

Security advisory TN1552-ST-PSIRT: STSW-SAFE1-MW buffer overflow

Overview

This security advisory pertains to STSW-SAFE1-MW buffer overflow identified in CVE-2023-50096.

Affected products

Product ⁽¹⁾	Version	Type	Note
STSW-SAFE1-MW	v3.3.6 and earlier	embedded software	-
X-CUBE-SAFE1	v1.2.0 and earlier	embedded software	-
X-CUBE SBSFU	From v2.2.0 to v2.6.2 <i>Note:</i> Because the issue might not be fixed in subsequent release, refer to the release notes ⁽²⁾ of the affected product to check if the issue is fixed.	embedded software	-
STM32CubeU5	From v1.1.0 to v1.5.0 <i>Note:</i> Because the issue might not be fixed in subsequent release, refer to the release notes ⁽²⁾ of the affected product to check if the issue is fixed.	embedded software	-

- Some other STM32Cube Expansion packages (X-CUBE or I-CUBE) could depend on the **affected products** and are not mentioned in this document. Check if the X-CUBE or I-CUBE packages you are using contain the **affected products**. If so, refer to the release notes of the X-CUBE or I-CUBE packages to check if the issue is fixed.
- 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 an STM32 Cube firmware package or an STM32 X-Cube firmware package is impacted, check the version of the middleware STSW-SAFE1-MW supported:

Software component relative path	File to read	Version fixing the vulnerabilities
./Middlewares/ST/STSAFE_A1xx/	Release_Note.html	v3.3.7 and later

Description

STMicroelectronics' middleware STSW-SAFE1-MW before version v3.3.7 allows MCU code execution if an attacker can read from and write to the I2C bus.

Impact

An attacker with physical access to the hardware executing the **affected product** could inject and execute code. Refer to <https://nvd.nist.gov/vuln/detail/CVE-2023-50096>.

Remediation

Use ST middleware STSW-SAFE1-MW v3.3.7 or later. Reconfigure the affected package with the fixed middleware.

Credit

<https://github.com/elttam/publications/blob/master/writeups/CVE-2023-50096.md>

Contact information

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Revision history

Table 1. Document revision history

Date	Version	Changes
08-Oct-2024	1	Initial release.

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