

Smart NFC Emulate Keyboard Reader



Up to 7 Modes includes UID, WG26, Sector, NDEF(URL, Text)...

It is easy to configured into different types of reader.

No need driver and software for most smart devices.

Just Plug and Play!

Auto scan the tag and emulate keyboard output.

Ordering information:

Model No.: ER300X

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1. Special Features

- Auto scan and Emulate keyboard NFC reader
- Act as a HID USB keyboard device
- Up to 7 types: **UID, WG26, Sector, URL, Text...**
- Support chip: ISO14443A/M1/UL/ NTAG213
- Frequency: 13.56 MHz
- Typical time to read tag(UID): <100ms
- Reading distance: up to 6 cm
- Communication interface: USB
- Power supply : DC 5V, BUS power
- 2 LED indicator
- Support OS: Android, iOS, Linux, Windows, Macintosh,
- Mechanic and environmental characteristics:
 - Dimensions: 120 x80x16 (mm)
 - Operating temperature: -10 ~50 °C
 - Storage temperature: -20~70 °C
 - Relative humidity: up to 95%
 - Weight: 100g

2. Output mode

The ER300X is a smart NFC reader. This reader acts as a USB HID keyboard device. There is no extra software needed for ER300X, the user can just use it as a keyboard.

When ER300X is deployed, no software is needed. It uses standard USB drivers supplied by the operating system such as Android, iOS, Windows, Macintosh and Linux.

Up to 6 types include UID, Sector, URL, Text and etc. By using a **“X Configure card”**, the user can change the reader to different mode. The reader can be configured as ER300D/L/A/N or else types. On the different type of reader, please reference the same type of reader manual or datasheet.

The “X Configure Card” can configure the reader ER300X to 7 different types(V7.22):

- 1) D10H-L # (Decimal, High-Low, 10Digits, /ER300D*)
 - 2) HL8-14 # (Hex, High-Low, 8-14Digits)
 - 3) D10L-H # (Decimal, Low-High, 10Digits)
 - 4) ASecto # (M1 Sector, ASCII, / ER300A*)
 - 5) WG26- # (Weigand26 protocol, 8 Digits)
 - 6) LH8-14 # (Hex, Low-High, 8-14Digits, /ER300L*)
 - 7) NDEF-2 # (URL&Text, /ER300N*)
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Each time the reader will change type to next. After configure successful then you can remove the “X Configure Card” away and use test card or else card to test. (Vx.xx: *HARDWARE VERSION NUMBER*)

Below is the description for the different types.

- 1) **D10H-L**: (work same as *ER300D/ER200D/YHY202D*), read UID by the sequence B3B2B1B0 and convert into decimal 10 digits.
- 2) **HL8-14**: read UID by the sequence B3B2B1B0 and output by hexadecimal 8 digits.
- 3) **D10L-H**: read UID by the sequence B0B1B2B3 and convert into decimal 10 digits.
- 4) **ASecto**: (work same as *ER300A/ER200A/YHY201A*), read one sector or block, needs a writer and program to write the data into the M1 card, data store as ASCII code, for example “123” store in the chip is “313233”.
- 5) **WG26-8**: read UID and output 8 digits by Weigand 26 protocol.

6) **LH8-14**: (work same as *ER300L/ER200L/YHY202L*), read UID by the sequence B0B1B2B3 and output by hexadecimal 8 digits(M1) or 14 digits(UL/NTAG21X).

7) **NDEF-2**: (work same as *ER300N/ER200N*), read the NFC chip NTAG213 of the URL or text inside based on the NDEF protocol. (Suggest writer:ER302+eReader software.)

-----Meaning Append the #

E: Enter key at the end strike

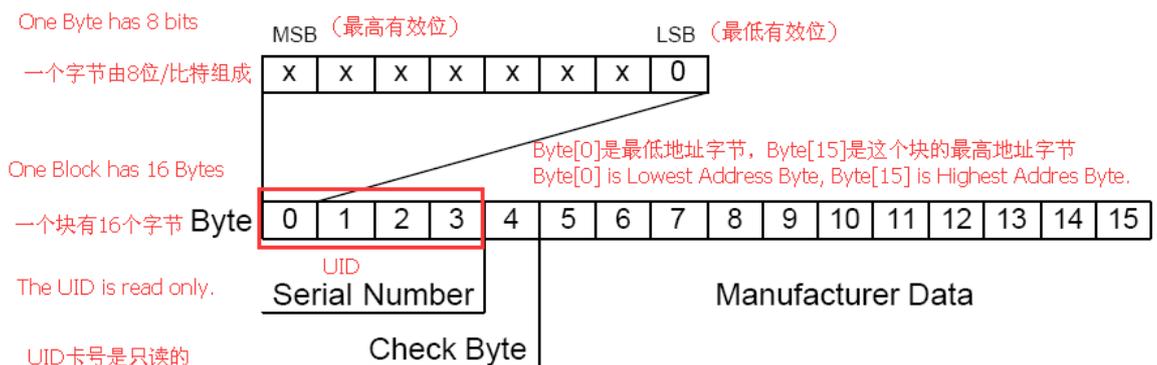
C: Counterfeit(Cloned) card detect

S: Screen Lock

P: PIN code

Vx.xx(Version number)

Below is the sequence of the UID bytes in the block.



Usage examples: (On ENGLISH KEYBOARD open a text file and set the keyboard input on the “**EN**”, 2 test cards: one is M1 chip, uid: **DCA21E2A** , and another is UL chip,UID: **048ED20AA75A80**,stored sequence is B0-B7) :

- Example 1: Read the “ **X Configure Card**” and if the text file shows : **D10H-L#ECV7.22** , then move the card away and put the M1 card on the reader, then the text file will show: **0706650844**.
- Example 2: Read the “ **X Configure Card**” and if the text file shows : **HL8-14#ECV7.22** , then move the card away and put the M1 card on the reader, then the text file will show: **2A1EA2DC**, and if you put the UL chip card/tag, then it will show: **805AA70AD28E04**.
- Example 3: Read the “ **X Configure Card**” and if the text file shows : **D10L-H#ECV7.22**, then move the card away and put the M1 card on the reader, then the text file will show: **3701612074**.
- Example 4: Read the “ **X Configure Card**” and if the text file shows : **ASecto#EV7.22** , then move the card away and put M1 card on the reader, then the text file will show: **Sector1:Hello 1234567890** (this string is depends on what you write in the sector) .
- Example 5: Read the “ **X Configure Card**” and if the text file shows : **WG26#ECV7.22** , then move the card away and put M1 card on the reader, then the text file will show: **02007772**
- Example 6: Read the “ **X Configure Card**” and if the text file shows : **LH8-14#ECV7.22**, then move the card away and put the M1 card on the reader, then the text file will show: **DCA21E2A**, and if you put the UL chip card/tag, then it will show: **048ED20AA75A80**.
- Example 7: Read the “ **X Configure Card**” and if the text file shows : **NDEF-2#ECV7.22** , then move the card away and put NTAG213 tag on the reader, then the text file will show URL or text: <http://www.ehuoyan.com/> (or “**NFC TEXT:Hello nfc 123456789#UID:0433A192EC5A80**”)(this string is depends on what you write in the chip) .
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3. Device Connect

If you want to connect the ER300X reader to the smart phone or pad, then you need to use an **OTG converter** to connect them. If you use a ER300X-M which has Micro USB connector then it can be connect to android pad or smart phone and need no **OTG converter**.

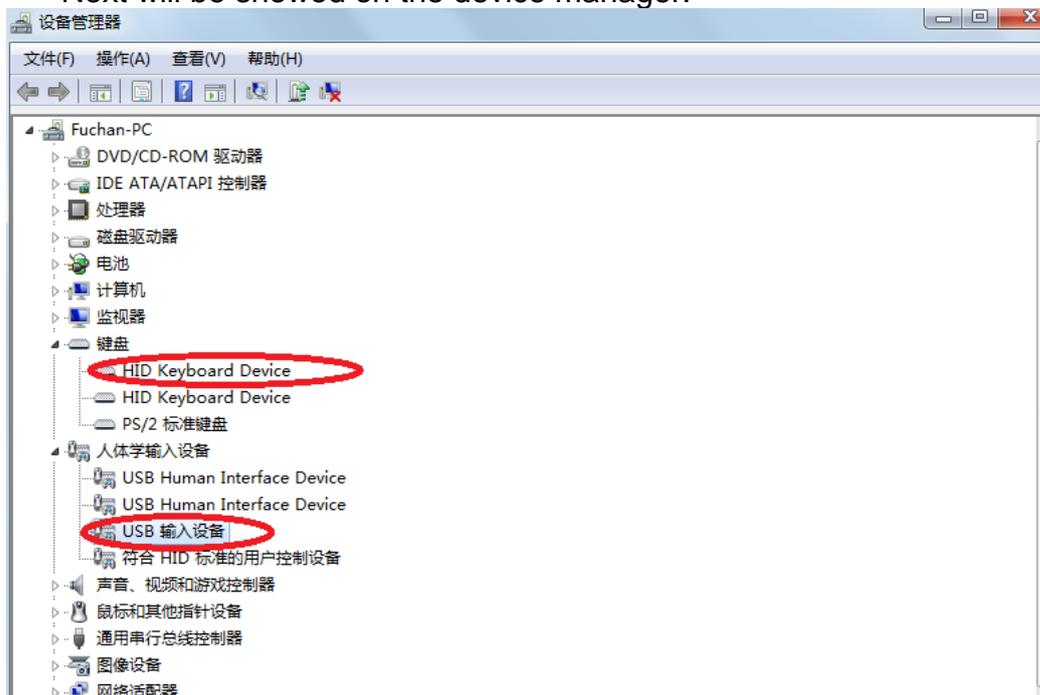
After power on the blue led will flash, it means that the reader is ready.

When plug the ER300X reader to the PC's USB port, the system will recognize it as HID keyboard device.



When plug the device to the usb port, the system will know it.

Next will be showed on the device manager:



It may show different with different system.

After installation successfully, open "Excel " or other application program to read the RFID Tag and the data will be shown on the screen .

4. Electrical Characteristics

4.1 Operating Condition Range

Relative humidity: up to 95%

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Tamb	Ambient Temperature		-10	25	60	°C

VDD	DC Supply Voltage	DVSS = 0V	4.5	5	5.5	V
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Table 1 - Operating Condition Range

4.2 Current Consumption

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
IDVDD	Supply Current	Reading card	-	35	50	mA

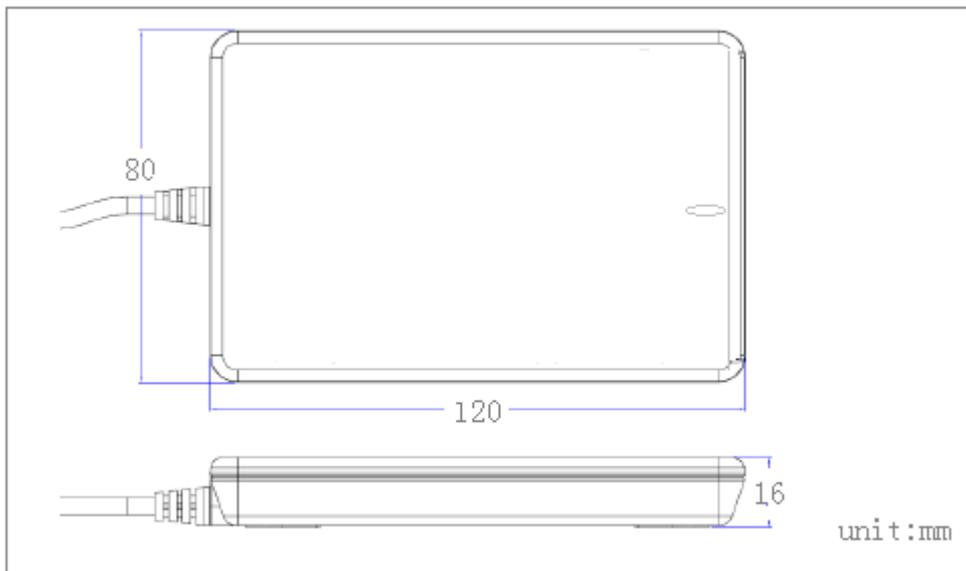
Table 2 - Current Consumption

4.3 Operating Distance

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
OD	Tag size more than 20mm	Measured from the reader bottom	0	40	60	mm

Table 3 - Operating Distance

5. Layout



6. Ordering information

Item No.	Description
ER300X-A	NFC reader, A type USB

ER300X-M NFC reader, Micro USB

7. Legal information

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