

SSA-491621: Denial of Service Vulnerability in CPC80 Firmware of SICAM A8000 Devices

Publication Date: 2022-07-12
 Last Update: 2022-07-12
 Current Version: V1.0
 CVSS v3.1 Base Score: 7.5

SUMMARY

A vulnerability was identified in the CPC80 firmware of SICAM A8000 devices. It could allow an unauthenticated remote attacker to cause a permanent denial of service condition.

Siemens has released updates for the affected products and recommends to update to the latest versions.

AFFECTED PRODUCTS AND SOLUTION

Affected Product and Versions	Remediation
CP-8000 MASTER MODULE WITH I/O - 25/+70 °C (6MF2101-0AB10-0AA0): All versions < CPC80 V16.30	Update to CPC80 V16.30 or later version https://support.industry.siemens.com/cs/ww/en/view/109811278/ See further recommendations from section Workarounds and Mitigations
CP-8000 MASTER MODULE WITH I/O - 40/+70 °C (6MF2101-1AB10-0AA0): All versions < CPC80 V16.30	Update to CPC80 V16.30 or later version https://support.industry.siemens.com/cs/ww/en/view/109811278/ See further recommendations from section Workarounds and Mitigations
CP-8021 MASTER MODULE (6MF2802-1AA00): All versions < CPC80 V16.30	Update to CPC80 V16.30 or later version https://support.industry.siemens.com/cs/ww/en/view/109811278/ See further recommendations from section Workarounds and Mitigations
CP-8022 MASTER MODULE WITH GPRS (6MF2802-2AA00): All versions < CPC80 V16.30	Update to CPC80 V16.30 or later version https://support.industry.siemens.com/cs/ww/en/view/109811278/ See further recommendations from section Workarounds and Mitigations

WORKAROUNDS AND MITIGATIONS

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

- Limit access to port 443/tcp to trusted IP addresses

Product specific remediations or mitigations can be found in the section [Affected Products and Solution](#). Please follow the [General Security Recommendations](#).

GENERAL SECURITY RECOMMENDATIONS

Operators of critical power systems (e.g. TSOs or DSOs) worldwide are usually required by regulations to build resilience into the power grids by applying multi-level redundant secondary protection schemes. It is therefore recommended that the operators check whether appropriate resilient protection measures are in place. The risk of cyber incidents impacting the grid's reliability can thus be minimized by virtue of the grid design.

Siemens strongly recommends applying the provided security updates using the corresponding tooling and documented procedures made available with the product. If supported by the product, an automated means to apply the security updates across multiple product instances may be used. Siemens strongly recommends prior validation of any security update before being applied, and supervision by trained staff of the update process in the target environment.

As a general security measure Siemens strongly recommends to protect network access with appropriate mechanisms (e.g. firewalls, segmentation, VPN). It is advised to configure the environment according to our operational guidelines in order to run the devices in a protected IT environment.

Recommended security guidelines can be found at:

<https://www.siemens.com/gridsecurity>

PRODUCT DESCRIPTION

The SICAM A8000 RTUs (Remote Terminal Units) series is a modular device range for telecontrol and automation applications in all areas of energy supply.

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-2022-29884

When using the HTTPS server under specific conditions, affected devices do not properly free resources. This could allow an unauthenticated remote attacker to put the device into a denial of service condition.

CVSS v3.1 Base Score	7.5
CVSS Vector	CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:U/C:N/I:N/A:H/E:P/RL:O/RC:C
CWE	CWE-772: Missing Release of Resource after Effective Lifetime

ACKNOWLEDGMENTS

Siemens thanks the following parties for their efforts:

- Michael Messner from Siemens Energy for reporting the vulnerability

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 (2022-07-12): Publication Date

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