

eSecu FIDO2 Pro Security Key

User Manual

(V2.3)

Excelsecu Data Technology Co., Ltd.

CONFIDENTIAL information of Excelsecu Data Technology Co., Ltd.

NO WARRANTIES OF ANY NATURE ARE EXTENDED BY THIS DOCUMENT. Any product and related material disclosed herein are only furnished pursuant and subject to the terms and conditions of a duly executed Program Product Licence or Agreement to purchase or lease equipment. The only warranties made by Excelsecu Technology, if any, with respect to the products described in this document are set forth in such Licence or Agreement. Excelsecu Technology cannot accept any financial or other responsibility that may be the result of your use of the information or software material, including direct, indirect, special or consequential damages.

You should be careful to ensure that the use of this information and/or software material complies with the laws, rules, and regulations of the jurisdictions with respect to which it is used. All rights reserved.

Copyright © 2020 Excelsecu Data Technology Co., Ltd.

Table of Content

1.	Product Overview	4
2.	Product Picture	4
3.	The Basic Operation.....	5
3.1.	Register (First Time Only).....	5
3.2.	Signing-In (After Completing Registration)	5
3.2.1.	Bluetooth Pairing Mode (First Time Only)	5
3.2.2.	Bluetooth Mode (Paired Before).....	6
3.2.3.	USB Mode	6
3.2.4.	NFC Mode	6
4.	How to use FIDO2 Pro Security Key for 2-Step Verification	7
4.1.	Register	7
4.2.	Sign in (USB Mode)	11
4.3.	Sign in (Bluetooth + Android Mobile Device)	12
4.4.	Sign in (NFC + Android Mobile Device)	15
4.5.	Sign in (Bluetooth + iPhone)	17
4.6.	Sign in (NFC Mode + iOS 13.3 and Above)	20
5.	Usage of FIDO Manager and OTP	22
6.	FAQ	22
	Question 1: I have two Gmail accounts, how many FIDO2 Pro Security Keys do I need to protect two gmail account. Do I need two FIDO2 Pro Security Keys?	22
	Question 2: What should I do if I lost my FIDO2 Pro Security Key?	22
	Question 3: Can I use FIDO2 Pro Security Key on PC over Bluetooth?	22
	Question 4: Why does GitHub say “this browser doesn’t support security key” on my iPhone?	23
	Question 5: What applications support FIDO2 Pro Security Key?	23
	Question 6: Can I register a FIDO2 Pro Security Key over my smart phone?	23
	Question 7: How can I know when to charge my FIDO2 Pro Security Key?.....	23
7.	Product Spec.....	23

Thank You for Using eSecu FIDO2 Pro Security Key

IMPORTANT INSTRUCTIONS

Please read this manual before operating your eSecu FIDO2 Pro Security Key and keep it for future reference.

1. Product Overview

eSecu FIDO2 Pro Security Key is a hardware authenticator supporting FIDO2 standard and FIDO U2F standard, as well as Bluetooth, NFC and USB communication interfaces. It can be used on FIDO2-enabled or U2F-enabled services and applications' two-factor authentication, multi-factor authentication or passwordless authentication. And multiple interfaces make it easier for you to complete authentication on PCs and mobile devices.

2. Product Picture



eSecu FIDO2 Pro Security Key

The button has the following lighting states:

Steady blue light: long press the button for 5 seconds to enter the Bluetooth pairing mode for the first time. After paired successfully, the steady blue light turns to flashing blue light.

Flashing blue light: short press the button to enter the Bluetooth mode.

Steady white light:

1. When the eSecu FIDO2 Pro Security Key is plugged into a computer's USB port.

2. When the eSecu FIDO2 Pro Security Key is placed on an NFC card reader or on the NFC sensor of a mobile device.

Flashing white light: the eSecu FIDO2 Pro Security Key is receiving an authentication request when it's on USB or Bluetooth mode.

Flashing red light: low power state. Blinking red light every 5 seconds. Please charge it in time.

3. The Basic Operation

3.1. Register (First Time Only)

1. Enter the user name and password to log in to any web service that supports U2F/FIDO2.
2. Insert the eSecu FIDO2 Pro Security Key in your computer over USB connection.
3. Add the eSecu FIDO2 Pro Security Key to your account(s).

3.2. Signing-In (After Completing Registration)

1. Open the website you want to log in.
2. Enter your usual username and password (for U2F-enabled services).
3. Connect the registered eSecu FIDO2 Pro Security Key to a mobile device (Bluetooth/NFC mode) or PC (USB mode).
4. When prompted, press the button on eSecu FIDO2 Pro Security Key to sign in or tap the eSecu FIDO2 Pro Security Key on an NFC sensor.

3.2.1. Bluetooth Pairing Mode (First Time Only)

1. Long press the button for 5 seconds to enter the Bluetooth pairing mode for the first time. The indicator light is steady blue. If there is no pairing request received in 60 seconds, the indicator light goes out and the eSecu FIDO2 Pro security key exits Bluetooth pairing mode.
2. Scan Bluetooth devices on your client side (e.g. a smart phone). Connect to the device which has the same SN as printed on the back of the eSecu FIDO2 Pro Security Key.
3. Input 6-digits PIN as printed on the back of the eSecu FIDO2 Pro Security Key. When paired successfully, the blue light should start blinking.
4. When an authentication request is received, the light blinks white, simply press the button on your eSecu FIDO2 Pro Security Key to complete the authentication.



For security purpose, the FIDO2 Pro Security Key will be forced to shut down after 30 seconds.

3.2.2. Bluetooth Mode (Paired Before)

1. Short press the button to enter the Bluetooth mode. The indicator light blinks blue.
2. When an authentication request is received, the light blinks white, simply press the button on your eSecu FIDO2 Pro Security Key to complete the authentication.



For security purpose, the FIDO2 Pro Security Key will be forced to shut down after 30 seconds.

3.2.3. USB Mode

1. Insert the registered eSecu FIDO2 Pro Security Key to the computer's USB port. The indicator light is white on.
2. When an authentication request is received, the white light blinks. Press the button to confirm this authentication.


3.2.4. NFC Mode

1. Please make sure NFC of the mobile device is turned on.
2. Tap your registered eSecu FIDO2 Pro Security Key on the NFC sensor of mobile device when it's asking for a security key.
3. The indicator light is white on and the authentication will complete in a moment.

4. How to use FIDO2 Pro Security Key for 2-Step Verification

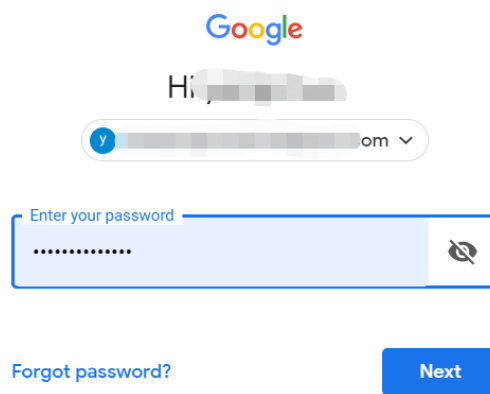
4.1. Register

Register FIDO2 Security Key with your Google account to make it become the second authentication factor.

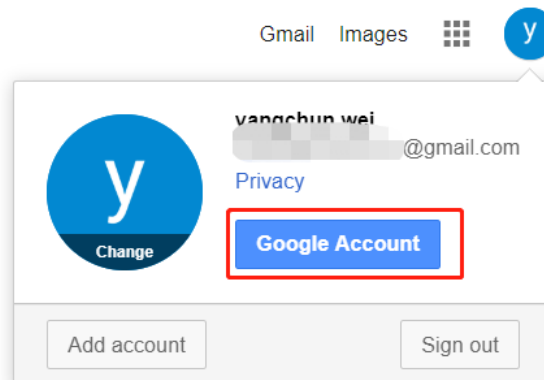


The registration can only be done from a non-mobile device.

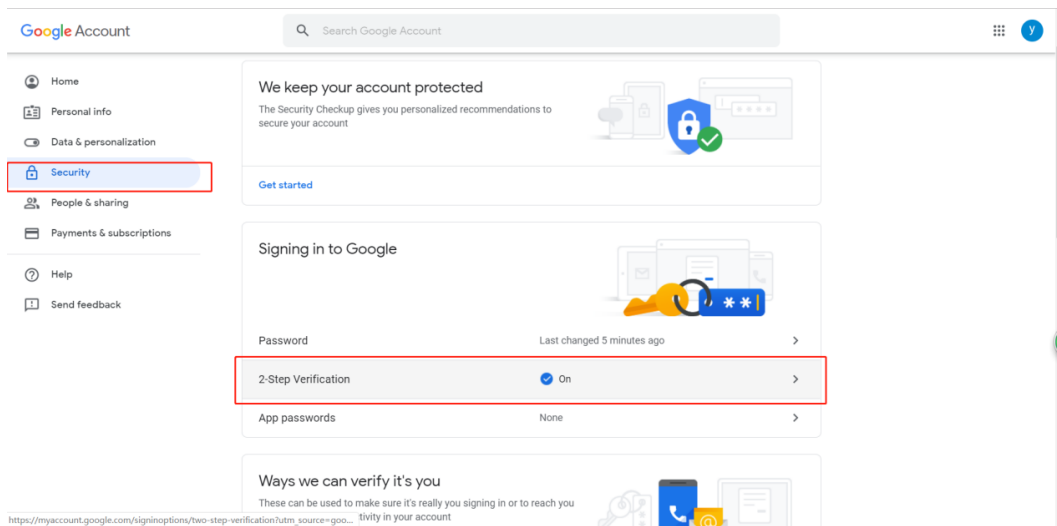
1. Log in to the website: <https://www.google.com> and click **Sign In** on the top right corner. Enter your account name and password.



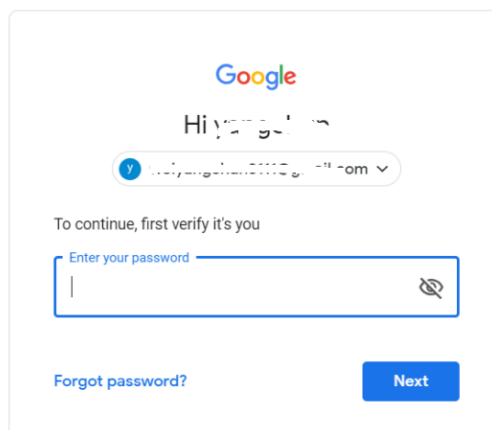
2. Once you have successfully logged in, click on your **Google Account**.



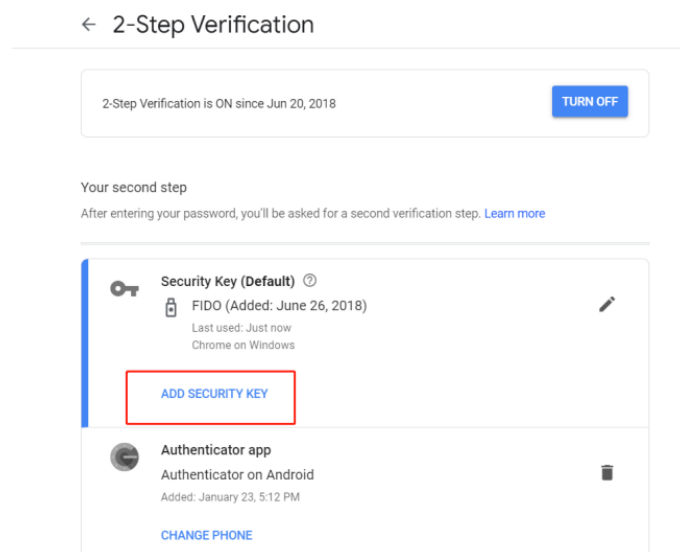
3. Select **Security**, and go to **2-Step Verification**.



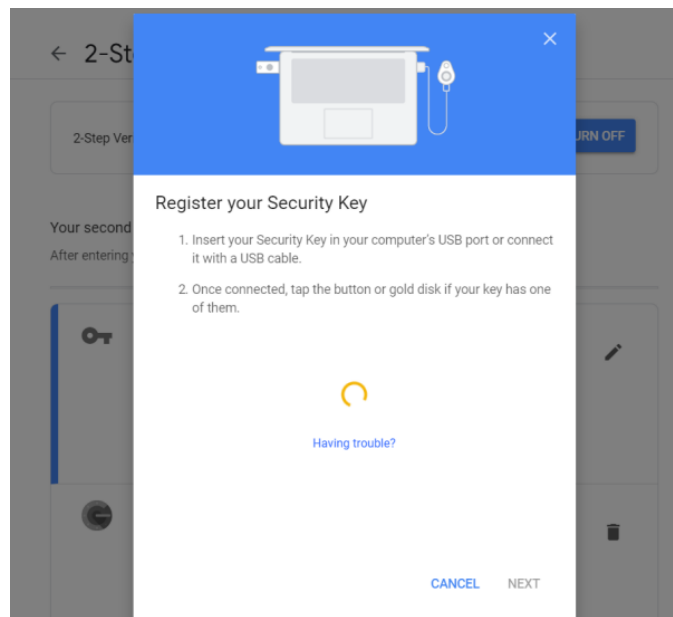
4. You will be asked to log in again.



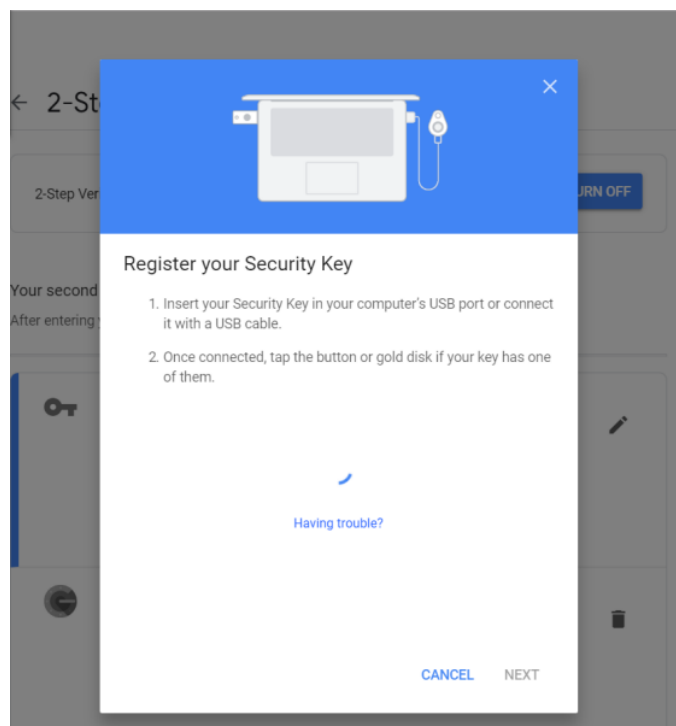
4. Click **ADD SECURITY KEY**.



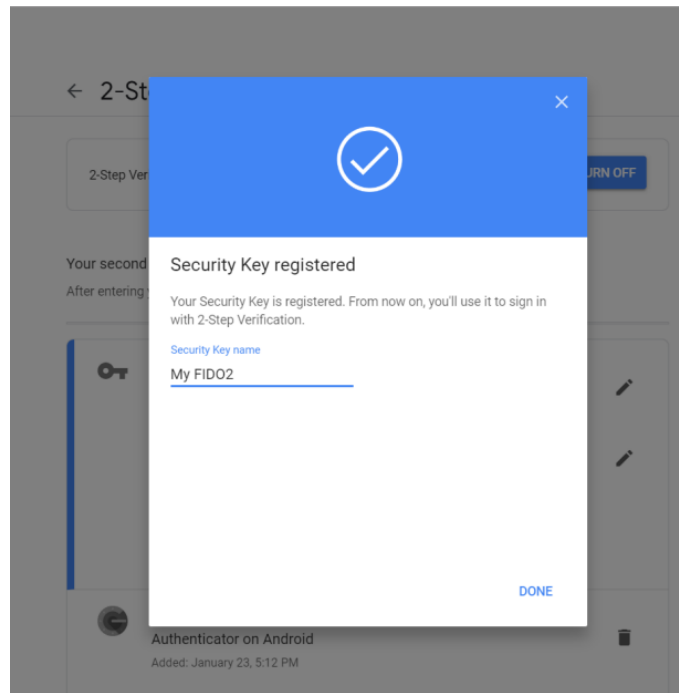
5. You will be prompted to insert your FIDO2 security key into a USB port. Click **NEXT** to continue.



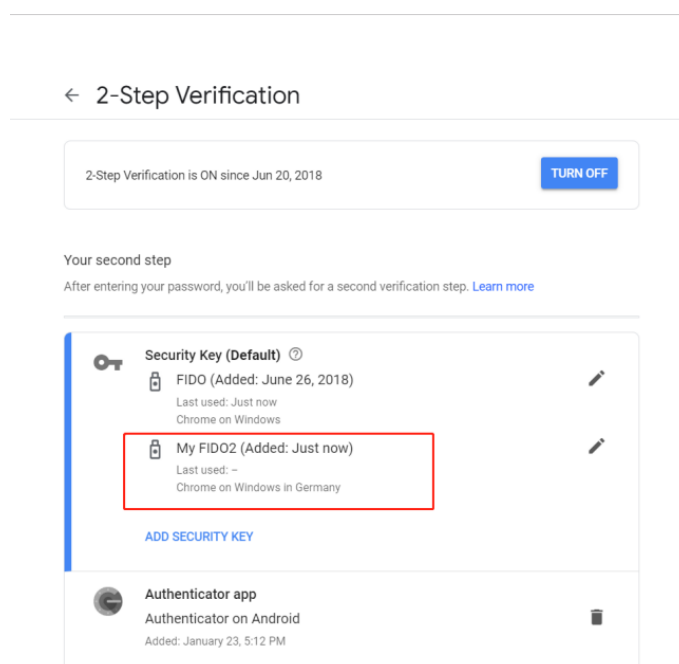
6. When the white light of the key is flashing, short press the button on the eSecu FIDO2 Pro Security Key.



7. Rename your security key, click **DONE** to finish.

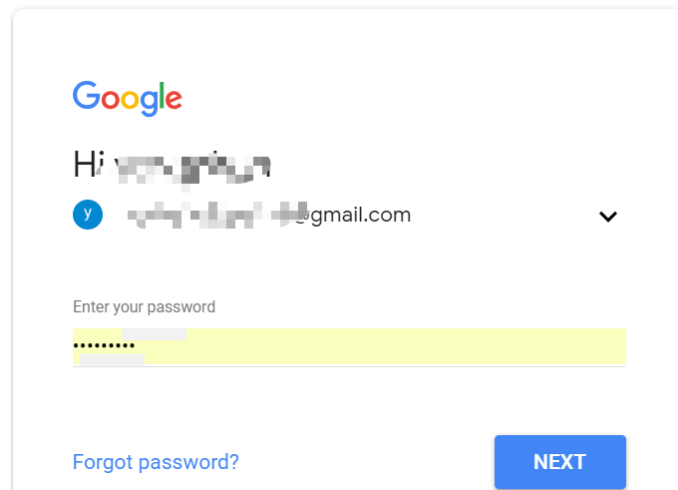


8. The eSecu FIDO2 Pro Security Key becomes the default second authentication factor of your account. You will be asked to use it to complete 2-Step Verification when sign in to Google in the future.

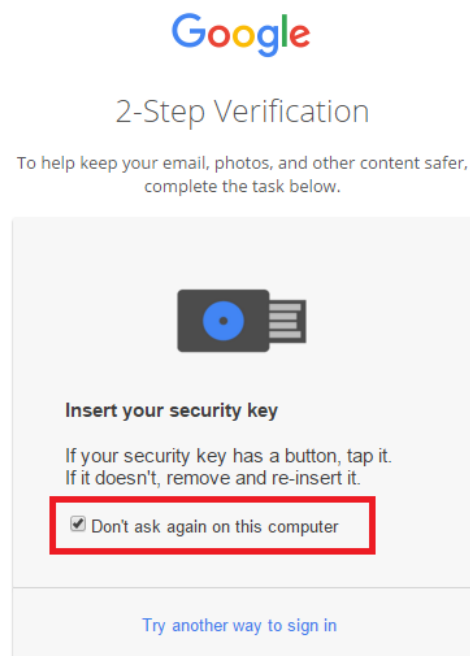


4.2. Sign in (USB Mode)

1. Sign in to Google with username and password. Since you have an eSecu FIDO2 Pro Security Key as the strong second authentication factor, you can simplify your password (e.g. 4-digit PIN) without compromising security.



2. Insert eSecu FIDO2 Pro Security Key to a USB port and tap the button on the key. You will be authorized to access your Google account now.

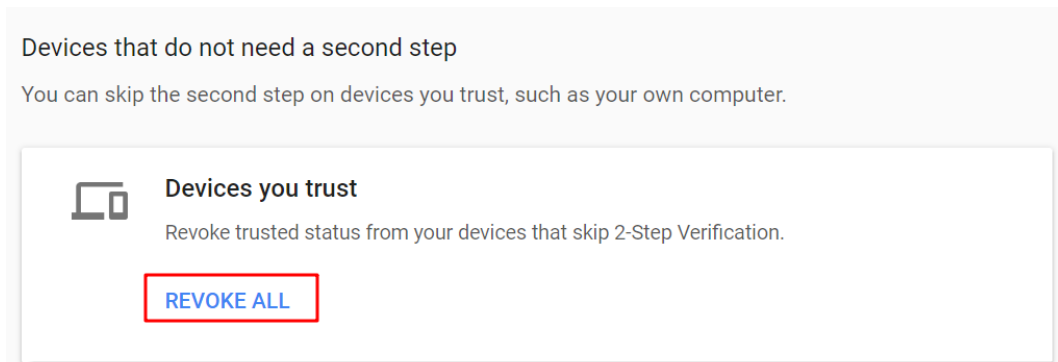




By default, "Don't ask again on this computer" is checked. After checking the box, the next login will skip the two-step verification and log in directly with the user name and password.

You can undo trusted devices in settings to restore the use of two-step verification.

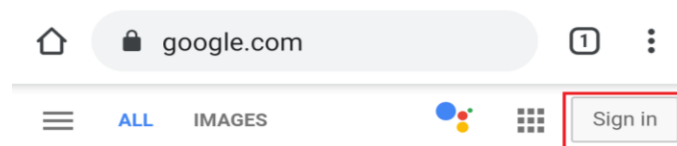
Click **Revoke All** to clear the trusted device and restore the use of two-step verification.



4.3. Sign in (Bluetooth + Android Mobile Device)

When using the eSecu FIDO2 Pro Security Key on an Android mobile device for the first time with Bluetooth connection, you need to pair them first.

1. Make sure the eSecu FIDO2 Pro Security Key is registered to your Google account.
2. Turn on the Bluetooth connection on your Android device. Open the Chrome browser, and go to <https://www.google.com>, click the **Sign in** button on the top right corner, then enter the username and password.



3. If the 2-step Verification of your Google account is turned on, you will be asked to use your Security Key for verification. Click on **Pair another Security Key**.



Use your Security Key with google.com

To use most keys, simply tap the button.

Using your Security Key with google.com helps protect your private data.



[Use your Security Key with NFC](#)

[Use your Security Key with USB](#)

[Pair another Security Key](#)

4. Press and hold the button on your eSecu FIDO2 Pro Security Key for over 5 seconds to active the Bluetooth pairing mode, the blue indicator light on the key shall steady on.



Ready to pair your Security Key?

Pair your key to this device so you can use it with your account



[Use your Security Key with NFC](#)

[Use your Security Key with USB](#)

CANCEL

BEGIN

5. When the Android device detects the signal of the key, the serial number printed on the back of the key will show on the page. Select the serial number, click on **CONTINUE** and enter the 6-digit PIN as

printed on the back of the eSecu FIDO2 Pro for pairing. When paired successfully, the indicator light on the key shall flashing blue, and the Google service will automatically verify your security key.



Select your Security Key

From the list below select the Security Key you wish to pair with your device. The name may be printed on the back of the key.



FD299999807

[Don't see your key?](#)

CONTINUE



Find the Bluetooth pairing PIN for your key FD299999807

The pairing PIN is usually a 4 or 6 digit number and may be on the back of your key. Continue when you are ready to enter the PIN.



Pairing your Security Key...

Pair with FD299999807?

Usually 0000 or 1234

PIN contains letters or symbols

You may also need to type this PIN on the other device.

Allow access to your contacts and call history

[Cancel](#) [OK](#)



Verifying your Security Key...

- When the eSecu FIDO2 Pro Security Key receives an authentication request, the indicator light changes to flashing white from flashing blue, short press the button on the key to confirm the authentication, then you will be authorized to login with your account.



2-Step Verification

This extra step shows it's really you trying to sign in

.com



You're all set

Don't ask again on this computer

Next

- When you are asked to do the 2-Step Verification on a paired Android device again, go through the Step 1~3 above, no need click on **Pair another Security Key**, just short press the button on the eSecu FIDO2 Pro Security Key to enter the Bluetooth mode, and the indicator light shall flash blue. When the key receives an authentication request, the indicator light changes to flashing white from flashing blue, short press the button again on the key to confirm the authentication, then you will be authorized to login with your account.



Use your Security Key with google.com

To use most keys, simply tap the button.

Using your Security Key with google.com helps protect your private data.



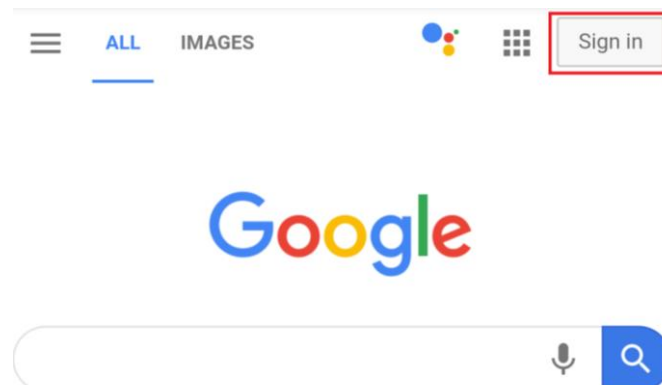
[Use your Security Key with NFC](#)

[Use your Security Key with USB](#)

[Pair another Security Key](#)

4.4. Sign in (NFC + Android Mobile Device)

- Turn on NFC on your mobile device. Open the Chrome browser on your Android mobile device, and go to <https://www.google.com>, then click the **Sign in** button on the top right corner, then enter the username and password.



- If the 2-step Verification of your Google account is turned on, you will be asked to use your Security

Key for verification, click on *Use your Security Key with NFC*.



Use your Security Key with google.com

To use most keys, simply tap the button.

Using your Security Key with google.com helps protect your private data.



[Use your Security Key with NFC](#)

[Use your Security Key with USB](#)

[Pair another Security Key](#)

3. Hold your registered eSecu FIDO2 Pro Security Key flat against the NFC sensor of your mobile device, a white indicator light on the key shall steady on.



Allow using your Security Key?

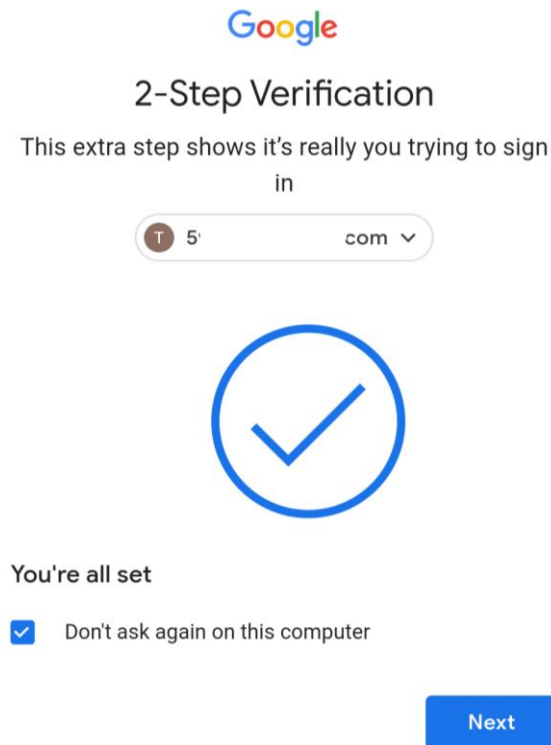
Hold your key flat against the back of your device until it stops vibrating



[Use your Security Key with Bluetooth](#)

[Use your Security Key with USB](#)

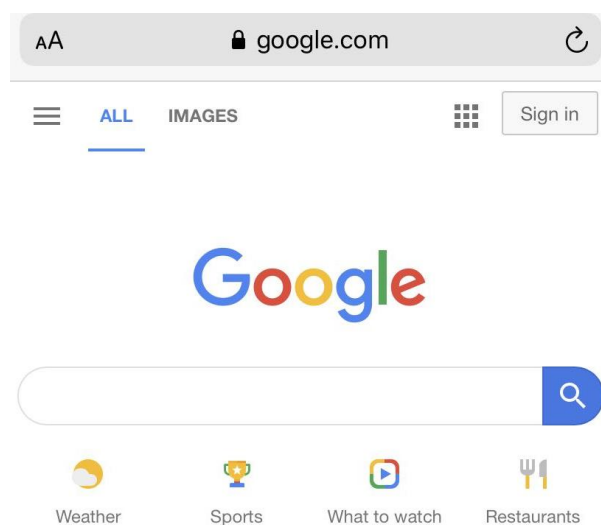
- The authentication will complete in a while, and you will be authorized to login with your account.



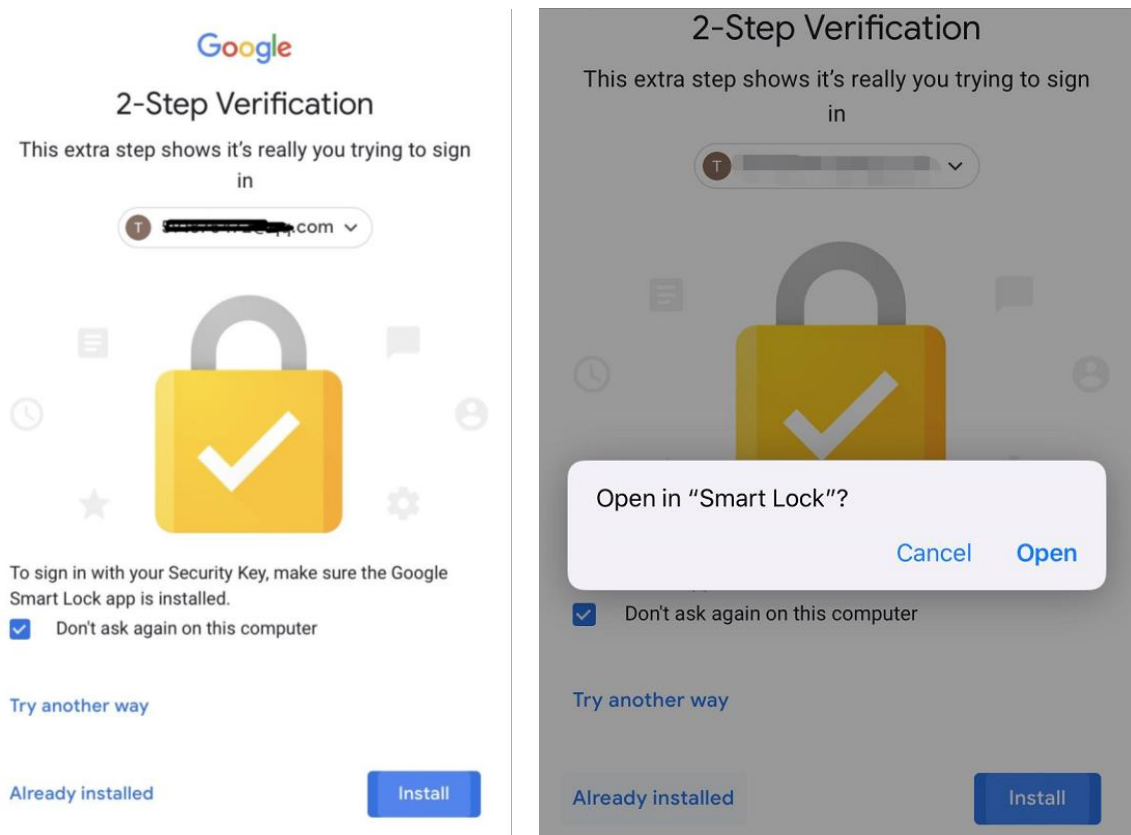
4.5. Sign in (Bluetooth + iPhone)

When using the eSecu FIDO2 Pro Security Key on an iPhone for the first time with Bluetooth connection, you need to pair them first.

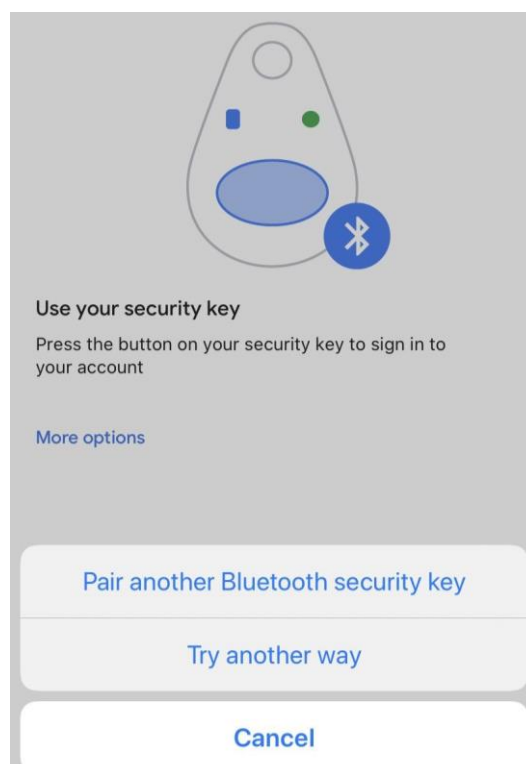
- Make sure the eSecu FIDO2 Pro security key is registered to your Google account.
- Turn on Bluetooth connection on your iPhone. Open Safari, and go to <https://www.google.com>, click on **Sign in** on the top right corner, then enter the username and password of your Google account.



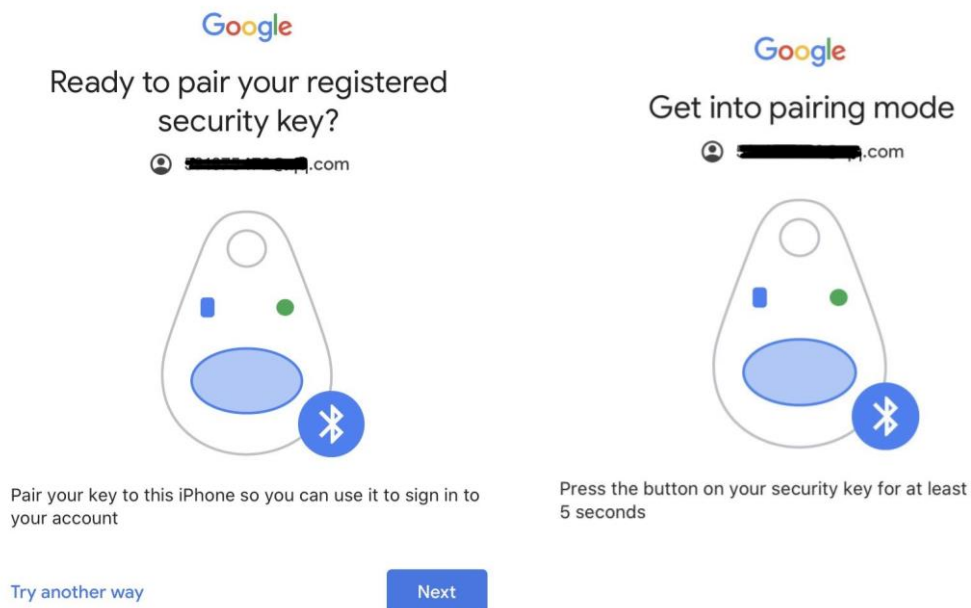
- If the 2-step Verification of your Google account is turned on, then you will be asked to use your Security Key, and make sure the Google Smart Lock app is installed. Click on **Install** if it's not installed. Then click on **Already installed**, and open it.



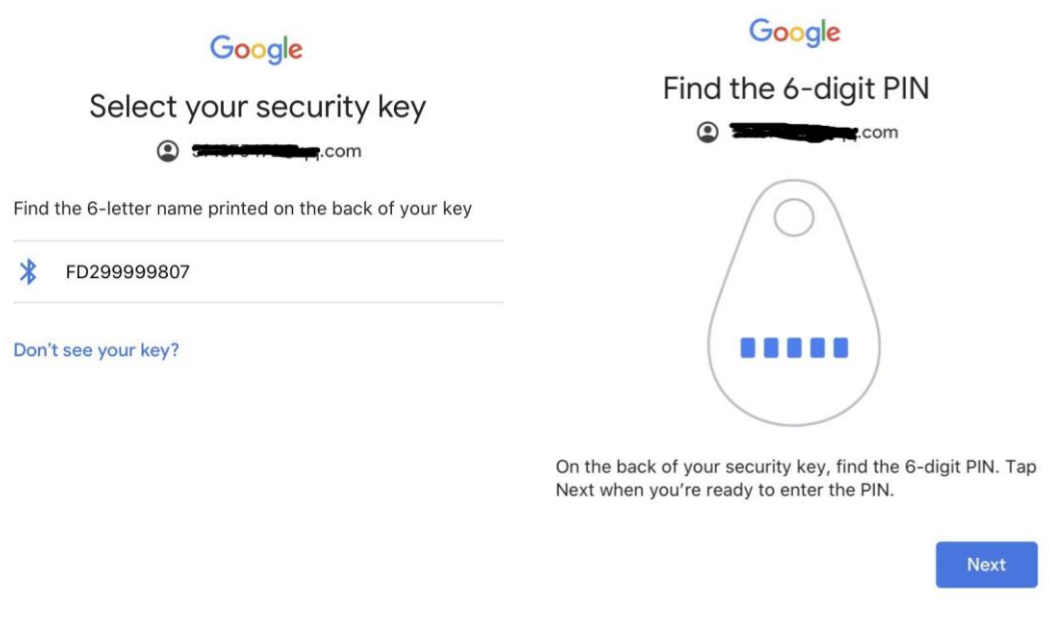
- Click on **More options**, select **Pair another Bluetooth security key**.



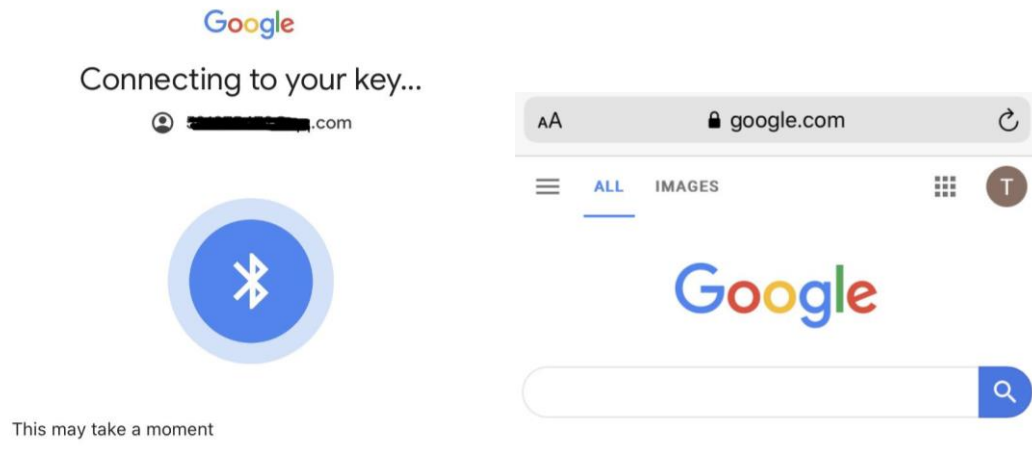
- Click on **Next**, and press the button of the eSecu FIDO2 Pro for at least 5 seconds to enter the Bluetooth pairing mode, make sure the blue light is steady on.



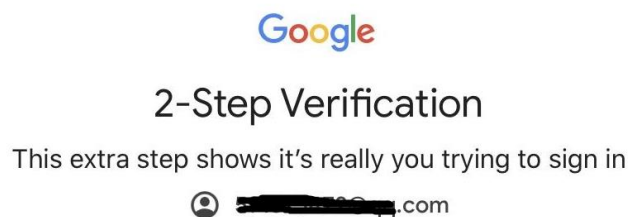
- When the phone detects the signal of the key, the serial number printed on the back of the key will show on the page. Select the serial number, click on **Next** and enter the 6-digit PIN as printed on the back of the eSecu FIDO2 Pro for pairing.



- The indicator light of the key shall flash blue and the Google service will automatically verify your security key. When the eSecu FIDO2 Pro Security Key receives an authentication request, the indicator light changes to flashing white from flashing blue, short press the button on the key to confirm the authentication, then you will be back to Safari automatically with your Google account logged in.



- When you are asked to do the 2-Step Verification on a paired iPhone again, go through the Step 1~3 above, after you open the Smart Lock app, short press the button on the eSecu FIDO2 Pro Security Key to enter the Bluetooth mode, and the indicator light shall flash blue. When the key receives an authentication request, the indicator light changes to flashing white from flashing blue, short press the button again on the key to confirm the authentication, then you will be back to Safari automatically with your Google account logged in.



Use your security key

Press the button on your security key to sign in to your account

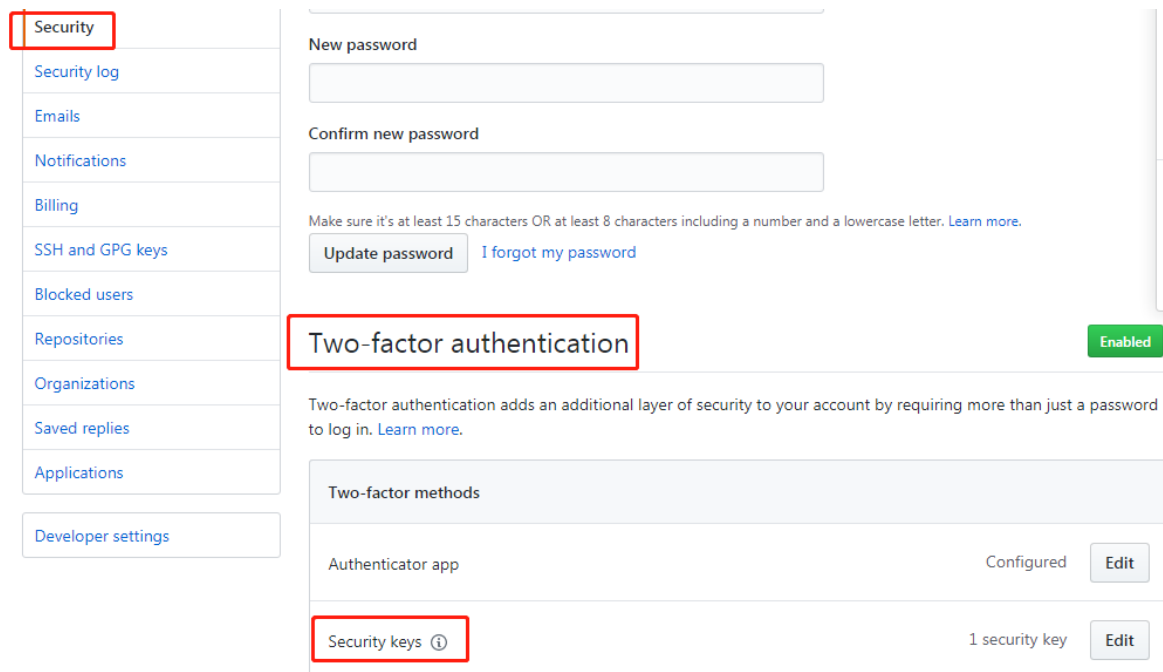
[More options](#)

4.6. Sign in (NFC Mode + iOS 13.3 and Above)

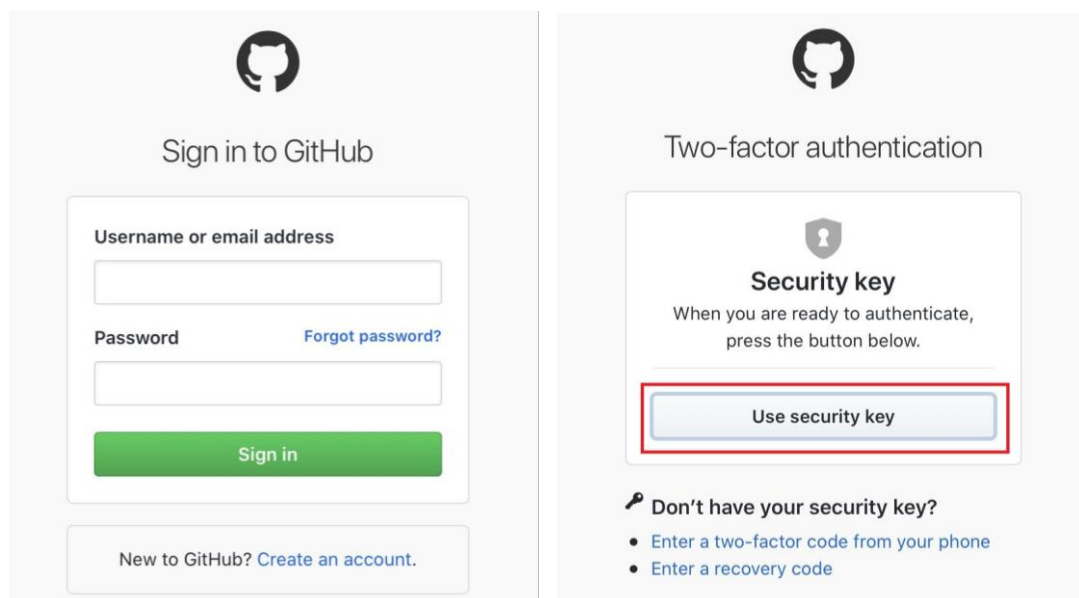
Only iOS 13.3 and above supports FIDO security key over NFC connection. Here we take GitHub as an

example.

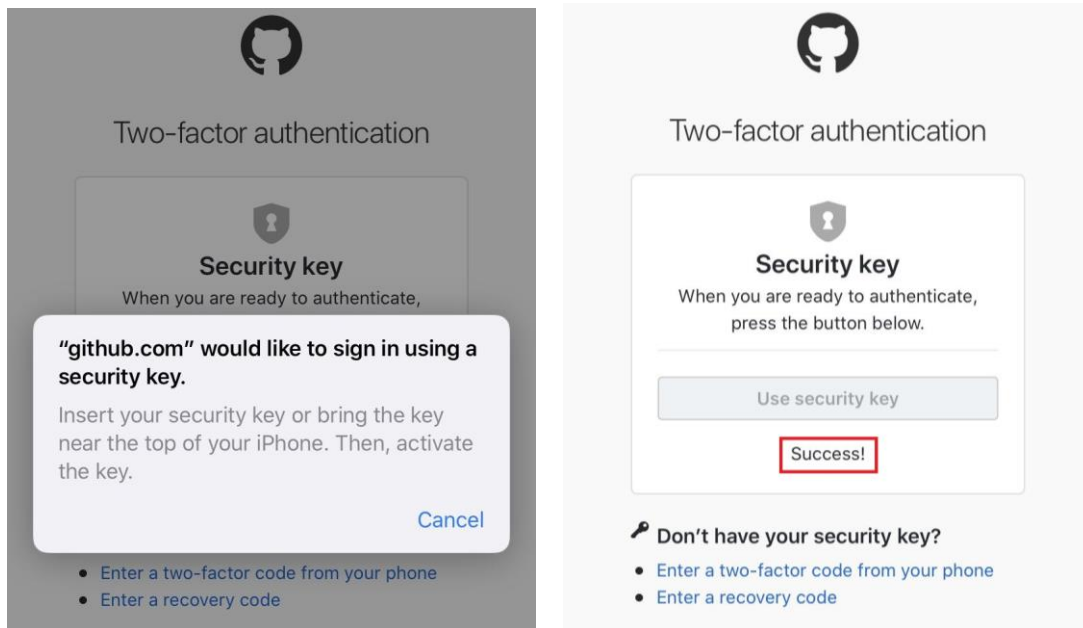
1. Log into your GitHub account on your PC, go to **Settings** -> **Security**, enable **Two-factor authentication**, and register your eSecu FIDO2 Pro Security Key.



2. Turn on NFC on your iPhone, open Safari, and go to <https://www.github.com>, sign in with the username and password, then press **Use security key**.



3. Hold your registered eSecu FIDO2 Pro Security Key near the top of your iPhone, a white indicator light on the key shall steady on. The authentication will complete in a while, and you will be authorized to login automatically.



5. Usage of FIDO Manager and OTP

The Software used to configure the FIDO and OTP (HOTP/TOTP) is described in document of “Excelsecu Manager User Manual”, you can refer to it for more details.

6. FAQ

Question 1: I have two Gmail accounts, how many FIDO2 Pro Security Keys do I need to protect two gmail account. Do I need two FIDO2 Pro Security Keys?

Answer: You can use one FIDO2 Pro Security Key with multiple accounts, but that is not recommended. Regardless of if you're protecting one gmail account, or two - you should register multiple keys (if the service allows it). That way, if you lose your key, or it's damaged, or it's stolen, you will still have a backup key ready to use.

Question 2: What should I do if I lost my FIDO2 Pro Security Key?

Answer: Just go to the website your key already registered. On the 2-step verification tab or similar tab, delete the device. Two FIDO2 Pro Security Keys are recommended, one for normal use, the other for backup.

Question 3: Can I use FIDO2 Pro Security Key on PC over Bluetooth?

Answer: Yes, if your PC has Bluetooth connection and the web service you want to login supports FIDO security key over Bluetooth connection. Currently Mac OS does not support FIDO security key over Bluetooth connection.

Question 4: Why does GitHub say “this browser doesn't support security key” on my iPhone?

Answer: Please make sure your iPhone is updated to iOS 13.3.

Question 5: What applications support FIDO2 Pro Security Key?

Answer: The applications support FIDO U2F/FIDO2 include but not limited to: Google, Facebook, Dropbox, GitHub, Dashlane, DUO, StrongAuth etc.

Question 6: Can I register a FIDO2 Pro Security Key over my smart phone?

Answer: No. You can always authenticate the FIDO2 Pro Security Key with your mobile devices, but registration can only be done from a non-mobile device.

Question 7: How can I know when to charge my FIDO2 Pro Security Key?

Answer: When a red indicator blinks every 5 seconds a time, the FIDO2 Pro Security Key is in low power state. Charging process starts automatically when FIDO2 Pro Security Key is plugged in the USB port of the PC.

7. Product Spec

Product	eSecu FIDO2 Pro Security Key (FD203)
System	Windows, macOS, Linux
Browser	Edge, Chrome, Firefox, Opera, Safari
Functions	FIDO U2F, FIDO2, HOTP, TOTP
Algorithm	SHA256, AES, HMAC, ECDH, ECDSA
Size	52.6x18.0x11.0 (mm)
Interface	USB-A, NFC, BLE
Data Retention	≥10 years
Rewrite Cycle	≥100,000 times
Operating Voltage	5V±10%
Operating Current	Max <40mA
Button	Single button
Button Endurance	≥100,000 times
Operating Temperature	-10~60°C
Storage Temperature	-20~60°C
Indicator Light	White, Blue, Red
Material	AL, PC
Certificate	CE, FCC, RoHS, WEEE, FIDO2 L1