

SSA-382653: Multiple Denial of Service Vulnerabilities in Industrial Products

Publication Date: 2022-12-13
Last Update: 2023-09-12
Current Version: V1.5
CVSS v3.1 Base Score: 7.5

SUMMARY

Affected SIMATIC firmware contains multiple vulnerabilities that could allow an unauthenticated attacker to perform a denial of service attack under certain conditions.

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
SIMATIC Drive Controller CPU 1504D TF (6ES7615-4DF10-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109773914/ See recommendations from section Workarounds and Mitigations
SIMATIC Drive Controller CPU 1507D TF (6ES7615-7DF10-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109773914/ See recommendations from section Workarounds and Mitigations
SIMATIC ET 200SP Open Controller CPU 1515SP PC2 (incl. SIPLUS variants): All versions < V21.9.7	Update to V21.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109759122/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1200 CPU family (incl. SIPLUS variants): All versions < V4.6.0	Update to V4.6.0 or later version https://support.industry.siemens.com/cs/ww/en/view/109814248/ See further recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1510SP F-1 PN (6ES7510-1SJ01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1510SP-1 PN (6ES7510-1DJ01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations

SIMATIC S7-1500 CPU 1511-1 PN (6ES7511-1AK01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1511-1 PN (6ES7511-1AK02-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1511C-1 PN (6ES7511-1CK00-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1511C-1 PN (6ES7511-1CK01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1511F-1 PN (6ES7511-1FK01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1511F-1 PN (6ES7511-1FK02-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1511T-1 PN (6ES7511-1TK01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1511TF-1 PN (6ES7511-1UK01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1512C-1 PN (6ES7512-1CK00-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
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SIMATIC S7-1500 CPU 1512SP F-1 PN (6ES7512-1SK01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1512SP-1 PN (6ES7512-1DK01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1513-1 PN (6ES7513-1AL01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1513-1 PN (6ES7513-1AL02-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
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SIMATIC S7-1500 CPU 1513R-1 PN (6ES7513-1RL00-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1515-2 PN (6ES7515-2AM01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1515-2 PN (6ES7515-2AM02-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
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SIMATIC S7-1500 CPU 1515F-2 PN (6ES7515-2FM02-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1515R-2 PN (6ES7515-2RM00-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1515T-2 PN (6ES7515-2TM01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1515TF-2 PN (6ES7515-2UM01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1516-3 PN/DP (6ES7516-3AN01-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
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SIMATIC S7-1500 CPU 1516T-3 PN/DP (6ES7516-3TN00-0AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1516TF-3 PN/DP (6ES7516-3UN00-0AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations

SIMATIC S7-1500 CPU 1517-3 PN/DP (6ES7517-3AP00-0AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1517F-3 PN/DP (6ES7517-3FP00-0AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1517H-3 PN (6ES7517-3HP00-0AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1517T-3 PN/DP (6ES7517-3TP00-0AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1517TF-3 PN/DP (6ES7517-3UP00-0AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1518-4 PN/DP (6ES7518-4AP00-0AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1518-4 PN/DP MFP (6ES7518-4AX00-1AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1518F-4 PN/DP (6ES7518-4FP00-0AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1518F-4 PN/DP MFP (6ES7518-4FX00-1AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1518HF-4 PN (6ES7518-4JP00-0AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations

SIMATIC S7-1500 CPU 1518T-4 PN/DP (6ES7518-4TP00-0AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU 1518TF-4 PN/DP (6ES7518-4UP00-0AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU S7-1518-4 PN/DP ODK (6ES7518-4AP00-3AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 CPU S7-1518F-4 PN/DP ODK (6ES7518-4FP00-3AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 ET 200pro: CPU 1513PRO F-2 PN (6ES7513-2GL00-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 ET 200pro: CPU 1513PRO-2 PN (6ES7513-2PL00-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 ET 200pro: CPU 1516PRO F-2 PN (6ES7516-2GN00-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 ET 200pro: CPU 1516PRO-2 PN (6ES7516-2PN00-0AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-1500 Software Controller V2: All versions < V21.9.7	Update to V21.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478528/ See recommendations from section Workarounds and Mitigations
SIMATIC S7-PLCSIM Advanced: All versions < V5.0	Update to V5.0 or later version https://support.industry.siemens.com/cs/ww/en/view/109809300/ See recommendations from section Workarounds and Mitigations

SIPLUS ET 200SP CPU 1510SP F-1 PN (6AG1510-1SJ01-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS ET 200SP CPU 1510SP F-1 PN RAIL (6AG2510-1SJ01-1AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS ET 200SP CPU 1510SP-1 PN (6AG1510-1DJ01-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS ET 200SP CPU 1510SP-1 PN (6AG1510-1DJ01-7AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS ET 200SP CPU 1510SP-1 PN RAIL (6AG2510-1DJ01-1AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS ET 200SP CPU 1510SP-1 PN RAIL (6AG2510-1DJ01-4AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS ET 200SP CPU 1512SP F-1 PN (6AG1512-1SK01-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
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SIPLUS S7-1500 CPU 1511-1 PN (6AG1511-1AK01-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
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SIPLUS S7-1500 CPU 1511-1 PN (6AG1511-1AK02-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
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SIPLUS S7-1500 CPU 1511-1 PN T1 RAIL (6AG2511-1AK01-1AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1511-1 PN T1 RAIL (6AG2511-1AK02-1AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations

SIPLUS S7-1500 CPU 1511-1 PN TX RAIL (6AG2511-1AK01-4AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1511-1 PN TX RAIL (6AG2511-1AK02-4AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1511F-1 PN (6AG1511-1FK01-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1511F-1 PN (6AG1511-1FK02-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1513-1 PN (6AG1513-1AL01-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
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SIPLUS S7-1500 CPU 1513F-1 PN (6AG1513-1FL02-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations

SIPLUS S7-1500 CPU 1515F-2 PN (6AG1515-2FM01-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1515F-2 PN (6AG1515-2FM02-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1515F-2 PN RAIL (6AG2515-2FM02-4AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1515F-2 PN T2 RAIL (6AG2515-2FM01-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1515R-2 PN (6AG1515-2RM00-7AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1515R-2 PN TX RAIL (6AG2515-2RM00-4AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1516-3 PN/DP (6AG1516-3AN01-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1516-3 PN/DP (6AG1516-3AN01-7AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1516-3 PN/DP (6AG1516-3AN02-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1516-3 PN/DP (6AG1516-3AN02-7AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations

SIPLUS S7-1500 CPU 1516-3 PN/DP RAIL (6AG2516-3AN02-4AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
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SIPLUS S7-1500 CPU 1516F-3 PN/DP (6AG1516-3FN02-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1516F-3 PN/DP RAIL (6AG2516-3FN02-2AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1516F-3 PN/DP RAIL (6AG2516-3FN02-4AB0): All versions < V2.9.7	Update to V2.9.7 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1517H-3 PN (6AG1517-3HP00-4AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1518-4 PN/DP (6AG1518-4AP00-4AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1518-4 PN/DP MFP (6AG1518-4AX00-4AC0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS S7-1500 CPU 1518F-4 PN/DP (6AG1518-4FP00-4AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations

SIPLUS S7-1500 CPU 1518HF-4 PN (6AG1518-4JP00-4AB0): All versions < V3.0.1	Update to V3.0.1 or later version https://support.industry.siemens.com/cs/ww/en/view/109478459/ See recommendations from section Workarounds and Mitigations
SIPLUS TIM 1531 IRC (6AG1543-1MX00-7XE0): All versions < V2.3.6	Update to V2.3.6 or later version https://support.industry.siemens.com/cs/ww/en/view/109817397/ See recommendations from section Workarounds and Mitigations
TIM 1531 IRC (6GK7543-1MX00-0XE0): All versions < V2.3.6	Update to V2.3.6 or later version https://support.industry.siemens.com/cs/ww/en/view/109817397/ See 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:

- Restrict access to port 102/tcp to trusted systems e.g. with an external firewall

Product-specific remediations or mitigations can be found in the section [Affected Products and Solution](#). 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

SIMATIC Drive Controllers have been designed for the automation of production machines, combining the functionality of a SIMATIC S7-1500 CPU and a SINAMICS S120 drive control.

SIMATIC ET 200SP Open Controller is a PC-based version of the SIMATIC S7-1500 Controller including optional visualization in combination with central I/Os in a compact device.

SIMATIC S7-1200 CPU products have been designed for discrete and continuous control in industrial environments such as manufacturing, food and beverages, and chemical industries worldwide.

SIMATIC S7-1500 CPU products have been designed for discrete and continuous control in industrial environments such as manufacturing, food and beverages, and chemical industries worldwide.

SIMATIC S7-1500 ODK CPUs provide functionality of standard S7-1500 CPUs but additionally provide the possibility to run C/C++ Code within the CPU-Runtime for execution of own functions / algorithms implemented in C/C++. They have been designed for discrete and continuous control in industrial environments such as manufacturing, food and beverages, and chemical industries worldwide.

SIMATIC S7-1500 Software Controller is a SIMATIC software controller for PC-based automation solutions.

SIMATIC S7-PLCSIM Advanced simulates S7-1200, S7-1500 and a few other PLC derivatives. Includes full network access to simulate the PLCs, even in virtualized 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.

TIM 1531 IRC is a communication module for SIMATIC S7-1500, S7-400, S7-300 with SINAUT ST7, DNP3 and IEC 60870-5-101/104 with three RJ45 interfaces for communication via IP-based networks (WAN / LAN) and a RS 232/RS 485 interface for communication via classic WAN networks.

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-2021-40365

Affected devices don't process correctly certain special crafted packets sent to port 102/tcp, which could allow an attacker to cause a denial of service in the device.

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-20: Improper Input Validation

Vulnerability CVE-2021-44693

Affected devices don't process correctly certain special crafted packets sent to port 102/tcp, which could allow an attacker to cause a denial of service in the device.

CVSS v3.1 Base Score	4.9
CVSS Vector	CVSS:3.1/AV:N/AC:L/PR:H/UI:N/S:U/C:N/I:N/A:H/E:P/RL:O/RC:C
CWE	CWE-1284: Improper Validation of Specified Quantity in Input

Vulnerability CVE-2021-44694

Affected devices don't process correctly certain special crafted packets sent to port 102/tcp, which could allow an attacker to cause a denial of service in the device.

CVSS v3.1 Base Score	5.5
CVSS Vector	CVSS:3.1/AV:N/AC:L/PR:H/UI:N/S:U/C:N/I:L/A:H/E:P/RL:O/RC:C
CWE	CWE-1287: Improper Validation of Specified Type of Input

Vulnerability CVE-2021-44695

Affected devices don't process correctly certain special crafted packets sent to port 102/tcp, which could allow an attacker to cause a denial of service in the device.

CVSS v3.1 Base Score	4.9
CVSS Vector	CVSS:3.1/AV:N/AC:L/PR:H/UI:N/S:U/C:N/I:N/A:H/E:P/RL:O/RC:C
CWE	CWE-1286: Improper Validation of Syntactic Correctness of Input

ACKNOWLEDGMENTS

Siemens thanks the following party for its efforts:

- Gao Jian 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 (2022-12-13):	Publication Date
V1.1 (2023-01-10):	Clarified SIMATIC S7-1500 CPU versions
V1.2 (2023-04-11):	Added fix for TIM 1531 family
V1.3 (2023-05-09):	Added fix for SIMATIC S7-1500 Software Controller
V1.4 (2023-07-11):	Added fix for SIMATIC S7-1500 CPU V2 firmware versions; Fix for SIMATIC Drive Controller available already with V2.9.7
V1.5 (2023-09-12):	Clarified SIMATIC S7-1500 Software Controller versions and adjusted fix for SIMATIC S7-1500 Software Controller V2; Added fix for SIMATIC ET 200SP Open Controller CPU 1515SP PC2 (incl. SIPLUS variants)

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