

# Schneider Electric Security Notification

## Modicon Quantum Ethernet Network module and Quantum / Premium COPRO

10 March 2020

### Overview

Schneider Electric is aware of a vulnerability in the Quantum Ethernet Network module and Quantum/Premium COPRO.

### Affected Product(s)

- Quantum Ethernet Network module 140NOE771x1, versions 7.0 and prior
- Quantum processors with integrated Ethernet – 140CPU65xxxx, all versions
- Premium processors with integrated Ethernet, all versions

### Vulnerability Details

CVE ID: **CVE-2020-7477**

CVSS v3.0 Base Score 7.5 | (High) | CVSS:3.0/AV:N/AC:L/PR:N/UI:N/S:U/C:N/I:N/A:H

A CWE-754: Improper Check for Unusual or Exceptional Conditions vulnerability exists which could cause a Denial of Service when sending a specially crafted command over Modbus.

### Remediation

#### Quantum Ethernet Network module 140NOE771x1

This vulnerability is fixed in version 7.1 and is available for download below:

- **140NOE77101:**  
<https://www.se.com/ww/en/download/document/140NOE77101+Exec+and+Release+Notes/>
- **140NOE77111:**  
<https://www.se.com/ww/en/download/document/140NOE77111+Exec+and+Release+Notes+For+Unity+and+Non+Unity+Users/>

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## Quantum / Premium COPRO

Schneider Electric's Modicon Quantum / Premium controllers have reached their end of life and are no longer commercially available. They have been replaced by the Modicon M580 ePAC controller, our current product offer. Customers should strongly consider migrating to the ModiconM580 ePAC. Please contact your local Schneider Electric technical support for more information.

To mitigate the risks associated with this vulnerability, users should immediately:

- Setup network segmentation and implement a firewall to block all unauthorized access to port TCP/502

### Quantum:

- Configure the Access Control List feature as mentioned in "Quantum using EcoStruxure™ Control Expert - TCP/IP Configuration, User Manual" in chapter "Software Settings for Ethernet Communication / Messaging / Quantum NOE Ethernet Messaging Configuration":

<https://www.schneider-electric.com/en/download/document/33002467K01000/>

### Premium:

- Configure the Access Control List following the recommendations of the user manual "Premium and Atrium using EcoStruxure™ Control Expert - Ethernet Network Modules, User Manual" in chapters "Connection configuration parameters / TCP/IP Services Configuration Parameters / Connection Configuration Parameters":

<https://www.schneider-electric.com/en/download/document/35006192K01000/>

## Product Information

Ethernet Programmable Automation Controller for industrial process and infrastructure.

**Product Category** - Industrial Automation Control

Learn more about Schneider Electric's product categories here: [www.schneider-electric.us/en/all-products](http://www.schneider-electric.us/en/all-products)

### How to determine if you are affected

Affected products listed in this security notification connected to an Ethernet network.

## General Security Recommendations

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We strongly recommend following industry cybersecurity best practices such as:

- Locate control and safety system networks and remote devices behind firewalls, and isolate them from the business network.
- Physical controls should be in place so that no unauthorized person would have access to the ICS and safety controllers, peripheral equipment or the ICS and safety networks.
- All controllers should reside in locked cabinets and never be left in the “Program” mode.
- All programming software should be kept in locked cabinets and should never be connected to any network other than the network for the devices that it is intended.
- All methods of mobile data exchange with the isolated network such as CDs, USB drives, etc. should be scanned before use in the terminals or any node connected to these networks.
- Laptops that have connected to any other network besides the intended network should never be allowed to connect to the safety or control networks without proper sanitation.
- Minimize network exposure for all control system devices and/or systems, and ensure that they are not accessible from the Internet.
- When remote access is required, use secure methods, such as Virtual Private Networks (VPNs), recognizing that VPNs may have vulnerabilities and should be updated to the most current version available. Also recognize that VPN is only as secure as the connected devices.

### Acknowledgements

Schneider Electric recognizes the following researcher(s) for identifying and helping to coordinate a response to this vulnerability:

CVE	Researcher(s) Name
CVE-2020-7477	China Information Technology Security Evaluation Centre (CNITSEC)

### For More Information

This document provides an overview of the identified vulnerability or vulnerabilities and actions required to mitigate. For more details and assistance on how to protect your installation, please contact your local Schneider Electric representative and/or Schneider Electric Industrial Cybersecurity Services. These organizations will be fully aware of this situation and can support you through the process.

<http://www2.schneider-electric.com/sites/corporate/en/support/cybersecurity/cybersecurity.page>

<https://www.schneider-electric.com/en/work/services/field-services/industrial-automation/industrial-cybersecurity/industrial-cybersecurity.jsp>

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## Legal Disclaimer

THIS DOCUMENT IS INTENDED TO HELP PROVIDE AN OVERVIEW OF THE IDENTIFIED SITUATION AND SUGGESTED MITIGATION ACTIONS, REMEDIATION, FIX, AND/OR GENERAL SECURITY RECOMMENDATIONS AND IS PROVIDED ON AN “AS-IS” BASIS WITHOUT WARRANTY OF ANY KIND. SCHNEIDER ELECTRIC DISCLAIMS ALL WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL SCHNEIDER ELECTRIC BE LIABLE FOR ANY DAMAGES WHATSOEVER INCLUDING DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, LOSS OF BUSINESS PROFITS OR SPECIAL DAMAGES, EVEN IF SCHNEIDER ELECTRIC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE USE OF THIS NOTIFICATION, INFORMATION CONTAINED HEREIN, OR MATERIALS LINKED TO IT ARE AT YOUR OWN RISK. SCHNEIDER ELECTRIC RESERVES THE RIGHT TO UPDATE OR CHANGE THIS NOTIFICATION AT ANY TIME AND IN ITS SOLE DISCRETION.

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At Schneider, we believe **access to energy and digital** is a basic human right. We empower all to **make the most of their energy and resources**, ensuring **Life Is On** everywhere, for everyone, at every moment.

We provide **energy and automation digital** solutions for **efficiency and sustainability**. We combine world-leading energy technologies, real-time automation, software and services into integrated solutions for Homes, Buildings, Data Centers, Infrastructure and Industries.

We are committed to unleash the infinite possibilities of an **open, global, innovative community** that is passionate about our **Meaningful Purpose, Inclusive and Empowered** values.

[www.se.com](http://www.se.com)

## Revision Control:

<p><b>Version 1</b> 10 March 2020</p>	<p>Original Release</p>
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