

A068-Creating Custom encryption card with XSMART readers using PROS CS Software

This guidance describes how to configure the XSMART readers and how to create Custom Encryption user cards with protected identification ID.

Required items:

1. XSMART readers
2. Latest version of PROS CS Software
<https://software.xprgroup.com/Software/PROS%20CS/Last%20version/PROS%20CS%20setup%206.1.1.exe>
3. Micro USB cable. Make sure the cable supports data transfer. If the PC cannot establish the connection with the reader, change the cable.



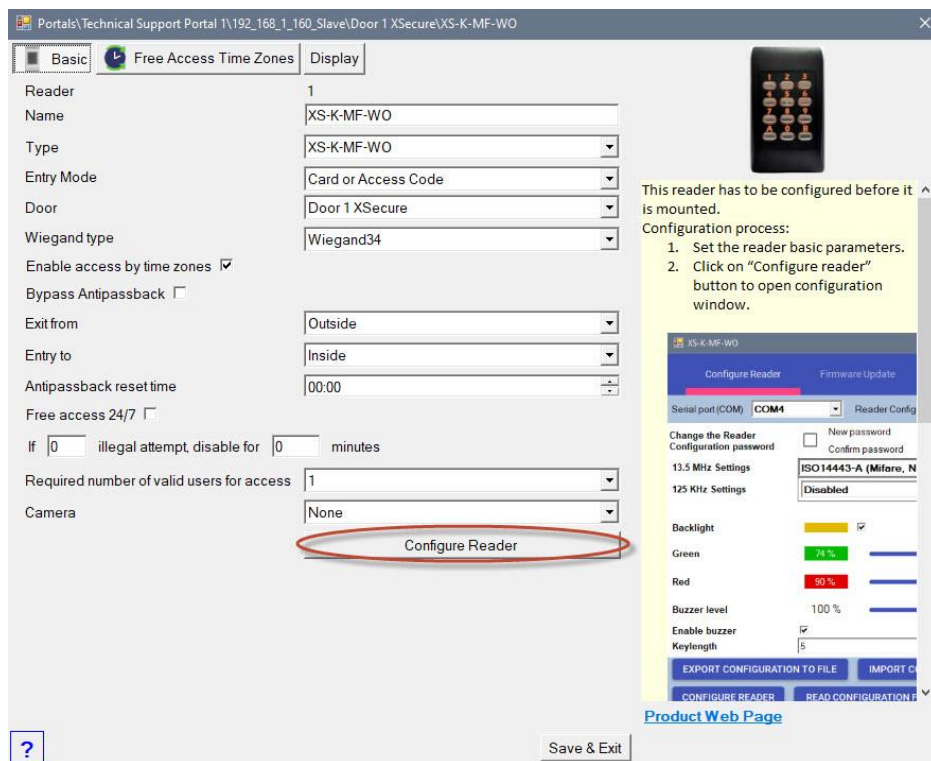
4. PROX-USB-X desktop reader
5. Mifare Desfire cards for creating Custom Encryption cards.
6. Separate Mifare Desfire card if you want to configure the reader with card.

1. Firmware update XSMART reader at PROS Client

1. Install the latest version of PROS CS Software.
2. Run the PROS Client
3. Click on reader which need to be configured to read custom encryption cards and select **"Properties"**.

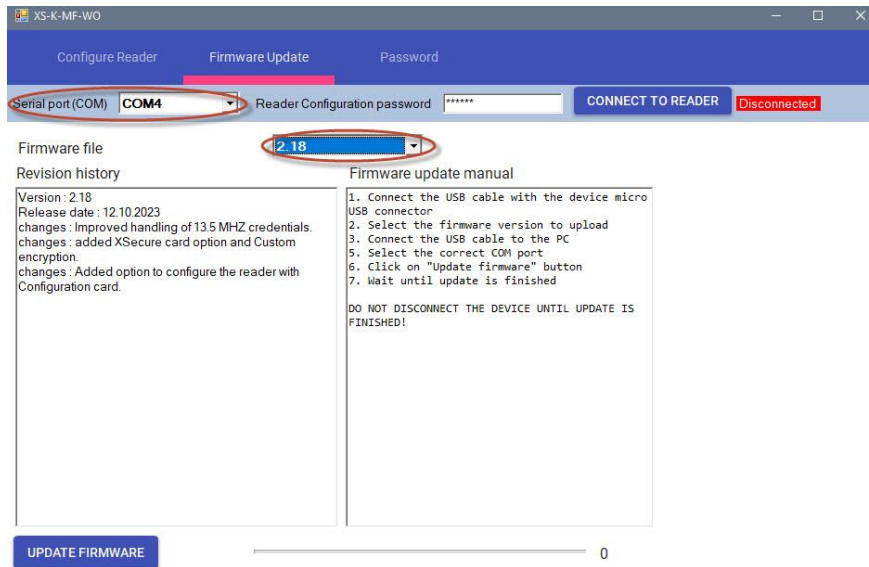


4. At section **"Basic"** click on **"Configure Reader"** tab.

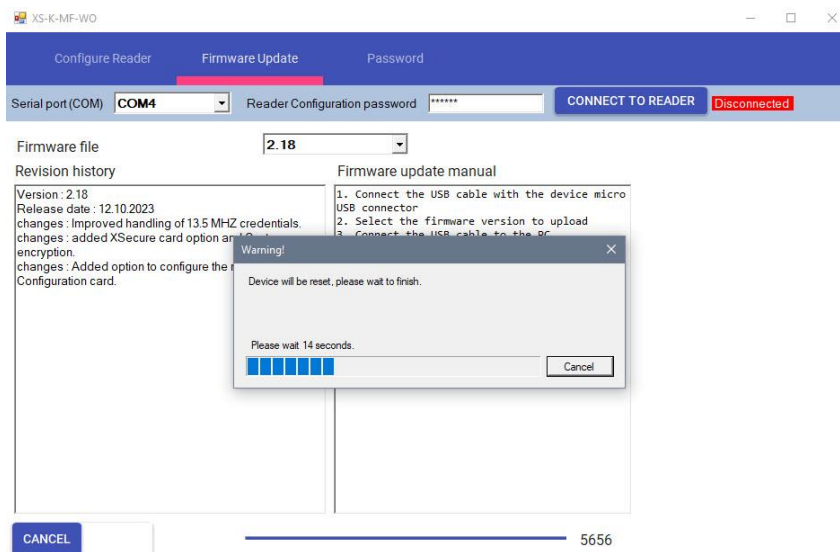


5. Connect the reader to the PC using a micro USB cable.
6. If the reader is recognized by the PC, the field "Serial Port (COM)" will show the communication port where the reader is connected, like "COM3". If there is no value in the "Serial Port (COM)" field, change the USB cable.

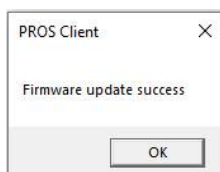
7. Select **"Firmware Update"**.
8. Connect the USB cable to the PC.
9. Select the correct COM port.
10. Select the latest available firmware (2.18 or newer).
11. Click on **"Update firmware"** button.



12. Wait until update is finished.

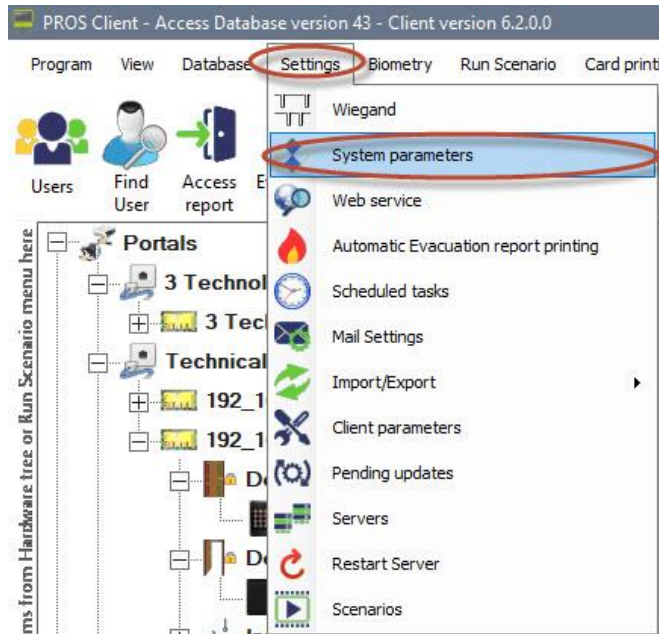


13. After Firmware update success click on **"OK"** tab.



2. Creating the Custom Desfire encryption settings at PROS Client

1. Install the latest version of PROS CS Software.
2. Run the PROS Client
3. Select **“Settings/System Parameters”**.



4. Select **“Desfire custom encoding”**.
5. Set the encryption settings items in the table. If the cards will be encoded with PROX-USB desktop reader, keep the value for **“Key number”** to zero.
6. Click on **“Save&Exit”** tab.

System parameters

System Biometry USB Desktop Readers Evacuation Report Desfire custom encoding

Custom Desfire encryption settings

Application Key	CCDFEC26AA0DBCF62E719F50CF251331	👁
Application ID (000001 - FFFFFFFF)	FF1512	👁
File ID	3	
Key number	0	
Offset (bytes, 0-255)	5	
ID length (bytes)	5	
Data encryption	Encyphered (AES)	
Key type	AES	

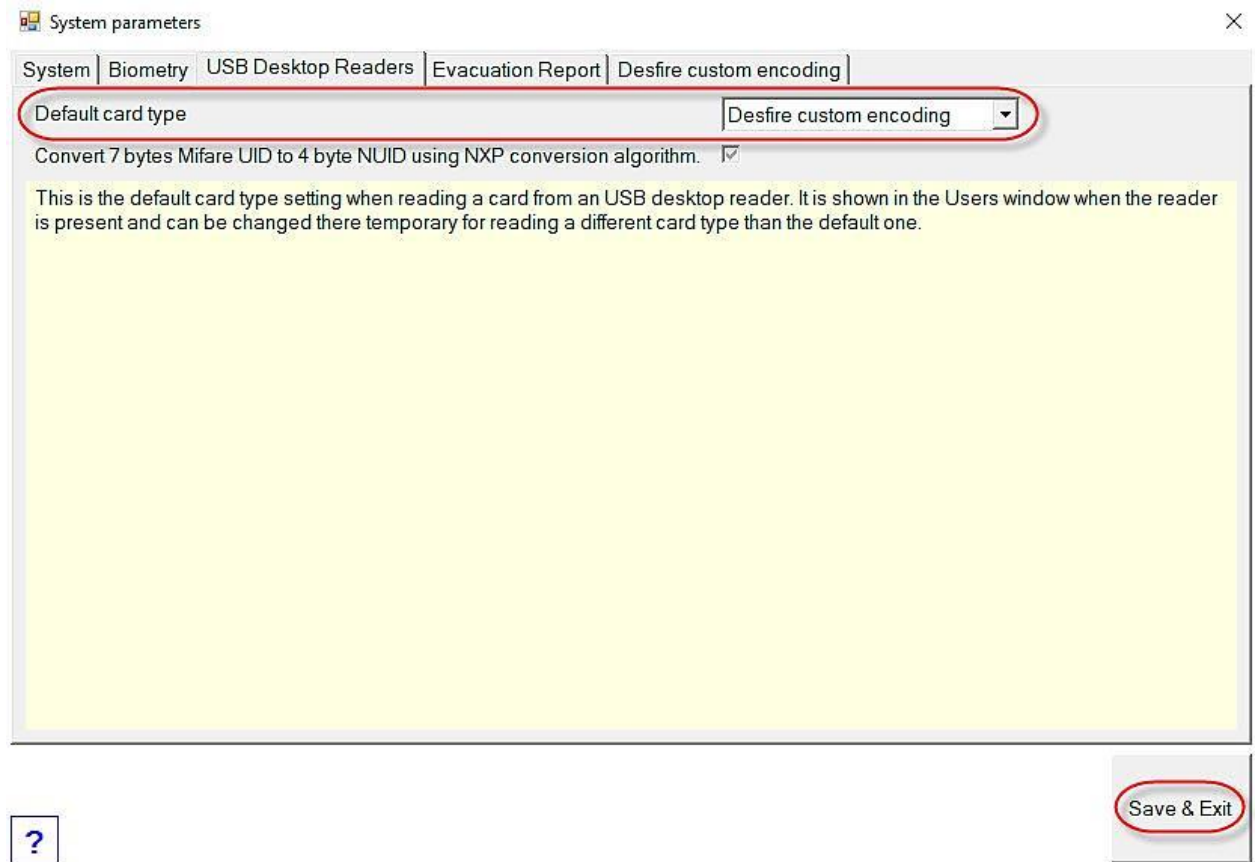
Update Desktop reader

?

Save & Exit

3. Select the Default Card type for PROX-USB-X Desktop

1. Select **“Settings/System Parameters”**.
2. Select **“USB Desktop Readers”**.
3. Set the default card type to **“Desfire custom encoding”**.
4. Click on **“Save&Exit”** tab.

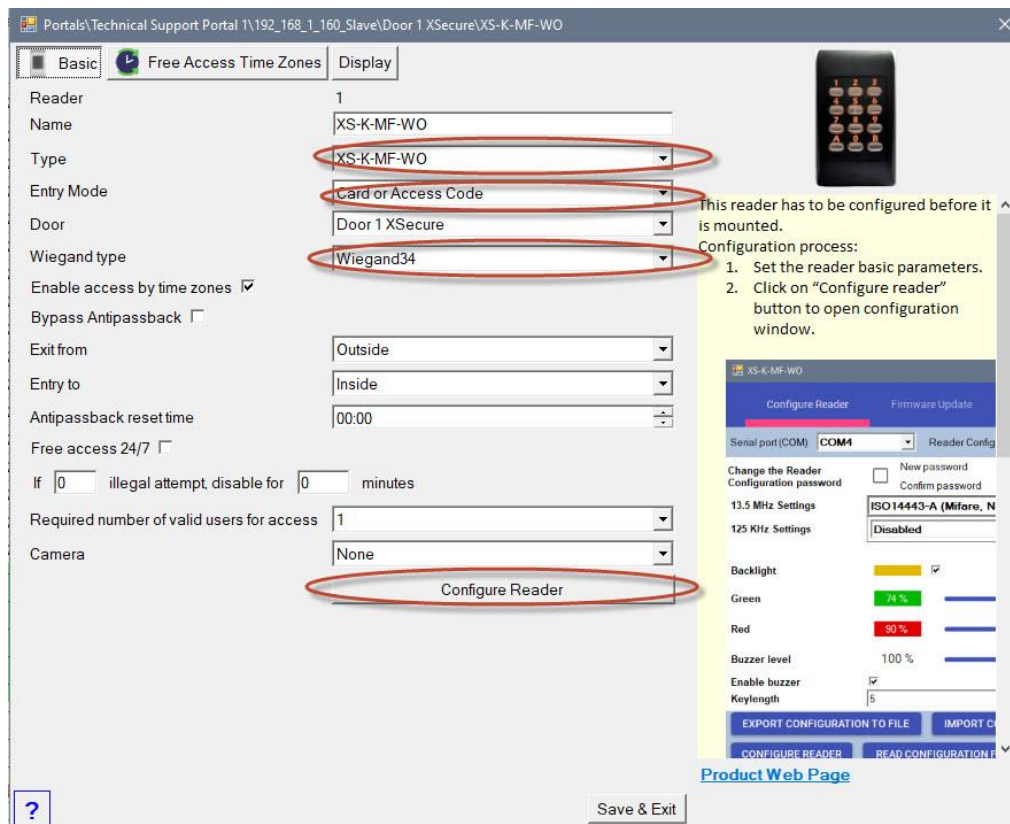


4. Configure the XSMART Readers to read custom encryption card at PROS Client

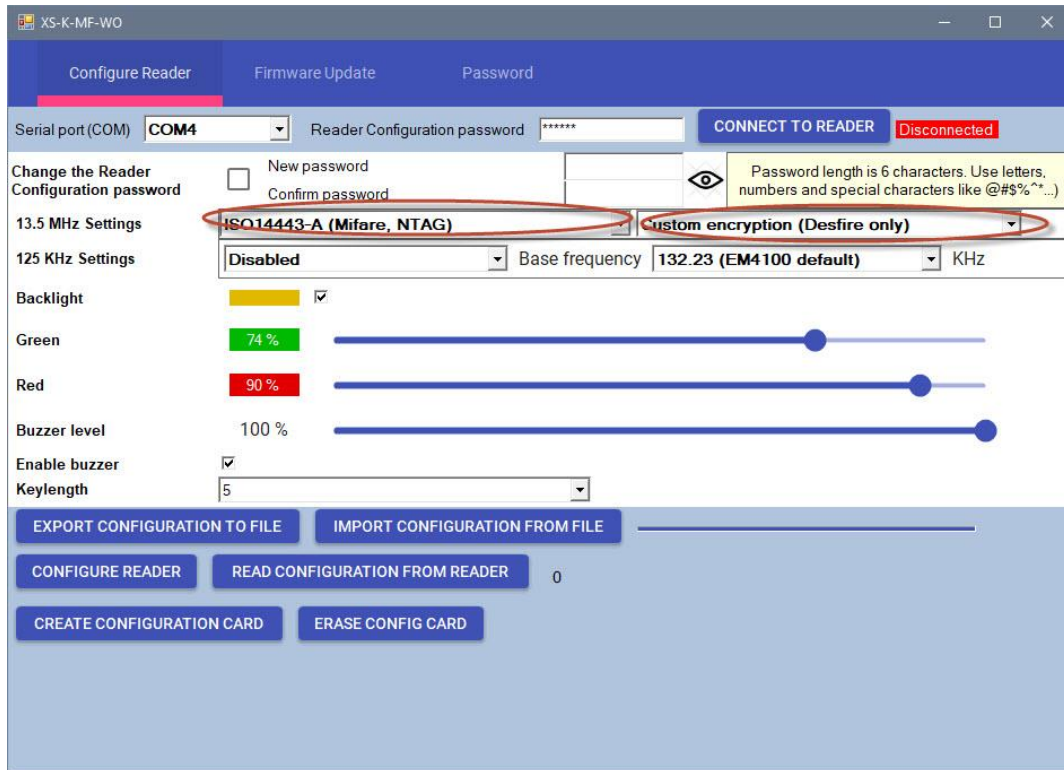
1. Click on reader need to be configured to read custom encryption cards and select **"Properties"**.



2. Select correct reader type.
3. Select Entry mode if you use reader with keypad.
4. Set Wiegand type to Wiegand 34.
5. Click on **"Configure Reader"** tab.



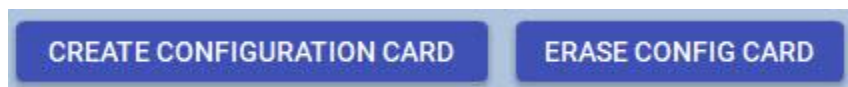
6. Connect the reader to the PC using a micro USB cable.
7. If the reader is recognized by the PC, the field “Serial Port (COM)” will show the communication port where the reader is connected, like “COM3”. If there is no value in the “Serial Port (COM)” field, change the USB cable.
8. Select “**ISO 14443-A(Mifare,NTAG)**” and select “**Custom encryption(Desfire only)**”.



9. If micro USB is used for configuring the reader click on “**Configure Reader**” tab.



10. If Configuration card is used for reader configuration, place the configuration card on your desktop reader and click on “**Erase Config Card**” if card is previously used for configuration and then create new Configuration Card using “**Create Configuration card**” tab. Keep the configuration card 5 to 10 seconds on the reader until you hear short and long beep. After this the reader is configured. If you have more readers just use the same configuration card for all readers.



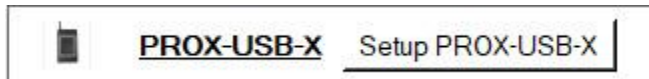
11. Connect the reader to the Controller.

5. Assigning the Custom encryption credential to user with desktop reader PROX-USB-X.

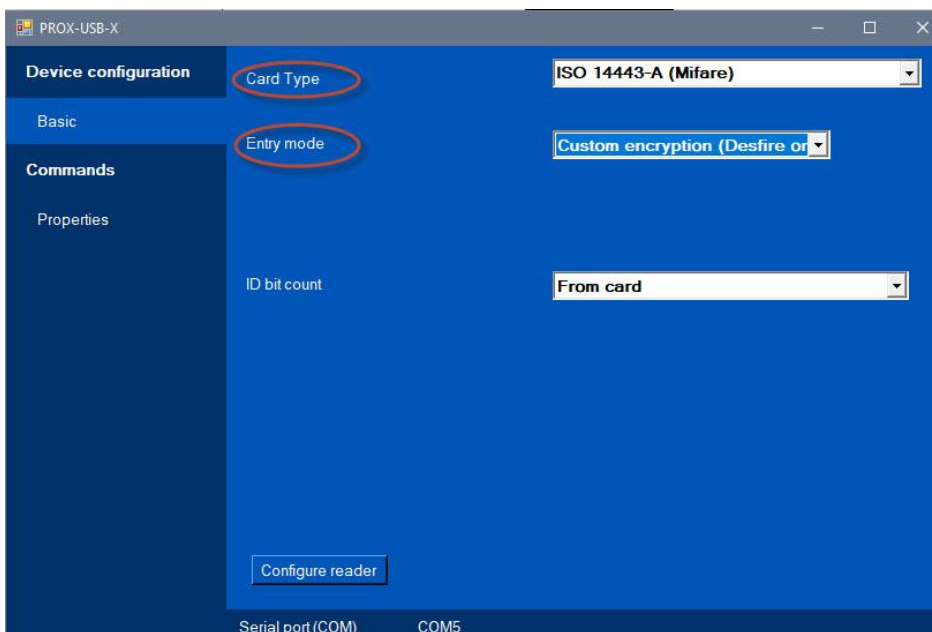
1. Make sure that card type is set to **“Desfire custom encoding”**.



2. Configure the desktop reader PROX-USB-X to read the Custom encryption credentials.
3. Connect the desktop reader PROX-USB-X to PC
4. Open Users management window.
5. Click on “Setup PROX-USB-X” tab.



6. Set the values as in image bellow and click on **“Configure reader”** tab. Now reader will read Custom encryption(Desfire only) cards.



7. Place the Mifare Desfire card at PROX-USB-X reader.
8. If card is already programmed select the icon to get the User ID(Card number).

User ID (Card number)	Site code	User code	Wiegand 26	Type
ID 1				
96552211			1266613 193 17683	
Access Code	0	Card	Get card ID	

9. If card is not programmed, type the User ID you want and click on icon” **Encrypt card**”.

User ID (Card number)	Site code	User code
ID 1		
147896523	2256	47307
Access Code	Encrypt card	Card

10. After Encryption is completed message will appear “**Card is encrypted**”.



11. Click on “**Save new**” tab.

