



# Modernize security across manufacturing

## Protect people, data, and critical infrastructure with Yubico

The manufacturing industry is complex, with systems and technology to not only support the manufacturing of goods, but to support daily operations as well. Four years running, this industry has been the leading target for cyberattacks,<sup>1</sup> facing persistent threats such as phishing, man-in-the-middle attacks, and ransomware—with an average breach costing \$5 million.<sup>2</sup>

To protect against evolving cyber threats, multi-factor authentication (MFA) can be a strong first-line of defense, however not all forms of MFA are created equal. Usernames and passwords are cumbersome to manage and drive up costs. Mobile authenticators (push notifications, OTP and SMS codes) are highly susceptible to cyber attacks and fail altogether in mobile-restricted or low connectivity areas. The continued reliance and support of these legacy authentication solutions can lead to lost productivity, delayed supply chains, increased operating expenses (OpEx), higher capital expenditure (CapEx) costs, and a greater risk of being breached.

Manufacturing environments need an easy-to-use, modern authentication solution. One that is scalable, can withstand the rigors of the manufacturing floor, and can be used to securely access systems and applications.

### Yubico's security solutions for manufacturing

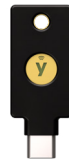
Yubico offers the [YubiKey](#) for modern phishing-resistant MFA and the [YubiHSM](#) for protecting servers, applications, and computing devices supercharging your cyber resilience.

The YubiKey is a hardware security key, that contains the highest-assurance passkey, and provides strong two-factor, multi-factor and passwordless authentication at scale. It is the only solution proven to stop account takeovers 100% in independent research.<sup>3</sup> With multi-protocol support,<sup>\*</sup> YubiKeys are future-proof investments by integrating seamlessly across both legacy and modern environments helping bridge to a passwordless future.

The YubiKey supports the Zero Trust and phishing-resistant MFA recommendations in the [OMB Memo M-22-09](#), [NIS2 Directive](#), [Essential Eight](#), SOC2, and supports the importance of securing data and critical digital infrastructure. For regulated environments, YubiKeys are also available in FIPS 140-2 validated form factors that meet the highest authenticator assurance level 3 (AAL3) requirements from NIST SP 800-63B.

The YubiHSM ensures uncompromised cryptographic hardware security for servers, applications, and computing devices at a fraction of the cost and size of traditional HSMs. It is a FIPS 140-2 validated, Level 3 solution, and is also available as a non-FIPS solution—both with the same capabilities.

<sup>\*</sup> Supports a broad range of authentication protocols: FIDO U2F, WebAuthn/FIDO2 (passkeys), OTP/TOTP, OpenPGP and Smart card/PIV, and enables you to bridge to passwordless.



### The YubiKey is:

- **Simple to use**—offers tap-and-go functionality that enables users to log-in 4 times faster than SMS.<sup>4</sup>
- **Cost-effective**—enables self-service password resets which reduces IT support costs by up to 90%.
- **Convenient**—provides easy, portable authentication across legacy and modern IT and OT infrastructure, devices and applications without requiring a battery or internet connection.
- **IP68 certified**—ensures robust security across manufacturing floors and are highly durable, crush-resistant, and water-resistant.



We introduced YubiKeys in our power operation SCADA systems to increase security with MFA. This process allows an operator to come on shift, authenticate quickly, and to take actions when appropriate, without any system interruptions. MFA ensures only authenticated users can gain access to operate the system.”

Chad Lloyd, Director of Cybersecurity Architecture for Energy Management, Schneider Electric

[yubi.co/SchneiderElectric](https://yubi.co/SchneiderElectric)



### The YubiHSM is:

- **Ultra-portable**—an innovative ‘nano’ form-factor that allows for flexible deployment.
- **Cost-effective**—ensures enterprise-grade high cryptographic security and operations without the traditional HSM price tag.
- **FIPS 140-2 validated**—robust hardware protection that ensures the highest levels of data protection and maintains compliance demands.



Secure your IT and OT systems with the YubiKey and YubiHSM

## Leverage Yubico solutions to:

### Reduce password reset costs

YubiKeys used for two-factor/multi-factor authentication dramatically reduce support costs related to password resets. YubiKeys enable self-service authentication without requiring users to wait for a manager or IT support in the event of an issue, thus lowering overhead costs related to password resets and lost productivity. This is especially important for applications/environments that are infrequently accessed by users and forgotten passwords are a common occurrence.

### Secure web-based applications

Convenient and strong authentication is a necessity as adoption of cloud-based applications increases, such as for email, payroll and timekeeping systems. YubiKeys seamlessly integrate into existing and new environments—they work [with thousands of applications and services](#) including leading [Identity Access Management \(IAM\)](#) solutions such as Microsoft, Okta, Ping, and Duo. The YubiKey in conjunction with IAM vendors and Identity Providers (IdPs) can also be used for Single Sign-on (SSO).

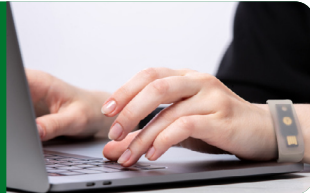
### Secure shared workstations/kiosks

Plant floors typically have shared workstations/kiosks which need strict access controls. YubiKeys are extremely portable and simple to use across shared workstations, ensuring that only people who are authorized to access a system or application will be able to, helping eliminate any insider threats. A single YubiKey works across multiple devices including desktops, laptops, mobile, tablets, notebooks, and shared workstations/kiosks.

### Secure mobile-restricted environments

For manufacturing environments where mobile use is restricted, or when there is no cellular connection, YubiKeys offer simple and secure authentication. YubiKeys do not require a cellular connection to operate nor batteries or have any other external dependency. To authenticate, users simply tap or insert, then touch the YubiKey and, because the YubiKey arrives in a variety of form factors—including support for USB-A, USB-C, NFC, and Lightning—authenticating to the full gamut of modern devices is simple.

With the YubiKey, using the NFC interface, you can utilize wearables like rubber bracelets or gloves with a slot, without having to remove protective clothing.



Additionally, since YubiKeys have no cameras, microphones, or network connections, data confidentiality is ensured.

“ We know that our security incidents were caused by stolen credentials, so strengthening our authentication infrastructure was a top priority. The YubiKey enables us to strengthen multifactor authentication.”

Mr. Daisuke Okamoto  
IT Platform Division | Mitsubishi Electric Digital Innovation

[yubi.co/MitsubishiElectric](https://yubi.co/MitsubishiElectric)



<sup>1</sup> IBM, X-Force 2025 Threat Intelligence Index

<sup>2</sup> IBM, 2025 Cost of Data Breach Report

<sup>3</sup> Google defends against account takeovers and reduces IT costs

<sup>4</sup> Google, Ibid.

Yubico (Nasdaq Stockholm: YUBICO) is a modern cybersecurity company on a mission to make the internet safer for everyone. As the inventor of the YubiKey, we set the gold standard for secure, simple login, stopping account takeovers with phishing-resistant, hardware-backed authentication.

Secure all users along the supply chain and safeguard third-party access with the YubiKey. Protect IP and product integrity with the YubiHSM. Yubico solutions ensure highest-assurance security.



### Secure the assembly line and supply chain

The YubiKey provides modern authentication at scale across the supply chain, helping manufacturing organizations and their suppliers implement robust, easy-to-use authentication for any user who has upstream access to the network or at critical intellectual property (IP) handoffs. The YubiHSM is suited to safeguard cryptographic keys and certificates used for signing code or components. It supports the secrets being shared within the supply chain, secure IoT devices, encrypt files and more.

### Easily procure and distribute phishing-resistant security at scale

To make it easy to deploy passwordless authentication at scale to secure digital identities against modern AI-driven threats, Yubico offers YubiKey as a Service for fast and frictionless deployment of enterprise-grade security.



With [YubiKey as a Service](#), organizations can benefit from simple and scalable global deployments of YubiKeys for their workforce, supply chain, and end customers. YubiKey as a Service offers customers a choice of form factors, replacement stock, and priority customer support, all for less than the price of a cup of coffee per month.

Customers also have access to turnkey [Enrollment](#) and [Delivery](#) services that help IT get users quickly onboarded with YubiKeys to fast track to phishing-resistance and then get YubiKeys to end users across the world, including corporate and residential addresses. Users can even experience [self-service ordering](#) of YubiKeys, giving them the freedom to have the keys shipped to their preferred address anytime they need. YubiKey as a Service customers receive continual enhancements to available and new services assuring a smart and future-proofed security investment.

### Trusted authentication leader

Yubico is the principal inventor of the WebAuthn/FIDO2 and U2F authentication standards adopted by the FIDO alliance and is the first company to produce the U2F security key and a multiprotocol FIDO2 authenticator.

YubiKeys are produced in the USA, maintaining security and quality control over the entire manufacturing process.



### The YubiKey Family

The YubiKey is available in multiple form factors for desktop, laptops and mobile devices.



Contact us  
[yubi.co/contact](https://yubi.co/contact)



Learn more  
[yubi.co/manufacturing](https://yubi.co/manufacturing)

Our technology secures people in over 160 countries, delivering fast, passwordless access. Dual-headquartered in Stockholm and Santa Clara, we believe strong security should be within everyone's reach. Learn more at [www.yubico.com](https://www.yubico.com).

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