STM32Cube software MCE driver encryption with zero value key in STM32N6

Overview

This security advisory pertains to the STM32Cube software MCE hardware abstraction layer (HAL) driver encryption with zero value key impacting STM32CubeN6.

Affected products

Product[1]	Version		Type	Note
STM32CubeN6	V1.2.0 and earlier versions.	*Note:* *Because the issue might not be fixed in a subsequent version, refer to the release notes[2] of the affected product to check if the issue has been fixed.*	Embedded software	-
X-CUBE-FREERTOS	Version V1.3.0 and earlier versions	*Note:* *Because the issue might not be fixed in a subsequent version, refer to the release notes[2] of the affected product to check if the issue has been fixed.*	Embedded software	Issue related to the STM32N6 product supported in the firmware package.

1. *Some other STM32Cube expansion packages or function packages (X-CUBE, I-CUBE, STSW, FPs) could depend on the affected products, and are not mentioned in this document. Check if the STM32Cube expansion packages or function packages you use contain the affected products. If this is the case, refer to the package release note to determine whether the issue has been fixed.*
2. *Release notes are available in each downloaded package (on www.st.com product pages, on STMicroelectronics GitHub product pages, and via STM32CubeMX).*

To know if the problem is fixed in a given version of the STM32Cube firmware package or of the STM32 X-CUBE firmware package, check if "SA0054" is present on the release note of the HAL software component, as described in the following table:

Table 1. File list to be checked

Software component relative path	File to read	Version fixing the vulnerabilities
/Drivers/STM32YYxx_hal_driver[1]	Release_Notes.html	Contains the mention "SA0054 fixed"

1. *"YY" corresponding to the STM32 series used.*

Description

Due to an incorrect operation in the MCE HAL driver, the STM32N6 MCE HW IP is not configured correctly.

Impact

Confidentiality of the external memory could be compromised when exclusively protected by the SMT32N6 MCE HW IP. This scenario requires physical access to the product.

Remediation

Refer to Section Affected products to identify fixed products.

Contact information

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For further information, contact your local STMicroelectronics sales office.

www.st.com

Revision history

Table 2. Document revision history

Date	Version	Changes
14-Oct-2025	1	Initial release.
14-Nov-2025	2	Changed document scope to public.

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