

## **SSA-492828: Denial-of-Service Vulnerability in SIMATIC S7-300 CPUs and SINUMERIK Controller**

Publication Date: 2020-11-10  
Last Update: 2022-08-09  
Current Version: V1.2  
CVSS v3.1 Base Score: 5.9

### **SUMMARY**

A vulnerability in S7-300 might allow an attacker to cause a Denial-of-Service condition on port 102 of the affected devices by sending specially crafted packets.

Siemens recommends specific countermeasures for products where updates are not, or not yet available.

### **AFFECTED PRODUCTS AND SOLUTION**

<b>Affected Product and Versions</b>	<b>Remediation</b>
SIMATIC S7-300 CPU family (incl. related ET200 CPUs and SIPLUS variants): All versions	Currently no fix is planned See recommendations from section <a href="#">Workarounds and Mitigations</a>
SIMATIC TDC CPU555: All versions	Currently no fix is planned See recommendations from section <a href="#">Workarounds and Mitigations</a>
SINUMERIK 840D sl: All versions	Currently no fix is planned See recommendations from section <a href="#">Workarounds and Mitigations</a>

### **WORKAROUNDS AND MITIGATIONS**

Siemens has identified the following specific workarounds and mitigations that customers can apply to reduce the risk:

- Protect network access to port 102/tcp of affected devices.

Please follow the [General Security Recommendations](#).

### **GENERAL SECURITY RECOMMENDATIONS**

As a general security measure, Siemens strongly recommends to protect network access to devices with appropriate mechanisms. In order to operate the devices in a protected IT environment, Siemens recommends to configure the environment according to Siemens' operational guidelines for Industrial Security (Download: <https://www.siemens.com/cert/operational-guidelines-industrial-security>), and to follow the recommendations in the product manuals.

Additional information on Industrial Security by Siemens can be found at: <https://www.siemens.com/industrialsecurity>

## **PRODUCT DESCRIPTION**

Products of the Siemens SIMATIC S7-300 CPU family have been designed for discrete and continuous control in industrial environments such as manufacturing, food and beverages, and chemical industries worldwide.

SIMATIC TDC is a multiprocessor automation system for drive, control and technology tasks. The system is used particularly for large plants.

SINUMERIK CNC offers automation solutions for the shop floor, job shops and large serial production environments.

SIPLUS extreme products are designed for reliable operation under extreme conditions and are based on SIMATIC, LOGO!, SITOP, SINAMICS, SIMOTION, SCALANCE or other devices. SIPLUS devices use the same firmware as the product they are based on.

## **VULNERABILITY CLASSIFICATION**

The vulnerability classification has been performed by using the CVSS scoring system in version 3.1 (CVSS v3.1) (<https://www.first.org/cvss/>). The CVSS environmental score is specific to the customer's environment and will impact the overall CVSS score. The environmental score should therefore be individually defined by the customer to accomplish final scoring.

An additional classification has been performed using the CWE classification, a community-developed list of common software security weaknesses. This serves as a common language and as a baseline for weakness identification, mitigation, and prevention efforts. A detailed list of CWE classes can be found at: <https://cwe.mitre.org/>.

### **Vulnerability CVE-2020-15783**

Sending multiple specially crafted packets to the affected devices could cause a Denial-of-Service on port 102. A cold restart is required to recover the service.

CVSS v3.1 Base Score	5.9
CVSS Vector	<a href="#">CVSS:3.1/AV:N/AC:H/PR:N/UI:N/S:U/C:N/I:N/A:H/E:P/RL:U/RC:C</a>
CWE	CWE-400: Uncontrolled Resource Consumption

### **ACKNOWLEDGMENTS**

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- WangFangLi from Beijing Winicssec Technology CO., Ltd for coordinated disclosure

### **ADDITIONAL INFORMATION**

For further inquiries on security vulnerabilities in Siemens products and solutions, please contact the Siemens ProductCERT:

<https://www.siemens.com/cert/advisories>

### **HISTORY DATA**

V1.0 (2020-11-10):	Publication Date
V1.1 (2021-08-10):	Added SIMATIC TDC CPU555 to the list of affected products
V1.2 (2022-08-09):	Clarify that currently no fix is planned

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