

# Thales FIDO2 Security Keys:

Stop Phishing Attacks  
with Strong Passwordless  
Multi-Factor Authentication

[cpl.thalesgroup.com](https://cpl.thalesgroup.com)

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Building a future we can all trust

Organizations expanding their digital transformation are moving applications and data to the cloud to enable accessibility from anywhere and decrease operating costs. As users log in to an increasing number of cloud-based applications, weak passwords are emerging as the primary cause of identity theft and security breaches.

Addressing this risk, Thales FIDO2 security keys are offering organizations passwordless, phishing-resistant authentication, allowing them to stop account takeover and remove risk of unauthorized access to sensitive resources like SaaS applications and Windows endpoints.

Thales FIDO2 security keys support multiple applications at the same time. Use one that combines FIDO2, U2F, PKI and RFID to access both physical spaces and logical resources.



## Passwordless Phishing-Resistant MFA

FIDO2 authentication removes the risk of account take-over by replacing vulnerable passwords with a phishing-resistant WebAuthn credential.

FIDO2 authentication has gained traction as a modern form of MFA because of its considerable benefits in easing the login experience for users and overcoming the inherent vulnerabilities of passwords. Advantages include less friction for users and a high level of protection against phishing attacks.

## Meet stringent compliance mandates

Thales FIDO2 security keys, USB Tokens and smart cards let you meet all your regulatory needs. They are FIDO2 and U2F certified. The combined PKI-FIDO keys are compliant with the US Executive Order mandate for phishing-resistant MFA and NIST regulations. They are FIPS 140-2 or Common Criteria (CC) certified, ANSSI qualified for the Java platform and the PKI applet. They also meet eIDAS regulations for both eSignature and eSeal applications.

## Enable Multiple User Authentication Journeys

Thales supports numerous passwordless authentication journeys with a wide range of FIDO devices.

### Facilitate Users' Adoption with Biometric Authentication



Provide your end users a new passwordless authentication experience thanks to SafeNet IDPrime FIDO Bio Smart Card.

End users authenticate faster & easier by tapping the card on their device and putting their fingerprint on the sensor.

To protect users' data privacy, with fingerprint on-device authentication, users' data never leave the device.

### Secure Access to SaaS Apps



Since the majority of users reuse their passwords across apps, you can improve security dramatically and reduce calls to the Helpdesk, by equipping users with FIDO authenticators.

### Network Login for Frontline Workers

FIDO2 security keys provide passwordless phishing-resistant MFA, enabling users such as frontline workers to securely access shared devices such as Windows PCs and tablets.

### Combine Physical & Logical Access

For optimum convenience, Thales FIDO smart cards support physical access enabling users to access both physical spaces and logical resources with a single customizable smart card.



### Modernize PKI / CBA Environments

Organizations that rely on PKI and Certificate based Authentication (CBA) can now use a combined PKI-FIDO smart card or USB

Token to facilitate their cloud and digital transformation initiatives. By providing their users with a single authentication device for securing access to legacy apps, network domains and cloud services, they reduce operational costs and simplify User Experience.

## Secure Remote Access

Whether working from home or while traveling, users may log into web-based applications from multiple devices in multiple locations. Thales FIDO authenticators provide secure remote access with MFA to protect your organization regardless of the endpoint device and the location.



## Secure Mobile Access

Thales FIDO devices enable users to authenticate to any cloud resources from their mobile devices: either by taping their contactless smart card on their device using NFC, or by plugging the SafeNet eToken Fusion USB-C to their mobile phone.

## Privileged Users Access Control

Privileged users with elevated permissions (administrators, VIPs, etc.) have ready access to sensitive data – their accounts are a prime target for spear phishing and whaling attacks.

Providing privileged users with FIDO2 security keys to replace vulnerable passwords ensures that only authorized users can access privileged resources.

## IDP and CMS compatibility

Thales FIDO2 security keys are compatible with any cloud or on premise system that supports the FIDO2 standard.

Check the Thales Website for a list of the tested and jointly validated Identity Providers (IDPs) and Credential Management Systems (CMS): <https://cpl.thalesgroup.com/access-management/authenticators/fido-devices>

## Supported Platforms

Thales PKI/FIDO security keys support a large variety of operating systems such as iOS, Android, Windows 11, 10, 8, Windows Server OS, macOS, and Linux.

# Thales FIDO2 Benefits

## Best in class security

- Thales controls the entire manufacturing cycle and develops its own FIDO crypto libraries, which reduces the risk of being compromised.

## Support for multiple use cases

- Combine FIDO, PKI and physical access in a single device
- Experience a strong authentication from mobile endpoints

## User convenience for better adoption

- Support for biometric (fingerprint on smart card)
- Sensitive presence detector on USB FIDO key

## Compliant with high security standards

- U2F and FIDO2 certified
- Compliant with US and EU regulations for phishing-resistant authentication
- FIPS and CC certified for PKI operations

## Robustness & Scalability for a long life duration

- Hard molded plastic, tamper evident USB FIDO keys
- No damage to USB ports thanks to sensitive presence detector
- Support for firmware updates for better maintenance and upgradability





## Smart Card – Form Factor

Product Characteristics	SafeNet IDPrime 3940 FIDO	SafeNet IDPrime 3930 FIDO	SafeNet IDCore 3121 FIDO	SafeNet IDPrime 941 FIDO	SafeNet IDPrime 931 FIDO	SafeNet IDPrime FIDO Bio
Contact (ISO 7816)	FIDO & PKI	FIDO & PKI	N/A	PKI	PKI	FIDO
Contactless (ISO 14443)	FIDO & PKI	FIDO & PKI	FIDO & Physical Access	FIDO & Physical Access	FIDO & Physical Access	FIDO
<b>Memory</b>						
Memory chip	400 KB Java Flash	400 KB Java Flash	586 KB User ROM	Contact chip: 400KB Java Flash Contactless chip: 586 KB User ROM	Contact chip: 400KB Java Flash Contactless chip: 586 KB User ROM	206KB
Free memory available for resident keys, certificates, additional applets & data	73 KB	55 KB	88.3 – 98.3 KB	Contact: 73 KB Contactless: 88.3 – 98.3KB	Contact: 73 KB Contactless: 88.3 – 98.3KB	4.8KB
<b>Key Capacity</b>						
FIDO resident keys	Up to 8	Up to 8	Up to 8	Up to 8	Up to 8	Up to 32
PKI key containers	20	20	N/A	20	20	N/A
<b>Standards Supported</b>						
Java Card	3.0.4	3.0.5	3.0.4	3.0.4	Contact chip: 3.0.5 Contactless chip: 3.0.4	3.0.5
Global Platform	2.2.1	2.2.1	2.3	Contact chip: 2.2.1 Contactless chip: 2.3	Contact chip: 2.2.1 Contactless chip: 2.3	2.2.1
FIDO 2.0	✓	✓	✓	✓	✓	FIDO 2.1
U2F	✓	✓	✓	✓	✓	✓
Base CSP minidriver (SafeNet minidriver)	✓	✓	N/A	✓	✓	N/A
<b>Cryptographic algorithms (PKI)</b>						
Hash: SHA-1, SHA-256, SHA-384, SHA-512.	✓	✓	N/A	✓	✓	N/A
RSA: up to RSA 4096 bits	✓	✓	N/A	✓	✓	N/A
RSA OAEP & RSA PSS	✓	✓	N/A	✓	✓	N/A
P-256 bits ECDSA, ECDH. P-384 & P-521 bits ECDSA,	✓	✓	N/A	✓	✓	N/A
ECDH are available via a custom configuration	✓	✓	N/A	✓	✓	N/A
On-card asymmetric key pair generation (RSA up to 4096 bits & Elliptic curves up to 521 bits)	✓	✓	N/A	✓	✓	N/A
Symmetric: AES—For secure messaging and 3DES for Microsoft Challenge/Response only	✓	✓	N/A	✓	✓	N/A





## Smart Card – Form Factor (continued)

Product Characteristics	SafeNet IDPrime 3940 FIDO	SafeNet IDPrime 3930 FIDO	SafeNet IDCore 3121 FIDO	SafeNet IDPrime 941 FIDO	SafeNet IDPrime 931 FIDO	SafeNet IDPrime FIDO Bio
<b>Certifications</b>						
Chip: CC EAL6+	✓	✓	✓	✓	✓	✓
NIST certification - FIPS 140-2 L2	N/A	✓	N/A	N/A	✓	N/A
Java platform: CC EAL5+/PP java card certified	✓	N/A	N/A	✓	N/A	N/A
Java platform + PKI applet: CC EAL5+/PP QSCD	✓	N/A	N/A	✓	N/A	N/A
eIDAS qualified for both eSignature and eSeal	✓	N/A	N/A	✓	N/A	N/A
French ANSSI	✓	N/A	N/A	✓	N/A	N/A
Physical Access - Mifare Classic & DesFire configurations	N/A	N/A	✓	✓	✓	N/A
<b>Other PKI Features</b>						
Onboard PIN policy	✓	✓	N/A	✓	✓	N/A
Multi-PIN support	✓	✓	N/A	✓	✓	N/A
Customization and branding	✓	✓	N/A	✓	✓	N/A
User verification	PIN	PIN	PIN	PIN	PIN	PIN and biometric fingerprint
<b>Certifications</b>						
FIDO supported in Windows 10 and other FIDO-compliant operating systems	✓	✓	✓	✓	✓	✓
PKI supported in Windows, macOS X, and Linux	✓	✓	N/A	✓	✓	N/A

# Token – Form Factor

Product Characteristics	 SafeNet eToken FIDO	 SafeNet eToken FIDO	 SafeNet eToken Fusion	 SafeNet eToken Fusion (CC)
<b>Form Factor</b>	USB-A	USB-C	USB-A or USB-C	USB-A or USB-C
<b>Contact (ISO 7816)</b>	FIDO	FIDO	FIDO & PKI	FIDO & PKI
<b>Contactless (ISO 14443)</b>	N/A	N/A	N/A	N/A
<b>Memory</b>				
<b>Memory chip</b>	400 KB Flash	400 KB Flash	400 KB Flash	400 KB Flash
<b>Free memory available for resident keys, certificates, additional applets &amp; data</b>	90 KB	55 KB	55 KB	73 KB
<b>Key Capacity</b>				
<b>FIDO resident keys</b>	Up to 8	Up to 8	Up to 8	Up to 8
<b>PKI key containers</b>	N/A	N/A	20	20
<b>Standards Supported</b>				
<b>Java Card</b>	3.0.4	3.0.4	3.0.4	3.0.4
<b>Global Platform</b>	2.2.1	2.2.1	2.2.1	2.2.1
<b>FIDO 2.0</b>	✓	✓	✓	✓
<b>PKI</b>	N/A	N/A	IDPrime 930	IDPrime 940
<b>U2F</b>	✓	✓	✓	✓
<b>Base CSP minidriver (SafeNet minidriver)</b>	N/A	N/A	✓	✓
<b>Cryptographic algorithms (PKI)</b>				
<b>Hash: SHA-1, SHA-256, SHA-384, SHA-512.</b>	N/A	N/A	✓	✓
<b>RSA: up to RSA 4096 bits</b>	N/A	N/A	✓	✓
<b>RSA OAEP &amp; RSA PSS</b>	N/A	N/A	✓	✓
<b>P-256 bits ECDSA, ECDH. P-384 &amp; P-521 bits ECDSA,</b>	N/A	N/A	✓	✓
<b>ECDH are available via a custom configuration</b>	N/A	N/A	✓	✓
<b>On-card asymmetric key pair generation (RSA up to 4096 bits &amp; Elliptic curves up to 521 bits)</b>	N/A	N/A	✓	✓
<b>Symmetric: AES—For secure messaging and 3DES for Microsoft Challenge/Response only</b>	N/A	N/A	✓	✓

## Token – Form Factor (continued)

Product Characteristics	 SafeNet eToken FIDO	 SafeNet eToken FIDO	 SafeNet eToken Fusion	 SafeNet eToken Fusion (CC)
Form Factor	USB-A	USB-C	USB-A or USB-C	USB-A or USB-C
<b>Certifications</b>				
Chip: CC EAL6+	✓	N/A	N/A	✓
NIST certification - FIPS 140-2 L2	N/A	N/A	N/A	N/A
Java platform: CC EAL5+/ PP java card certified	✓	N/A	N/A	✓
Java platform + PKI applet: CC EAL5+/PP QSCD	N/A	N/A	N/A	✓
eIDAS qualified for both eSignature and eSeal	N/A	N/A	N/A	✓
French ANSSI	N/A	N/A	N/A	✓
Physical Access - Mifare Classic & DesFire configurations	N/A	N/A	N/A	N/A
<b>Other PKI Features</b>				
Onboard PIN policy	N/A	N/A	✓	✓
Multi-PIN support	N/A	N/A	✓	✓
Customization and branding	N/A	N/A	✓	✓
<b>Operating Systems</b>				
FIDO supported in Windows 10 and other FIDO-compliant operating systems	✓	✓	✓	✓
PKI supported in Windows, macOS X, and Linux	N/A	N/A	✓	✓

## About Thales OneWelcome Identity & Access Management Solutions

Thales' digital identity products and solutions empower billions of people and things with digital identities worldwide. The Thales OneWelcome Identity & Access Management portfolio enables organizations to build frictionless, trusted and secure digital journeys for customers, business partners and employees. The OneWelcome Identity Platform provides a variety of capabilities from identity verification, single sign-on, passwordless and multi-factor authentication to fraud management, adaptive access, dynamic authorization and consent & preference management for the highest levels of assurance. More than 30,000 organizations trust us with their IAM and data security needs, enabling them to deliver secure digital services to their users.

## About Thales

Today's businesses and governments depend on the cloud, data and software to deliver trusted digital services. That is why the most recognized brands and organizations around the world, rely on Thales to help them protect sensitive information and software wherever it is created, stored or accessed – from the cloud and data centers to devices and across networks. As the global leader in data security and software licensing, our solutions enable organizations to move to the cloud securely, achieve compliance with confidence, create more value from their software and deliver seamless digital experiences for millions of consumers every day.