

eSecu FIDO2 Fingerprint Key User Manual (V2.5)

Excelsecu Data Technology Co., Ltd.

www.excelsecu.com



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Table of Contents

1.	Importa	ant Instructions4
2.	Produc	t Overview4
3.	Produc	t Picture4
4.	FIDO2 I	-ingerprint Key Management5
	4.1.	eSecu FIDOManager5
	4.2.	Windows Settings5
	4.3.	Chrome Browser
5.	The Bas	sic Operation of FIDO2 Fingerprint Key11
	5.1.	Register (First Time Only)11
	5.2.	Signing-In (After Completing Registration)11
6.	How to	use FIDO2 Fingerprint Key with Microsoft for passwordless login
	6.1.	Register the FIDO2 Fingerprint Key12
	6.2.	Sign in with FIDO2 Fingerprint Key14
7.	How to	use FIDO2 Fingerprint Key with Google for 2-Step Verification
	7.1.	Register the FIDO2 Fingerprint Key16
	7.2.	Sign in with FIDO2 Fingerprint Key19
8.	FAQ	
	8.1.	I have two gmail accounts, how many FIDO2 Fingerprint Keys do I need to protect two
	gmail a	ccount. Do I need 2 keys?21
	8.2.	What should I do if I lost my FIDO2 Fingerprint Key?21
	8.3.	Does this FIDO2 Fingerprint Key have NFC capabilities?22
	8.4.	Does this FIDO2 Fingerprint Key have Bluetooth capabilities?
	8.5.	What applications support FIDO2 Fingerprint Key?
9.	Produc	t Specs



1. Important Instructions

Thank you for using eSecu FIDO2 Fingerprint Key!

Please read this manual before operating your eSecu FIDO2 Fingerprint Key (FIDO2 Fingerprint Key for short) and keep it for future reference.

2. Product Overview

eSecu FIDO2 Fingerprint Key is a hardware authenticator complying with FIDO2 standard and FIDO U2F standard, which is self-developed by Excelsecu. By using an eSecu FIDO2 Fingerprint Key, users are freed from having to remember and type passwords as well as less to worry about their account information stolen by phishing, hacking or viruses. It uses Private / Public Key (asymmetric) cryptography to provide strong authentication and can be used on FIDO2-enabled or U2F-enabled services and applications as a factor of two-factor authentication, multi-factor authentication or passwordless authentication.

3. Product Picture



The key has the following lighting states:

Steady red light: Insert the FIDO2 Fingerprint Key in the computer's USB port/ Fingerprint verification fail.



Flashing red light: Need to touch.

Flashing green light: Fingerprint enroll/ Need to verify fingerprint.

4. FIDO2 Fingerprint Key Management

Before using FIDO2 Fingerprint Key, fingerprint is always required to be enrolled via USB. Currently, there are three methods to manage FIDO2 Fingerprint Key: eSecu FIDOManager, Windows settings and Chrome Browser.

4.1. eSecu FIDOManager

The Software used to configure the FIDO and OTP (HOTP/TOTP) and fingerprint's enrollment, test, remove, reset is described in document of "Excelsecu Manager User Manual", you can refer to it for more details.

4.2. Windows Settings

You can set up your FIDO2 Fingerprint Key straight from **Setting** page if the platform is **Windows 10 version 1903 (build 18298) or above**.

1. Choose Setting -> Accounts -> Sign-in options -> Security Key.

← Settings	×
命 Home	Sign-in options
Find a setting	P Manage how you sign in to your device
Accounts	Select a sign-in option to add, change, or remove it.
RE Your info	Windows Hello Face This option is currently unavailable—click to learn more
Email & accounts	Windows Hello Fingerprint This option is currently unavailable—click to learn more
🖏 Sign-in options	Windows Hello PIN Sign in with a PIN (Recommended)
Access work or school	Security Key Sign in with a physical security key
9, Family & other users	Manage a physical security key that can log you into applications.
\bigcirc Sync your settings	Learn more
	Manage
	Password Sign in with your account's password
	Picture Password



2. Click Manage, and connect your key to the computer according to the prompt.



3. You are able to manage fingerprint, PIN or reset your FIDO2 Fingerprint Key now.

Security Ke Personalize you Set up	y Fingerprint Ir security key
Creating a PIN secure Add	y PIN for your security key helps keep you
Reset Secur Remove everyth factory settings Reset	ity Key ning from this security key and reset to
	Close

Fingerprint Enrollment

Before you set up your fingerprint, you need to set a PIN. You are able to change the PIN if

PIN is already set.

Note: PIN length is between 4 to 63 characters.



New security key PI	Ν
Confirm security ke	y PIN

Click **Set up** to enroll a fingerprint, and you are required to input the PIN. The enrollment process requires you to touch the fingerprint sensor 4 times. You are able to remove fingerprints if there is at least one enrolled.

Security Key Fingerprint Personalize your security key Set up	
 Security Key PIN Creating a PIN for your security key helps keep you secure Change Reset Security Key Remove everything from this security key and reset to factory settings Reset 	Touch the fingerprint sensor Repeatedly lift and rest your finger on the sensor on the top of your device until setup is complete.
Close	Cancel

Reset Security Key

Note: Resetting the key requires to be done within 10 seconds after powering up. If the following prompt shows up, reinsert your key and click reset again.





Follow the prompt windows to finish reset.



4.3. Chrome Browser

Chrome Version 79 or above on Windows, Mac or Linux are able to manage eSecu FIDO2 security keys. Here we take Windows as an example.

Note: if you are using Chrome on Windows 1903, **each time** you use the chrome to manage your eSecu FIDO2 security key, you need override this by running Chrome as Administrator with the command line flag:

--disable-features=WebAuthenticationUseNativeWinApi.

1. Go into the chrome.exe file location, here we take "C:\Users\Weiyc\AppData\Local\Google\Chrome\Application" as an example, please change



it to your chrome file location, and run the following command as administrator:

cd C:\Users\Weiyc\AppData\Local\Google\Chrome\Application

chrome.exe --disable-features=WebAuthenticationUseNativeWinApi

exit

Administrator C:\Windows\system32\cmd.exe	_		×
Microsoft Windows [Version 10.0.18362.836] (c) 2019 Microsoft Corporation. All rights reserved.			
C:\Users\Weiyc>cd C:\Users\Weiyc\AppData\Local\Google\Chrome\Application			
C:\Users\Weiyc\AppData\Local\Google\Chrome\Application>chrome.exedisable-features=WebAuthenticationUse	Native	WinApi	
C:\Users\Weiyc\AppData\Local\Google\Chrome\Applicationexit			

This command will automatically open the chrome browser. Then go to chrome -> settings
 -> Privacy and security -> Security -> Manage security keys, or directly visit the link:
 chrome://settings/securityKeys, then you are able to manage PIN, sign-in data, fingerprints and reset.

← -	C G Chrome chrome://settings/securityKeys			
Sett	ings	Q Search settings		
•	You and Google	← Manage security keys		
Ê	Autofill			
•	Privacy and security	Create a PIN Protect your security key with a PIN (Personal Identification Number)	۲	
۲	Appearance	Sign-in data		
Q	Search engine	View and delete sign-in data stored on your security key	,	
	Default browser	Fingerprints Add and delete fingerprints saved on your security key	×	
Ċ	On startup			
Adva	nced 👻	Reset your security key This will delete all data on the security key, including its PIN	*	
Exter	isions 🖸			
Abou	t Chrome			

Create a PIN

Click **Create a PIN** to set the PIN for your key.

Note: PIN length is between 4 to 63 characters.



			Create a PIN		
Create a PIN			Enter your new P	IN. A PIN must be at le	east four characters long and can contain
To continue, insert and touch your security key			letters, numbers,	and other characters.	
\mathbf{C}			PIN	Confirm PIN	0
,					0
	Cancel Sa	ave			Cancel Save

If you have resident credentials for passwordless login stored in authenticator, you are able

to manage sign-in data by clicking Sign-in data.

Security key sign-in data	
Website	Username
Verify.excelsecu.com	fp key (testkey1)
	Cancel Delete

Manage fingerprints

You can add and delete fingerprints saved on your security key by click Fingerprints.

Note: before managing fingerprints, you need to set a PIN for your key.

Your security key has no fingerprints stored	Add Done Cancel Continue
Add fingerprint Keep touching your security key until your fingerprint is captured	Add fingerprint Your fingerprint was captured
Add fingerprint Enter a name for this fingerprint Name FingerPrint00	Manage fingerprints Fingerprints on this security key Add FingerPrint00



Reset security key

Note: Resetting the key requires to be done within 10 seconds after powering up. If the following prompt shows up, reinsert your key and click reset again.

Reset your security key	
Can't reset this security key. Try resetting the key immediately after i	nserting it.
	ок
Touch to confirm reset	
Touch your security key again to confirm reset. All information store security key, including its PIN, will be deleted.	d on the
	Cancel
Reset your security key	
Your security key has been reset	
	ок

5. The Basic Operation of FIDO2 Fingerprint Key

5.1. Register (First Time Only)

- 1. Enter the username and password to log in to any application that supports FIDO U2F/FIDO2.
- 2. Insert the FIDO2 Fingerprint Key in a USB-A port.
- 3. Add the FIDO2 Fingerprint Key to your account(s).

5.2. 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. Insert the registered FIDO2 Fingerprint Key to the computer's USB port.
- 4. When prompted, authenticate with a simple touch of the fingerprint module to sign in.

6. How to use FIDO2 Fingerprint Key with Microsoft for passwordless login

6.1. Register the FIDO2 Fingerprint Key

1. Click "My Microsoft account" after signing in.



2. Select "Security".



3. Click "more security options".



(+)
More security options
Try the latest security options to help keep your account safe.
Explore >

4. You will be asked to verify your identity.

Microsoft	Microsoft
Verify your identity	Enter code
Email)m	 We emailed a code to Please enter the code to sign in. Code
I nave a code	Don't ask me again on this device Verify

After the verification is passed, enter the "Additional security options" page, and click
 "Set up a security key" under "Windows Hello and security keys".

occup a security ney	anaci	windows here and security keys i

Windows Hello and	security keys
Now you can sign in with in to your account instea	out a password using Windows Hello or security keys. A security key is a physical device (like a USB security key) that you can use to sign d of a password. Learn more about signing in with Windows Hello or a security key.
Set up a security key	
Set up Windows Hello	
Manage your sign-in met	hods

6. Identify what type of key you have (USB or NFC) and click next.



Microsoft Account Your info Privacy Security Payment & billing ~ Services & subscriptions Devices More ~	V R (V)
Set up your security key	
Have your key ready	
USB device NFC device	
To use a USB security key, when prompted, plug it into your USB port. Then touch	
For detailed instructions on how your keys should be connected, please visit your key manufacturer's website.	
Cancel Next	

7. Insert your key into the USB port and touch your key to verify the fingerprint when the key flashes green light.

ð	ð
Insert your security key into the USB port.	Touch your security key.
Cancel	Cancel

8. Name your FIDO2 Fingerprint Key, and the registration is finished.

Set up your security key
Name your new security key Hint: Name it so you'll know later which key this one is.
eSecu FIDO2 fp key
Next
You're all set!
Next time you sign in, you can use your security key instead of a password to sign in.
Gotit
Add another security key

6.2. Sign in with FIDO2 Fingerprint Key

1. Click "Sign in".





2. Click "Sign in with a security key".

Next

3. Insert your key into the USB port and touch your key to verify the fingerprint when the key flashes green light.

Ö	Ö
Insert your security key into the USB port.	Touch your security key.
Cancel	Cancel

4. Sign in successfully.

All Microsoft 🧹 🛛 Sea	arch 🔎	Cart 箳	8
Microsoft			Sign out
8	My Mic	rosoft acco	om unt



7. How to use FIDO2 Fingerprint Key with Google for 2-Step Verification

7.1. Register the FIDO2 Fingerprint Key

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

1. Log in to the website: <u>https://www.google.com/</u> and click Login in 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->2-step verification.



Google Account	Q Search Google Account			
Home Home Personal info Data & personalization	We keep your account protected The Security Checkup gives you personalized recommendation secure your account	ns to		
Security People & sharing	Get started			
Payments & subscriptions Help Send feedback	Signing in to Google		**	
	Password	Last changed 5 minutes ago	>	
	2-Step Verification	🥑 On	>	
	App passwords	None	>	
ttos://www.count.op.ole.com/signing.fbw-st	Ways we can verify it's you These can be used to make sure it's really you signing in or to so verification/two source-good. With' in your account	reach you		

4. You will be asked to log in again.

	Google	
F	li ; ~	
🕐		\cdot
o continue, first veri	ify it's you	
Enter your password		8

5. Click ADD SECURITY KEY.

2-Step \	erification is ON since Jun 20, 2018	TURN OFF
our secor	nd step	
ter enterir	g your password, you'll be asked for a second verification step). Learn more
0-	Security Key (Default) ⑦	
	FIDO (Added: June 26, 2018)	1
	Last used: Just now Chrome on Windows	
Γ	ADD SECURITY KEY	
0	Authenticator app	
	Authenticator on Android	Î
	Added: January 23, 5:12 PM	

6. Click NEXT to continue.





7. You will be prompted to insert your FIDO2 Fingerprint Key into a USB port.



8. When the red light of the key is flashing, it means you are required to touch the key. Press

the fingerprint module on FIDO2 Fingerprint Key.



9. Rename the FIDO2 Fingerprint Key, click DONE to finish.



← 2-St		
2-Step Ver	\bigcirc	JRN OFF
Your second After entering	Security Key registered Your Security Key is registered. From now on, you'll use it to sign in	
07	with 2-Step Verification. Security Key name My FIDO2	;
		1
	DONE	
A	uthenticator on Android dided: January 23, 5:12 PM	Î

 The FIDO2 Fingerprint 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.

2-Step	Verification is ON since Jun 20, 2018	TURN OFF
0115 6800	nd stan	
fter enteri	ng your password, you'll be asked for a second verification step). Learn more
07	Security Key (Default) 💿	
	FIDO (Added: June 26, 2018) Last used: Just now Chrome on Windows	i
	My FIDO2 (Added: Just now)	i
	Unrome on Windows in Germany	

7.2. Sign in with FIDO2 Fingerprint Key

Log in to the website: <u>https://www.google.com/</u> and click Login in the top right corner.
 Enter your account name and password, then click "Next".



Google	
Hi,	
	lom v
Enter your password	
	0

2. You will be prompted to insert your FIDO2 Fingerprint Key into a USB port. When the red light of the key is flashing, press the fingerprint module on FIDO2 Fingerprint Key.



3. Click Next to login.

	2 Stop Vorification
Th	is extra step shows it's really you trying to sign in
	♥ "~om ♥
You	're all set
	Don't ask again on this computer

Note:

- 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.

×	Backup codes
	These printable one-time passcodes allow you to sign in when away from your phone, like when you're traveling.
	SET UP
	Google prompt
	Get a Google prompt on your phone and just tap Yes to sign in.
	ADD PHONE
evices th	It do not need a second step
evices th	at do not need a second step the second step on devices you trust, such as your own computer.
evices th iou can skip	at do not need a second step the second step on devices you trust, such as your own computer. Devices you trust

8. FAQ

8.1. I have two gmail accounts, how many FIDO2 Fingerprint Keys do I need to protect two gmail account. Do I need 2 keys?

Answer: You can use one FIDO2 Fingerprint 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.

8.2. What should I do if I lost my FIDO2 Fingerprint 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 Fingerprint Keys are recommended, one for normal use, the other for backup.

8.3. Does this FIDO2 Fingerprint Key have NFC capabilities?

Answer: No

8.4. Does this FIDO2 Fingerprint Key have Bluetooth

capabilities?

Answer: No

8.5. What applications support FIDO2 Fingerprint Key?

Answer: The applications support FIDO[®] U2F/FIDO2 include but not limited to: Google, Microsoft, Facebook, Dropbox, GitHub, Salesforce, Dashlane, etc.

9. Product Specs

Product	eSecu FIDO2 Fingerprint Key (FD210)
System	Windows, macOS, Linux
Browser	Edge, Chrome, Firefox, Opera, Safari
Functions	FIDO U2F, FIDO2, HOTP, TOTP
Algorithm	SHA256, AES, HMAC, ECDH, ECDSA
Size	65x19x12.2mm
Interface	USB-A
Data Retention	≥10 years
Rewrite Cycle	≥100,000 times
Operating Voltage	5V±10%
Operating Current	Max <40mA
FP Sensor Resolution	508dpi
Verification Time	<1s
False Accept Rate	< 0.001%
False Reject Rate	< 1%
Storage	30 fingerprints
Operating Temperature	-10°C~60°C
Storage Temperature	-20°C~60°C
Indicator Light	2 LED (Red, Green)
Material	AL, PC
Certificate	CE, FCC, RoHS, WEEE, FIDO2 L1