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SB0023

Security bulletin

EUCLEAK protection statement for STMicroelectronics certified products

Overview

NinjaLab published a timing attack on the ECDSA signature generation, called “EUCLEAK”, and referred to CVE-2024-45678. STMicroelectronics products EMVCo®, Common Criteria, SESIP, GSMA or PSA certified with a security assurance level covering side channel attacks resistance, are not impacted by this attack.

Description

The EUCLEAK attack exploits the timing information during the inversion of the private ephemeral key k using the extended Euclidean algorithm (EEA). STMicroelectronics’s implementation of products supporting that cryptographic service, as per product security targets and certified by one of the listed schemes below, computes the inverse with a time constant algorithm, which is not the extended Euclidean algorithm (EEA).

For certification scope and security assurance level, refer to the product security targets and certificates available on the certification body websites:

- https://www.trustcb.com/iot/sesip/sesip-certificates/
- https://www.psacertified.org/certified-products/
- https://www.emvco.com/approved-registered/approved-products/
- https://www.commoncriteriaportal.org/products/index.cfm
- https://www.trustcb.com/gsma/esa/

CVE-2024-45678 : https://nvd.nist.gov/vuln/detail/CVE-2024-45678

NinjaLab: https://ninjalab.io/wp-content/uploads/2024/09/20240903_eucleak.pdf

Contact information

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Revision history

Table 1. **Document revision history**

Date	Version	Changes
25-Oct-2024	1	Initial version.

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