

## Application Report

# Variable Time Tag Comparison on SimpleLink™ Devices



## TI-PSIRT-2019-080030

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### Summary

The signature verification implementation uses a non-constant time memcmp function, which enables the MAC check to be potentially vulnerable to a timing attack.

**CVSS base score:** 7.5

**CVSS vector:** <https://www.first.org/cvss/calculator/3.0>

### Affected products and versions

- CC26X0
- CC13X0
- CC2640R2
- CC26X2
- CC13X2
- MSP432E4
- CC32XX

### Potentially impacted features

- CC26X0, CC13X0: AES CCM
- CC26X2, CC13X2: AES CCM, AES GCM, ECDSA, ECJPAKE
- MSP432E4: AES CCM, AES GCM
- CC32XX: HMAC

### Suggested mitigations

The following service pack releases address the potential vulnerability:

Affected SDK	SDK version with mitigation
SimpleLink CC13x2-26x2-SDK	<a href="#">3.30.00.03</a> and newer
SimpleLink MSP432E4 SDK	<a href="#">3.30.00.22</a> and newer
SimpleLink CC32xx SDK	<a href="#">3.30.00.04</a> and newer
SimpleLink CC13x0 SDK	<a href="#">4.10.00.10</a> and newer
SimpleLink CC2640R2 SDK	<a href="#">4.10.00.10</a> and newer

### Acknowledgment

- TI internal finding

### Revision history

- Version 1.0 initial publication

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