Multiple Vulnerabilities in GENESIS64™ and MC Works64

Release date: November 28, 2024
Last update date: January 16, 2025
Mitsubishi Electric Corporation

Overview

Multiple malicious code execution vulnerabilities exist in GENESIS64™ and MC Works64. An attacker may be able to execute an arbitrary code by storing a specially crafted DLL in a specific folder or tampering with a specially crafted DLL. This could lead to disclose information in the affected products, tamper with, destroy or delete information in the affected products, or cause a denial of service (DoS) condition on the products. (CVE-2024-8299, CVE-2024-8300, CVE-2024-9852).

Customers using GENESIS64™ or MC Works64 version 10.97.2 or prior and using a Dialogic telephony board without installing the Dialogic driver or non-Dialogic telephony board are affected by CVE-2024-8299. In addition, customers using version 10.97.3 or later and installing multi-agent notification feature are affected by CVE-2024-8299.

Customers using GENESIS64™ or MC Works64 version 10.97.2 or prior are affected by CVE-2024-9852. In addition, customers using version 10.97.3 or later and installing multi-agent notification feature are affected by CVE-2024-9852.

In addition, customers who install affected products in an unprotected folder other than the default installation folder are affected by CVE-2024-8300. The multi-agent notification feature is not included in the default installation of GENESIS64™ version 10.97.3 or later.

Affected versions of GENESIS64™ and MC Works64 are listed below. Please apply a security patch and take mitigations.

CVSS[2]

CVE-2024-8299	CVSS:v3.1/AV:L/AC:L/PR:L/UI:N/S:U/C:H/I:H/A:H	Base Score: 7.8
CVE-2024-8300	CVSS:v3.1/AV:L/AC:H/PR:L/UI:N/S:U/C:H/I:H/A:H	Base Score: 7.0
CVE-2024-9852	CVSS:v3.1/AV:L/AC:L/PR:L/UI:N/S:U/C:H/I:H/A:H	Base Score: 7.8

Affected products

<Affected products and versions>

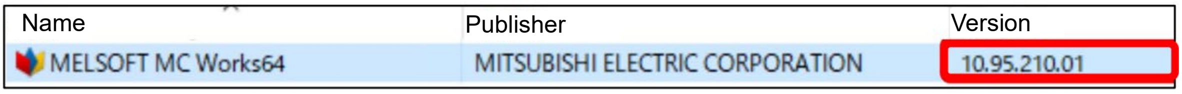
CVE-2024-8299	: GENESIS64™ all versions and MC Works64 all versions
CVE-2024-8300	: GENESIS64™ Version 10.97.2, 10.97.2 CFR1, 10.97.2 CFR2, and 10.97.3
CVE-2024-9852	: GENESIS64™ all versions and MC Works64 all versions

<How to check your product version>

Open Windows® Control Panel and select "Programs and Features".

[If you are using MC Works64]

MC Works64 is applicable if the name is displayed as "MELSOFT MC Works64" and the version number is displayed as "10.95.210.01" or prior (Fig. 1).

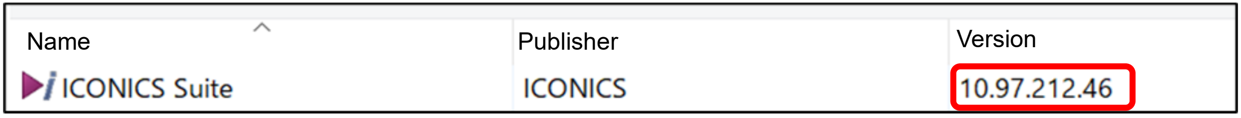


Name	Publisher	Version
MELSOFT MC Works64	MITSUBISHI ELECTRIC CORPORATION	10.95.210.01

Figure 1 MC Works64 Version 4.04E (10.95.2)

[If you are using GENESIS64™ Version 10.97.2]

GENESIS64™ is applicable if the name is displayed as "ICONICS Suite" and the version number is displayed as "10.97.212.46" or prior (Fig. 2).



Name	Publisher	Version
ICONICS Suite	ICONICS	10.97.212.46

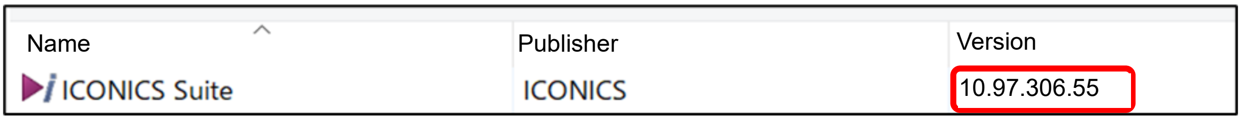
Figure 2 GENESIS64™ Version 10.97.2

If you are applying the Critical Fixes Rollup (CFR), please open the Windows® Settings menu, go to Apps > Installed Apps, and check the version of the installed CFR.

[If you are using GENESIS64™ Version 10.97.3]

GENESIS64™ is applicable if the name is displayed as "ICONICS Suite" and the version number is displayed as "10.97.306.55" (Fig. 3).

[2] https://www.first.org/cvss/v3.1/specification-document



Name	Publisher	Version
ICONICS Suite	ICONICS	10.97.306.55

Figure 3 GENESIS64^{TM} Version 10.97.3

Description

The following three vulnerabilities exist in GENESIS64^{TM} and MC Works64.

CVE-2024-8299 A malicious code execution vulnerability due to Uncontrolled Search Path Element (CWE-427[2]) exists in the Phone agent of the multi-agent notification feature of GENESIS64^{TM} and MC Works64. Customers using GENESIS64^{TM} or MC Works64 version 10.97.2 or prior and using a Dialogic telephony board without installing the Dialogic driver or non-Dialogic telephony board are affected. In addition, customers using version 10.97.3 or later and installing multi-agent notification feature are affected.

CVE-2024-8300 A malicious code execution vulnerability due to Dead Code (CWE-561[3]) exists in the FA device communication driver of GENESIS64^{TM}. Customers who install affected products in an unprotected folder other than the default installation folder are affected.

CVE-2024-9852 A malicious code execution vulnerability due to Uncontrolled Search Path Element (CWE-427) exists in the FAX agent of the multi-agent notification feature on GENESIS64^{TM} and MC Works64. Customers using GENESIS64^{TM} or MC Works64 version 10.97.2 or prior are affected. In addition, customers using version 10.97.3 or later and installing multi-agent notification feature are affected.

Impact

An attacker may be able to execute a malicious code by storing a specially crafted DLL in a specific folder or tampering with a specially crafted DLL. This could lead to disclose information in the affected products, tamper with, destroy or delete information in the affected products, or cause a denial of service (DoS) condition on the products.

CVE-2024-8299 An attacker may be able to execute a malicious code by storing a specially crafted DLL in a specific folder. This could lead to disclose information in the affected products, tamper with, destroy, or delete information in the affected products, or cause a denial of service (DoS) condition on the products.

CVE-2024-8300 An attacker may be able to execute a malicious code by tampering with a specially crafted DLL. This could lead to disclose information in the affected products, tamper with, destroy, or delete information in the affected products, or cause a denial of service (DoS) condition on the products.

CVE-2024-9852 An attacker may be able to execute a malicious code by storing a specially crafted DLL in a specific folder. This could lead to disclose information in the affected products, tamper with, destroy, or delete information in the affected products, or cause a denial of service (DoS) condition on the products.

Countermeasures for Customers

CVE-2024-8299

If you need to use the Phone Agent and are using a Dialogic telephony board, please install the driver provided by Dialogic. If you need to use the Phone Agent and are using a non-Dialogic telephony board, there are no plans to release a fixed version, so please take the mitigations in “Mitigations/Workarounds listed below.

CVE-2024-8300

Please apply a security patch listed in “Countermeasures for Products”.

CVE-2024-9852

There are no plans to release a fixed version, so please take the mitigations in “Mitigations/Workarounds listed below.

Countermeasures for Products

CVE-2024-8299

There are no plans to release a fixed version.

CVE-2024-8300

The security patches corresponding to each version are as follows:
[If you are using GENESIS64^{TM} Version 10.97.2 series]
”10.97.2 Critical Fixes Rollup 3”
(https://iconicsinc.my.site.com/community/s/software-update/a355a000003g4Q5AAI/10972-critical-fixes-rollup-3)

[If you are using GENESIS64^{TM} Version 10.97.3 series]
”10.97.3 Critical Fixes Rollup 1”

[2] https://cwe.mitre.org/data/definitions/427.html

[3] https://cwe.mitre.org/data/definitions/561.html

(https://iconicsinc.my.site.com/community/s/software-update/a35QQ000000y2oXYAQ/10973-critical-fixes-rollup-1)

CVE-2024-9852

There are no plans to release a fixed version.

Mitigations / Workarounds

Mitsubishi Electric recommends that customers take the following mitigations to minimize the risk of exploiting these vulnerabilities.

All vulnerabilities

1) Use PCs with the affected product installed in the LAN and block remote login from untrusted networks, hosts, and users.
2) Prevent unauthorized access by using a firewall or virtual private network (VPN), etc., and allow remote login only to trusted users when connecting a PC with the affected product installed to the Internet.
3) Restrict physical access to the PC on which the affected product is installed and the network to which the PC is connected to prevent unauthorized physical contact.
4) Do not click on web links in emails from untrusted sources. Also, do not open attachments in untrusted emails.

CVE-2024-8299

If you do not need to use the multi-agent notification feature, please uninstall it. The multi-agent notification feature is not included in the default installation of GENESIS64 TM version 10.97.3 or later.

For customers who need to use the multi-agent notification feature, and do not need to use the Phone agent, please execute a custom installation of the multi-agent notification feature and skip the installation of the Phone agent.

CVE-2024-8300

Do not install the affected products in non-default, unprotected folders.

CVE-2024-9852

If you do not need to use the multi-agent notification feature, please uninstall it. The multi-agent notification feature is not included in the default installation of GENESIS64 TM version 10.97.3 or later.

For customers who need to use the multi-agent notification feature, and do not need to use the FAX agent, please execute a custom installation of the multi-agent notification feature and skip the installation of the FAX agent.

If you install the FAX Agent, please activate "Windows Fax and Scan" feature in Microsoft Windows®. The steps for enabling the "Windows Fax and Scan" feature can vary depending on Microsoft Windows® version, so check the Microsoft site for more information. The following is an example for Window®11.

(1) Open Settings in Windows®11.
(2) Click on System in the left-hand menu in the Settings window.
(3) Click on Optional features under the System section.
(4) Click on the View features button to the right of "Add an optional feature".
(5) In the dialog box that appears, scroll down the list to view the Windows Fax and Scan entry.
(6) Check the check box to the right of the entry and click the Next button.
(7) Click the Add button to install Windows Fax and Scan.
(8) Once the installation is complete, reboot your PC.

Acknowledgement

Mitsubishi Electric would like to thank Asher Davila and Malav Vyas, security researchers at Palo Alto Networks, who reported these vulnerabilities.

Contact information

Please contact your local Mitsubishi Electric representative.

<Contact address: Mitsubishi Electric FA>
https://www.mitsubishielectric.com/fa/support/index.html

Trademarks

GENESIS64 TM is a trademark of ICONICS, Inc.
Windows® is a registered trademark of Microsoft Corporation in the United States and other countries.

Update history

January 16, 2025

Revised "Overview," "Description," and "Mitigations / Workarounds."