



VinCSS FIDO2® Fingerprint User Manual



Overview

VinCSS FIDO2® Fingerprint security key is a FIDO2 certified authenticator. FIDO2 provides a passwordless way to authenticate users and addresses security, convenience, privacy, and scalability issues that passwords do not. The number of accounts that can be registered with the VinCSS FIDO2® Fingerprint security key is unlimited when using it for two-factor authentication. It is limited to 50 accounts for passwordless authentication.

VinCSS FIDO2® Fingerprint security key is not a USB storage, so there is no risk of malware infection. The authentication key only functions to authenticate user and does not store any other information, ensuring privacy.

VinCSS FIDO2® Fingerprint security key requires user to interact directly with the key so it cannot be remotely attacked, the key that applies the FIDO2 standard should protect users from phishing attacks on the internet, MITM (man-in-the-middle attacks), skimming, etc. The key's hardware is designed to protect the data in the authentication key from being tampered with.

USB cable, BLE, and NFC are the three connection ways that the VinCSS FIDO2® Fingerprint security key incorporates. Users are supported this on any contactless or wireless client device, such as a desktop computer, laptop, tablet, or smartphone, and complete secure FIDO2® authentication.

Diagram

The VinCSS FIDO2® Fingerprint Security Key



Meaning of the LED indicator

LED indicator	Meaning	Definition
Blinking red 3 times in a row 	The built-in battery is running low and needs to be charged	Using Bluetooth or NFC
Solid amber 	The security key is being charged	Connecting with USB
Solid green 	The security key is fully charged	Connecting with USB
Solid blue 	Bluetooth mode On, the security key is connected to a Bluetooth device	Using Bluetooth
Blinking blue 	The security key enters the pairing mode	Using Bluetooth
Solid purple 	NFC activated	Using NFC
Blinking white quickly 	The security key is processing request and require user interaction	Require user to authenticate with fingerprint
The white light does not flash/flashes slowly 	The security key is processing request and require user interaction	Require user to authenticate by touching the security key



Connect Status

Manipulation	The original state	Action	The next state	Note
Turn on Bluetooth	The security key in sleep state (no USB connection, LED is off)	Hold down the fingerprint sensor for 5 seconds	LED indicator shows solid blue	Make sure the battery capacity of the security key is enough for use. If the LED shows red, please plug in the charger and try again.
Pairing Mode	The security key in Bluetooth enabled state	Hold down the fingerprint sensor for 5 seconds	LED indicator flashes blue	
Turn off Bluetooth	The security key in Bluetooth or NFC enabled state	Double-tap the fingerprint on the sensor	LED is off	

Note: The security key will automatically connect to the device if the security key has been connected before



Connect to Computer

- Note:**
- o To extend the battery's standby time, the battery will be placed in sleep mode. The first time the device is used, the user must connect it directly using a USB type-C cable.
 - o Currently, the macOS operating system only supports using the VinCSS FIDO2 Fingerprint security key through a USB connection, not yet supporting users to use it via BLE and NFC connections. (However, Bluetooth/NFC connection can still be used on the security key if the app supports FIDO2 authentication via Bluetooth/NFC connection).
 - o Windows operating system supports using all 3 forms of the security key connection via USB, Bluetooth and NFC (requires hardware support).



Connecting via USB

- Plug the VinCSS FIDO2® Fingerprint security key into your computer using USB type-C cable, and make sure the security key is not in Bluetooth or NFC working mode.



Connecting via NFC

- Put the VinCSS FIDO2® Fingerprint security key on the NFC reader. When the LED indicator on the key turns purple, the VinCSS FIDO2® Fingerprint security key can be used.
- To disconnect NFC, lift the security key off the NFC reader. Disconnection is successful, the purple LED will be off.



Connecting via BLE

- Turn on the Bluetooth mode of the security key.
- Turn on **the Bluetooth connection** mode of the device then connect to the security key named **V-FIDO2**.
- Enter the pairing code to connect.
The pairing code is a sequence of the last 6 digits taken from the serial code (In case the serial code has only the last 5 digits, enter the number "0" at the beginning of the serial number (for example: XXX123456 => 123456 or XXX12345 => 012345).
- Bluetooth connection is successful, LED shows solid blue.



Connect your Security Key

- The first step when connecting the security key is to set up the PIN and Fingerprint. There are several available tools that can be used for setting up the security key listed below:

	Windows built-in Security Key Manager	Chrome built-in Security Key Manager
Functions	<ul style="list-style-type: none">- Set up/change the PIN of the security key- Add/Remove fingerprint- Reset security key	<ul style="list-style-type: none">- Set up/change the PIN of the security key- Add/Remove fingerprint- Reset security key- Managing sign-in data
Actions	<ul style="list-style-type: none">"Settings"=> "Accounts"=> "Sign-in options"=> "Security Key"	<ul style="list-style-type: none">"Chrome Settings"=> "Privacy and security"=> "Security"=> "Manage security keys"

Note: In the case of forgetting the PIN of the VinCSS FIDO2® Fingerprint security key, users can reset the key, but this will make the previously registered services unable to authenticate by using the key. After resetting, the device becomes a new security key, so services need to be re-registered to authenticate. In case the PIN code is entered incorrectly many times (more than 8 times), the device will be locked permanently, user will also be forced to reset to use the VinCSS FIDO2® Fingerprint security key as a new device.

Connection status table of the VinCSS FIDO2® Fingerprint security key



Note: Please keep updating to the latest operating system(s)/software for maximum compatibility.

CONNECTION FORM CONVERSION TABLE

	Google Chrome / Microsoft Edge / Firefox					
	U2F			FIDO2		
	USB	BLT	NFC	USB	BLT	NFC
 macOS Support from macOS version 10.15 and above	✓	✗	✗	✓	✗	✗
 iOS Support from iOS version 13.3 and above (From iPhone 7 and above support NFC connection)	✓	✗	✓	✓	✗	✓
 Windows Support from Windows 8.1 version and above	✓	✓	✓	✓	✓	✓
 Android Support from Android version 9 and above	✓	✓	✓	✓	✓	✓

CHROME	Support from chrome version 100.0.4896 and above
EDGE	Support from Microsoft Edge version 93 and above
FIREFOX	Support from Firefox 92 version and above
SAFARI	Support from Safari version 13 and above

U2F	✓ Support
FIDO2	✗ No support
U2F	Multi-Factor Authentication
FIDO2	Passwordless authentication

CONNECTION FORM CONVERSION TABLE

	U2F			FIDO2		
	USB	BLT	NFC	USB	BLT	NFC
 macOS Support from macOS version 10.15 and above	✓	✗	✗	✓	✗	✗
 iOS Support from iOS version 13.3 and above (From iPhone 7 and above support NFC connection)	✓	✗	✓	✓	✗	✓

CHROME	Support from chrome version 100.0.4896 and above		Support
EDGE	Support from Microsoft Edge version 93 and above		No support
FIREFOX	Support from Firefox 92 version and above		Multi-Factor Authentication
SAFARI	Support from Safari version 13 and above		Passwordless authentication

PROVISION YOUR SECURITY KEY WITH WEB SERVICES

The first step of using FIDO authentication is to register a security key for your account. To register a security key for your account, please follow the steps below:

Step 1: Authenticate your account as normal with PC and a WebAuthN supported browser.

Step 2: Go to account settings - login method – Set up security key.

Step 3: Connect the security key to the device using 1 of 3 methods: USB, BLE or NFC and follow the instruction messages displayed on the screen.

Note: Refer to the Connection form conversion table above to choose the most suitable for your device.

Step 4: Fingerprint authentication/Touch the sensor to demonstrate the user's presence when LED indicator blinks. The registration process will be completed in a moment.

AUTHENTICATE TO WEB SERVICES

After registration, users can authenticate to their account passwordlessly or as a strong second factor with the security key.

- o **For Passwordless Authentication:** user can click "sign-in with security key" in the sign in window, then follow the authentication instructions displayed on the screen.
- o **For Two Step Authentication:** users are required to type authentication with username and password as usual, then two step verification window will pop up, user follow the instructions shown on the screen to complete the authentication.

FAQ

Q: What to do when the VinCSS FIDO2® Fingerprint security key is lost?

A: In case of losing the VinCSS FIDO2® Fingerprint security key, you can use the backup methods registered during the first key registration process to log in to your account, and unlink the lost key. The backup methods can be one-time recovery code, SMS OTP or Authenticator applications on mobile devices.

Q: In case of losing the VinCSS FIDO2® Fingerprint security key, will the user lose his account?

A: When a The VinCSS FIDO2® Fingerprint security key is lost, the user will not lose an account, because this key does not contain all the information necessary for logging in.

Q: What services are currently available to support the VinCSS FIDO2® Fingerprint security key?

A: Most online services now support authentication with the VinCSS FIDO2® Fingerprint security key, for example:

- Microsoft Account (Outlook, Office, Skype, OneDrive, Xbox Live, Bing...)
- Google Accounts (Drive, Google Cloud, Hangout, Gmail, Play, YouTube...)
- AWS Web Service
- Facebook
- GitHub
- Dropbox
- Salesforce
- Gitlab
- Jira

FAQ

Q: Does using the VinCSS FIDO2® Fingerprint security key, which I often plug in from several computers, increase the danger of malware infection between computers?

A: No, because the VinCSS FIDO2® Fingerprint security key is not a USB storage, there is no risk of malware infection.

Q: How can I know if the battery is fully charged?

A: When a USB cable is plugged in, the charging process begins immediately. The LED will blink red three times in a row if the battery level is low (*below 20%*), amber if the security key is charging, and green if the battery is fully charged. You can use the VinCSS FIDO2® Fingerprint security key while it's charging.

Q: Where will the VinCSS FIDO2® Fingerprint security key be guaranteed?

A: Customers who purchase the authentication key can send product needed warranty through distributions, or send the products directly at the VinCSS center in Hanoi and Ho Chi Minh City.

Q: Does using the VinCSS FIDO2® Fingerprint security key affect the policy of changing passwords within 90 days being applied at most companies today?

A: VinCSS FIDO2® Fingerprint is designed not connected to centralized password storage service, so the password change policy does not affect the key.

SPECIFICATION

VinCSS FIDO2® Fingerprint security key

INFORMATION	DETAIL
Product name	VinCSS FIDO2® Fingerprint
USB Type	USB Type-C
Bluetooth	Bluetooth Low Energy 5.0
NFC	ISO7816/ISO14443
Supported OS	Windows, macOS, Linux, Android, iOS
Authentication Methods	Passwordless, Strong Two Factor, Strong Multi-Factor
Certificate	FIDO2® Certified, FCC
Supported protocol	WebAuthn, FIDO2 CTAP1, FIDO2 CTAP2, Universal 2nd Factor (U2F)
Supported browser	Google Chrome, Mozilla Firefox, Apple Safari, Microsoft Edge, Microsoft Edge Chromium
Account storage	50
Fingerprint storage	5
Indicator lights	RGB Led
Fingerprint Sensor resolution	508 dpi
Weight	20gr

SPECIFICATION

VinCSS FIDO2® Fingerprint security key

INFORMATION	DETAIL
CPU	32-bit ARM® Cortex™-M4
Fingerprint Sensor FAR	<0.0002%
Fingerprint authentication time	<1s
Battery	25mAh. Lithium-ion Battery
Battery life	5 – 7 days (<i>12 authentication times per day</i>)
Standby	2 years
Full charge time	2 hour 30 minutes
Operation Voltage/Current	5V/1A
Material	Heavy-duty high-grade polycarbonate plastic, ensuring product durability
Product dimensions	45,7 x 38 x 8,3 mm
Operation Temperatures	-10°C to 60°C
Color	Black, White, Blue
Accessory	USB Type-C cable, keychain, holder accessory
Make in	Vietnam

For further infomations, please contact sales@vincss.net,
Or your service provider.



VinCSS - A member of FIDO ALLIANCE

The FIDO Alliance is an open industry association with a focused mission: Authentication standards to help reduce the world's over-reliance on passwords

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