

ACR122U NFC MIFARE RFID SMART READER



Introduction

The ACR122U NFC Reader is a PC-linked contactless smart card reader/writer developed based on 13.56 MHz Contactless (RFID) Technology. Compliant with the ISO/IEC18092 standard for Near Field Communication (NFC), it supports not only MIFARE® and ISO 14443 A and B cards, but also all four types of NFC tags.

ACR122U is compliant with both CCID and PC/SC. Thus, it is a plug-and-play USB device allowing interoperability with different devices and applications. With an access speed of up to 424 kbps and a full USB speed of up to 12 Mbps, ACR122U can also read and write more quickly and efficiently. The proximity operating distance of ACR122U is up to 5 cm, depending on the type of contactless tag in use.

Objective

Writing, reading and format NFC Tag data using ACR122U on Windows PC.

Requirement

ACR122U Reader, a PC (Windows 10 tested) & [NFC Tools for Desktop program](#)

Technical Specification

Physical Characteristics	
Dimensions (mm)	98.0 mm (L) x 65.0 mm (W) x 12.8 mm (H)
Weight (g)	70 g
USB Interface	
Protocol	USB CCID
Power Source	From USB port
Speed	USB Full Speed (12 Mbps)
Cable Length	1.0 m, Fixed
Contactless Smart Card Interface	
Standard	ISO/IEC 18092 NFC, ISO 14443 Type A & B, MIFARE®, FeliCa
Protocol	ISO 14443-4 Compliant Card, T=CL
	MIFARE® Classic Card, T=CL
	ISO18092, NFC Tags
	FeliCa
Built-in Peripherals	
LED	1 bi-color: Red and Green
Buzzer	Monotone
Certifications/Compliance	
EN 60950/IEC 60950	
ISO 18092	
ISO 14443	
USB Full Speed	
PC/SC	
CCID	
VCCI (Japan)	
KC (Korea)	
Microsoft® WHQL	
CE	
FCC	
RoHS 2	
REACH	
Device Driver Operating System Support	
Windows® CE	
Windows®	
Linux®	
MAC OS®	
Solaris	
Android™	

A). Installing Driver and Program Setup.

1. Download both driver and program from link below

USB Driver: <https://www.acs.com.hk/download-driver-unified/9840/ACS-Unified-MSI-4280.rar>

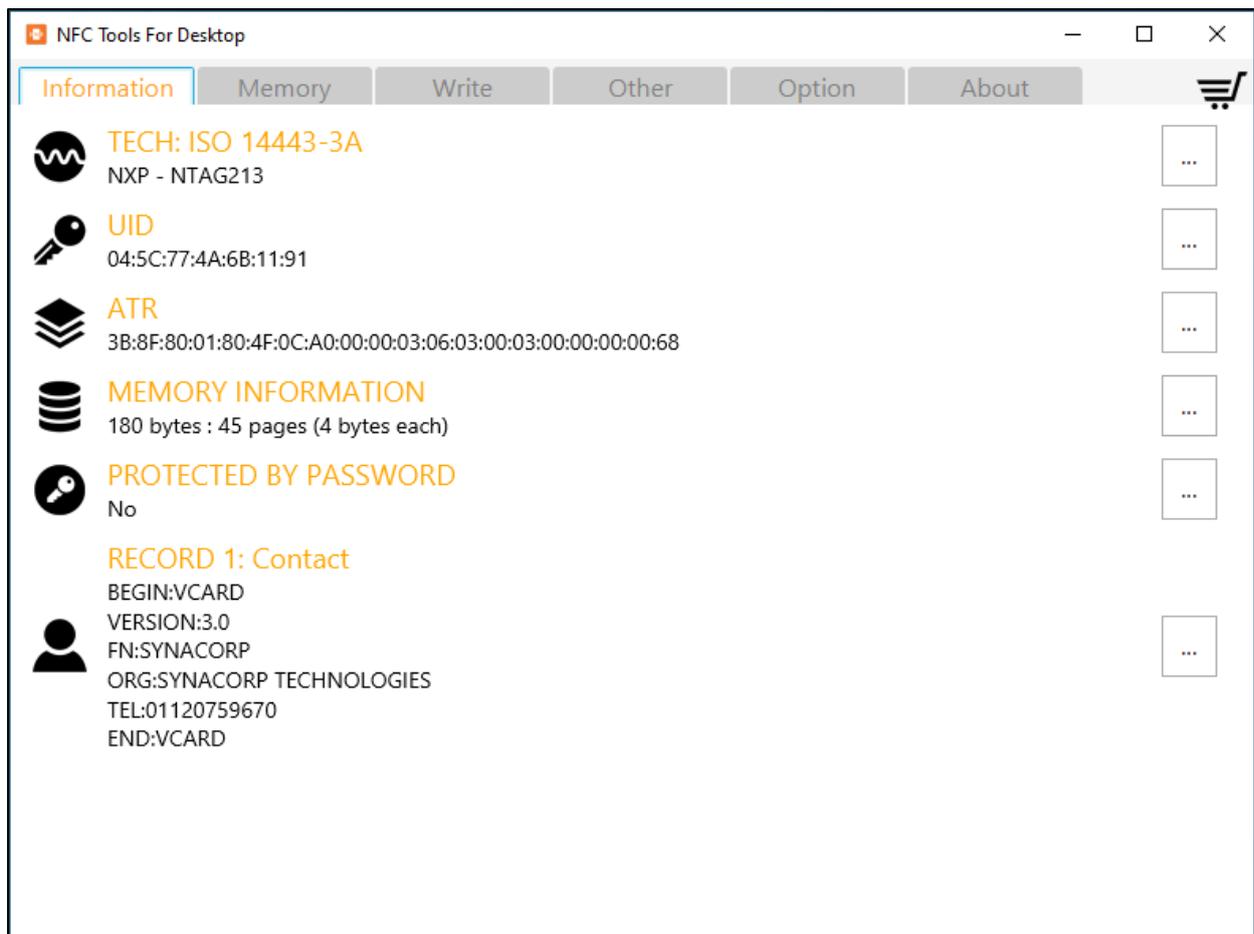
NFC Tools for Desktop: <https://www.wakdev.com/en/apps/nfc-tools-pc-mac.html>

2. Install the driver and connect the device after the installation completed.

3. Unzip / unpack / decompress the '.zip' file downloaded from site above.

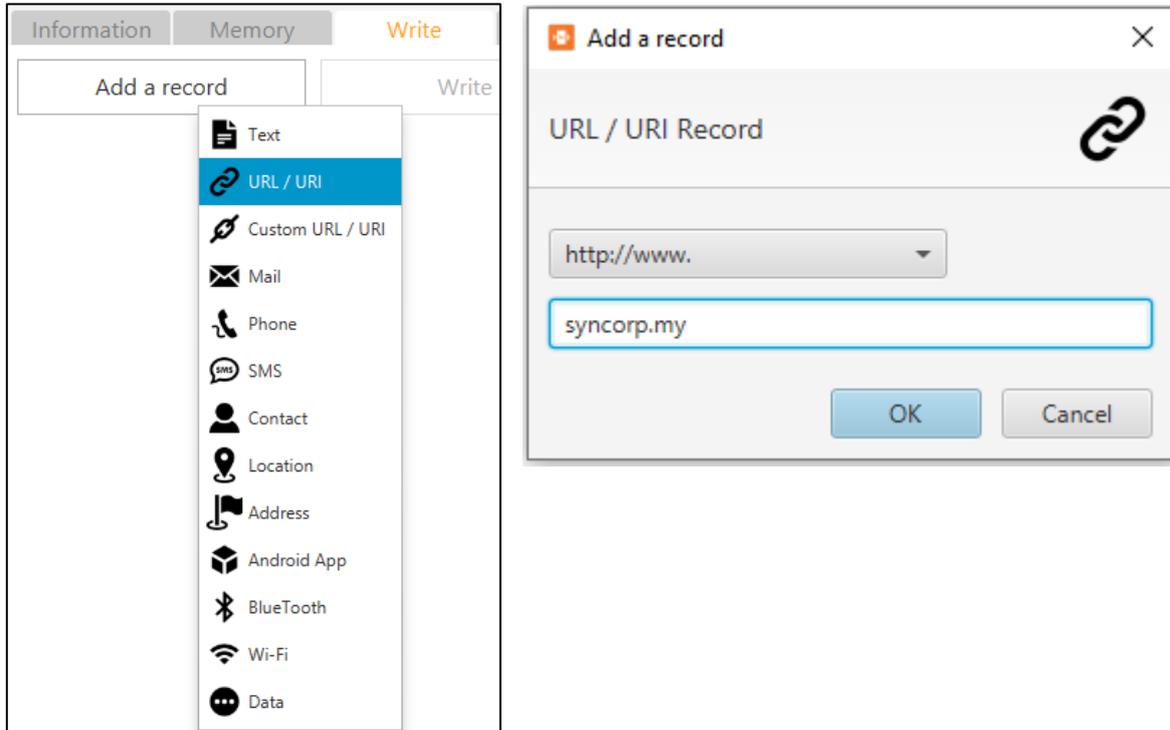
B). Reading NFC Tag Information

- Locate the unpacked folder and run the ***nfctoolsgui.exe*** to launch the program.
- Place the NFC tag on the ACR122U; LED will change from RED to YELLOW and buzzer will beep once. This indicate that the device already detected the Tag.
- NFC Model, UID, Memory, Password Protection & Tag Content will displayed.

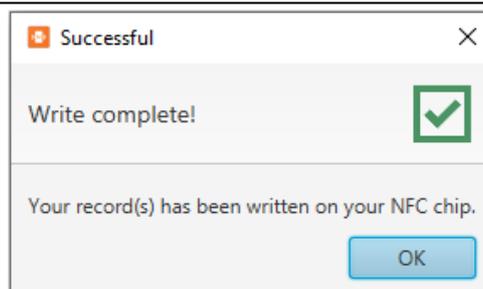
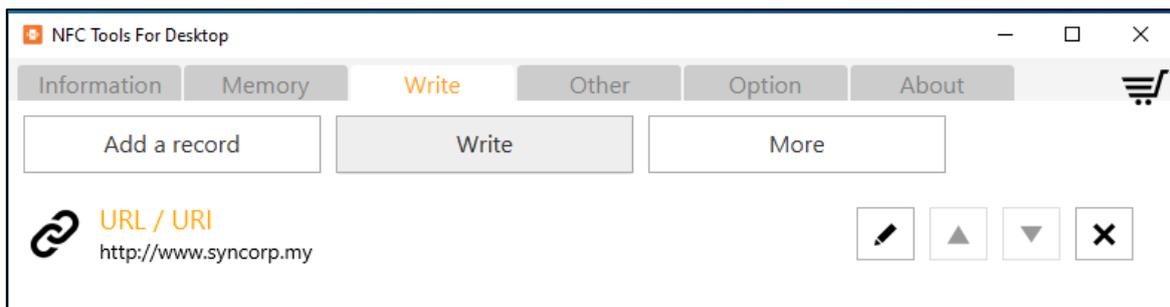


D-2). Programming Link / URL using PC

- Switch to **'Write'** tab and click on **'Add a record'** button. Select **'URL / URI'** from the list down menu.
- Input your Link / URL inside the new pop-up menu, and click on **'OK'**.

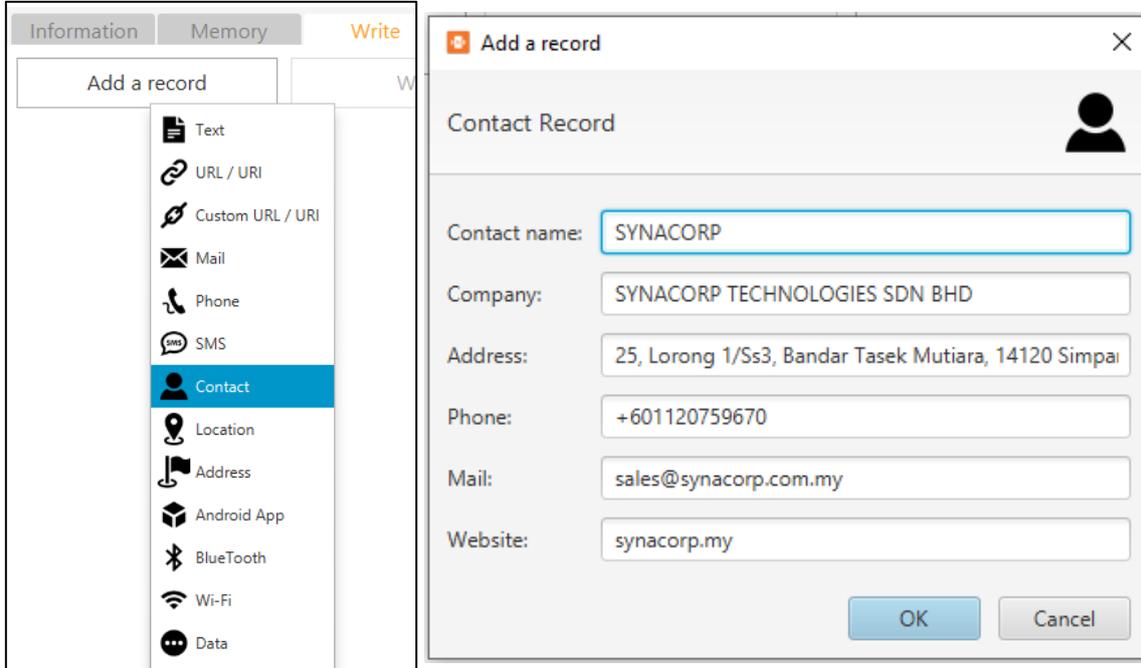


- Once data confirmed, click on **'Write'** button to encode the link to NFC tag.
- The new pop-up window will appear to shows the result whether it successful or not

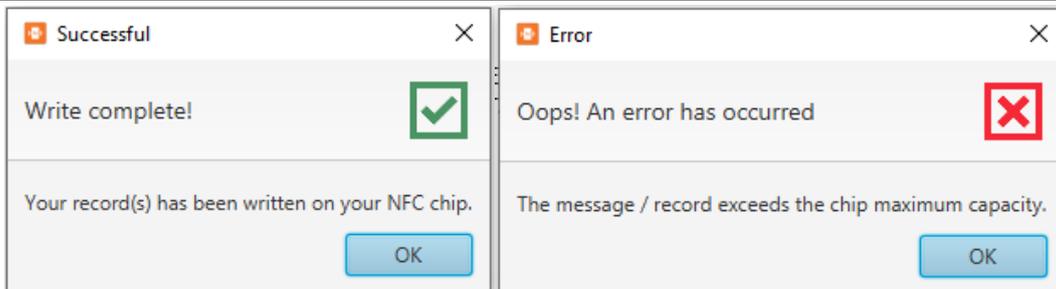
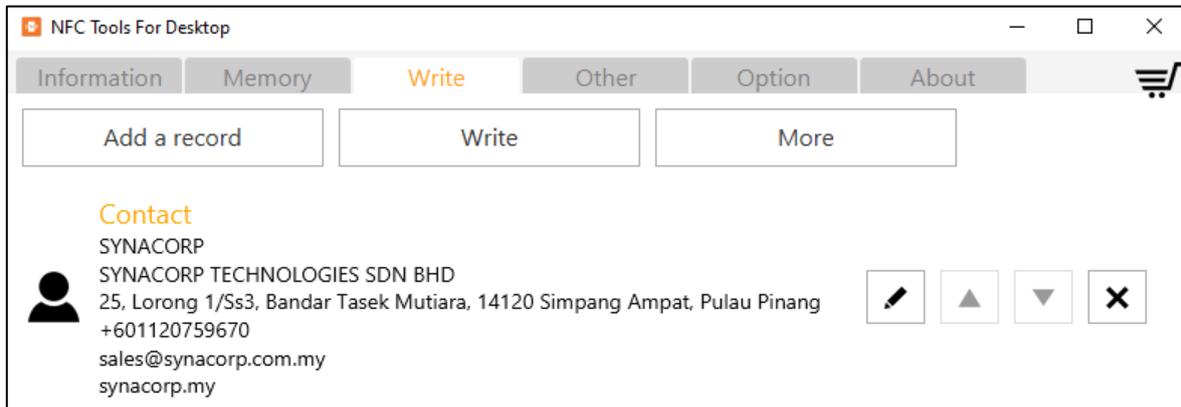


D-3). Programming Business Card or Digital Contact using PC

- Switch to 'Write' tab and click on 'Add a record' button. Select 'Contact' from the list down menu.
- Input all contact info details on the pop-up window and click on 'OK' button.



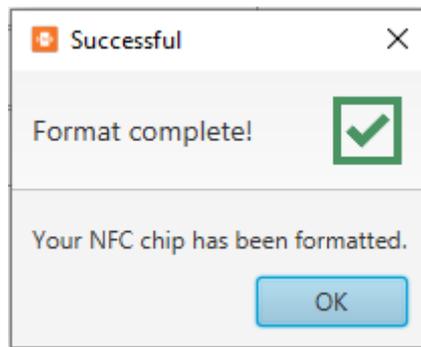
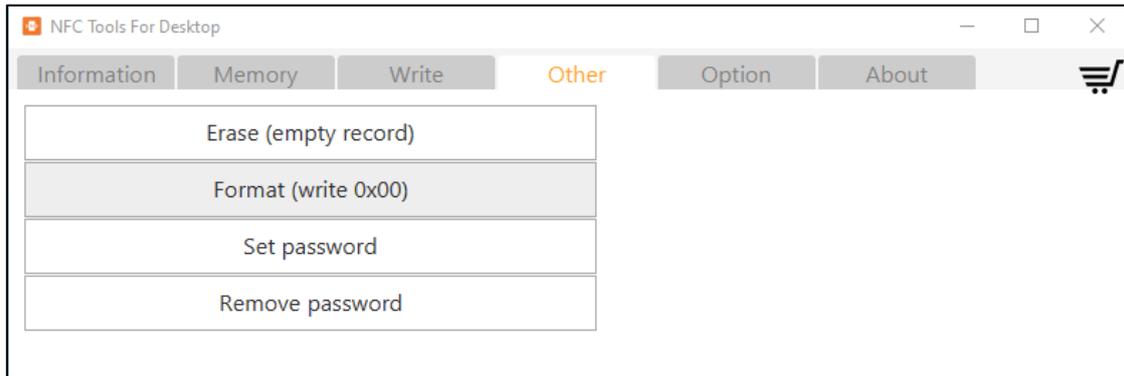
- Once data confirmed, click on 'Write' button to encode the link to NFC tag.
- The new pop-up window will appear to shows the result whether it successful or not



Note that the more data / text will increase storage use. Choose NFC Tag Size properly

D-4). Formatting / Erase NFC Tag using PC.

- Switch to **'Other'** tab and click on **'Format (write 0x00)'** button.
- The new pop-up window will appear to shows the result whether it successful or not



- Once format complete user can re-scan the NFC tag to confirm whether the data already deleted or not.