

## Security advisory TN1529-ST-PSIRT: STM32CubeProgrammer for STM32H563/573 RSSe SFI security enhancement

### Overview

This security advisory pertains to the STM32CubeProgrammer for STM32H563/573 RSSe SFI security enhancement.

### Affected products

Product	Version	Type	Note
STM32CubeProg	V2.14, V2.15, V2.16	Tools	Affected component from STM32CubeProgrammer installation directory: <ul style="list-style-type: none"> <li>• STM32H563/573 RSSe SFI: <code>./STM32CubeProgrammer/bin/RSSe/H5/enc_signed_RSSe_SFI_STM32H5_v2.0.0.0.bin</code></li> <li>• Personalization data file: <code>./STM32CubeProgramme/bin/PersoPackages/STM32H5_48402011_SFI._01000000_00000000.enc.bin</code></li> </ul>

The user can get the STM32CubeProgrammer version from the listed path relative to the STM32CubeProgrammer installation directory:

- Under Windows®:
  - Path: `./STM32CubeProgrammer/bin/`
  - Command: `STM32_Programmer_CLI.exe --version`
- Under Linux®:
  - Path: `./STM32CubeProgrammer/bin/`
  - Command: `./STM32_Programmer_CLI --version`
- Under macOS®:
  - Path: `./STM32CubeProgrammer/bin/`
  - Command: `./STM32_Programmer_CLI --version`

The user can get STM32H563/573 SFI RSSe codep version from the RSSe file name: `./STM32CubeProgrammer/bin/RSSe/H5/enc_signed_RSSe_SFI_STM32H5_v<version: 4 digits dot separated>.bin`.

The user can get the personalization data file version from the personalization data file name: `./CubeProgrammer/bin/PersoPackages/STM32H5_48402011_SFI._01000000_<version: 2 digits>000000.enc.bin`.

### Description

When using the affected versions of the STM32H563/573 RSSe SFI delivered through the STM32CubeProgrammer tool, an attacker with physical access to the STM32H563/573 may be able to extract data protected by SFI. The issue is fixed within the new RSSe version described in the remediation section.

### Impact

The data protected by the SFI might be extracted when the firmware loading strategy is not closely monitored or managed by the user.

## Remediation

During SFI firmware image creation process, the user must use an STM32CubeProgrammer that supports a personalization data file version 1.0 or higher (STM32H5\_48402011\_SFI.\_01000000\_10000000.enc.bin) in order to program the HSM.

For firmware image secure programming in production, the user must use a programmer tool supporting STM32H563/573 RSSE version 2.0.1.0 or higher (enc\_signed\_RSSE\_SFI\_STM32H5\_v2.0.1.0.bin).

An HSM programmed with a personalization data file version 1.0 or higher only supports STM32H573/563 RSSE version 2.0.1.0 or higher (enc\_signed\_RSSE\_SFI\_STM32H5\_v2.0.1.0.bin).

The user can also contact her/his STMicroelectronics representative to obtain the latest version of the STM32H563/573 RSSE SFI file and the latest version of the STM32H563/573 SFI dedicated personalization data file.

## Contact information

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## Revision history

**Table 1. Document revision history**

Date	Version	Changes
18-Jul-2024	1	Initial release.

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