How manufacturers can embrace compliance with confidence

Manufacturers of all kinds are being required to comply with new and evolving standards and regulations for data security, privacy and supply chain security, particularly for manufacturers in highly regulated verticals such as government and health.

The pressure to be compliant will be felt acutely by those manufacturers responding to the injection of funds from the CHIPS and Science Act of 2022,[1] which prioritizes US-based semiconductor manufacturing and research, including production to defense and other critical sectors.

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The need for phishing-resistant MFA

Federal contracting may require manufacturers to adhere to the standards of Executive Order (EO) 14028 and Office of Management and Budget (OMB) Memo M-22-09, including the requirement for phishing-resistant multi-factor authentication (MFA), or the updated requirements of the Cybersecurity Maturity Model Certification (CMMC) standard.

Further, phishing-resistant MFA is recommended by Cybersecurity and Infrastructure Security Agency (CISA) and the National Security Agency (NSA) for all critical infrastructure sectors, including manufacturing.

The specifics are listed in the 2023 publication Best Practices in Identity and Access Management and additional guidance on implementing phishing-resistant MFA can be found in a fact sheet CISA published.[2]

Agencies and publications for awareness

Global compliance pressures

Outside of the U.S. Federal space, manufacturers face compliance pressures from regulations such as the EU General Data Protection Regulation (GDPR), the EU Network and Information Security (NIS2) Directive and state privacy laws to standards such as ISO/IEC 27001 (Information Security Management) and IEC 62443 (Security for Industrial Automation and Control Systems) and NIST's Cybersecurity Framework.

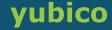High tech
(silicon and semiconductor)

Retail

Machinery

Medical

Energy

Transportation
(aerospace and automotive)

[1] The White House, Fact Sheet: CHIPS and Science Act
[2] CISA, Implementing Phishing-Resistant MFA

Mitigating data protection compliance risk in manufacturing

Every business has personal data that is subject to stringent data privacy and cybersecurity laws and regulations. Further, many manufacturers must become ISO certified or adhere to higher standards to meet contractual requirements—particularly in the Federal space. The YubiKey and YubiHSM 2 can help manufacturers comply with required and voluntary data security standards.

This checklist will help frame how Yubico products satisfy compliance requirements.

EO 14028 on Improving the Nation's Cybersecurity / OMB Memo M-22-09

Implement phishing-resistant MFA

CMMC 2.0 / DFARS Defense Federal Acquisition Regulation Supplement

Attest to practices aligned with NIST SP 800-171

CISA and NSA Best Practices in Identity and Access Management

Implement phishing-resistant MFA

National Institute of Standards and Technology (NIST) SP 800-63-3 / 4 Digital Identity Guidelines

Meets Authenticator Assurance Level 3 (AAL3) for hardware-based authenticator

Meets revised definition for phishing-resistance

ISO/IEC 27001 standard for Information Security Management System (ISMS)

Annex A.9 Safeguard access to information

NIST SP 800-171 Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations

3.5.2 Authenticate the identities of users, processes or devices before allowing access to organizational systems

3.5.3 MFA for local and network access to privileged accounts and for network access to non-privileged accounts

IEC 62443 Security for Industrial Automation and Control Systems

262 Verify third-party components

264 Reliably identify and authenticate all users

EU General Data Protection Regulation (GDPR) | The California Privacy Rights Act & other state laws

Article 32 Technical and organizational measures to protect and secure data

EU Network and Information Security (NIS2) Directive

Article 21 Mandates the use of multi-factor authentication to manage and mitigate risk

To learn more about the changing compliance landscape, read our companion eBook

Get on the fast track to phishing-resistant authentication to future proof compliance, connect with sales

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