <u>C</u> Unpower			
Circle CIR415 CL & 1S PICC 0 There is a card in the reader. The card is connected to in share mode. 3B 8F 80 01 80 4F 0C A0 00 00 03 06 03 00 01 00 00 00 6A			

# Parameter Sheet

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## circle Carrier Frequency ......13.56MHz (Default: 424kbps) **SAM Smart Card Interface** Standard.....ISO 7816 3/4 Class A Supply Current ......Max. 50mA Smart Card Voltage.....5V Operating Baud Rat ......9600 - 125kbps Clock Frequency ......4.0 MHz Card Connector Type.....Contact Human Interface 1 Red & Green Bi-colour (Power & Charging status) 1 Blue & Green Bi-colour (Bluetooth & USB mode) 1 Blue (PICC operation) Buzzer ..... Optional **Operating Conditions** 0 - 45 °C (when battery is charging) **Compliances/Certifications** Systems/ Standards ......USB 2.0 Full Speed, CCID, Microsoft® WHQL, Bluetooth 5.0 Regulatory/ Environmental......EN 62368/IEC 62368, CE, FCC, VCCI, RoHS, REACH, MIC, TELEC **Operational Environment**

Compatible Operating System .......Windows® 7, 8, 8,1, 10, Linux®, Mac OS® 10.11 and above, Android™ 7.0 and above, IOS 8.0 and above

# 

NOTE: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

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