

EcoStruxure

Link150 Ethernet Gateway Firmware Upgrade Tool

User Guide

EcoStruxure offers simple, cost-effective serial-to-Ethernet connectivity.

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Safety Information

Important Information

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a "Danger" or "Warning" safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

Cybersecurity Safety Notice

⚠ WARNING

POTENTIAL COMPROMISE OF SYSTEM AVAILABILITY, INTEGRITY, AND CONFIDENTIALITY

- Change default passwords at first use to help prevent unauthorized access to device settings, controls, and information.
- Disable unused ports/services and default accounts to help minimize pathways for malicious attackers.
- Place networked devices behind multiple layers of cyber defenses (such as firewalls, network segmentation, and network intrusion detection and protection).
- Use cybersecurity best practices (for example, least privilege, separation of duties) to help prevent unauthorized exposure, loss, modification of data and logs, or interruption of services.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designated to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at this own expense.

About the Book

Document Scope

The aim of this document is to provide the users, installers, and maintenance personnel with the software solution to update the Link150 gateway to the latest firmware version irrespective of the initial version. This guide must be used with Link150 gateway.

Validity Note

This guide is valid for Link150 Firmware Upgrade Tool for use with Link150 gateway.

Online Information

The technical characteristics of the devices described in the present document also appear online. To access the information online, go to the Schneider Electric home page www.se.com/ww/en/download/.

The characteristics that are described in the present document should be the same as those characteristics that appear online. In line with our policy of constant improvement, we may revise content over time to improve clarity and accuracy. If you see a difference between the document and online information, use the online information as your reference.

Related Documents

Title of Documentation	Reference Number
Link150 Ethernet Gateway – User Guide	DOCA0110EN
Link150 Ethernet Gateway – Release Note	DOCA0182EN
Link150 Ethernet Gateway – Instruction Sheet	NHA50221

You can download these technical publications and other technical information from our website at www.se.com/ww/en/download/.

Introduction

EcoStruxure Master Range

EcoStruxure is Schneider Electric's IoT-enabled, plug-and-play, open, interoperable architecture and platform, in Homes, Buildings, Data Centers, Infrastructure and Industries. Innovation at Every Level from Connected Products to Edge Control, and Apps, Analytics and Services.

Link150 Firmware Upgrade Tool

Link150 firmware can be updated by using the Link150 Firmware Upgrade Tool. This tool provides the software solution to update the Link150 gateway to the latest firmware version irrespective of the initial version.

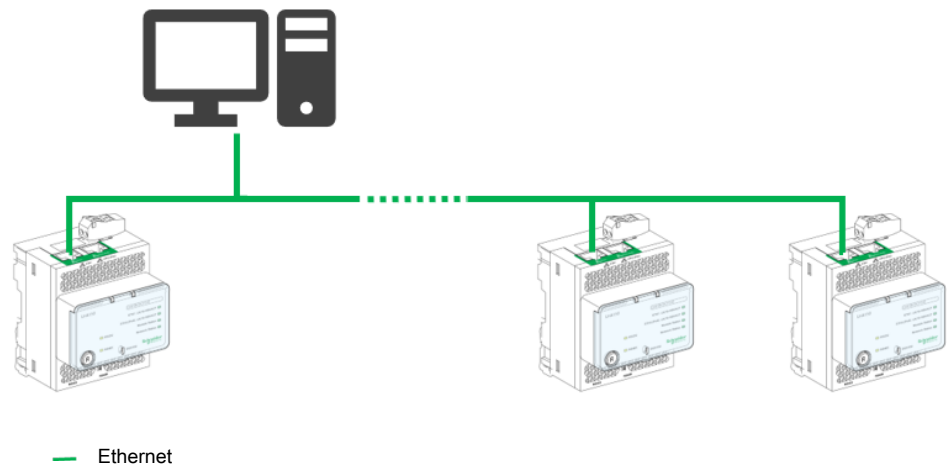
The latest version of the Link150 Firmware Upgrade Tool can be downloaded from Schneider Electric website at www.se.com/ww/en/download/.

Firmware Update Setup

Multiple Link150 devices can be simultaneously updated, only if the devices are all connected in an Ethernet star network topology. Refer to the below graphical representation.

NOTE:

- It is strongly recommended to exclude daisy chain connected devices when performing updates of multiple devices simultaneously.
- It is not recommended to update the firmware of more than 32 devices at a time.



⚠ WARNING

POTENTIAL COMPROMISE OF SYSTEM AVAILABILITY, INTEGRITY AND CONFIDENTIALITY

- In a daisy chain setup, update the device firmware only one at a time. The Link150 Firmware Upgrade Tool will not support firmware update of multiple devices at a time.
- For firmware version 005.001.015 or later, it is strongly recommended to enable HTTPS mode before starting the firmware update of Link150 gateways.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Tool Configuration

Automatic discovery is not available in the firmware upgrade tool. The list of Link150 gateways for which the firmware is to be updated are described and written manually in a user-created **.csv** file.

Follow the standard rules of **.csv** file format when editing the configuration file.

An example of the **.csv** file is shown below:

	A	B	C
1	192.168.1.21	User1	Password1
2	192.168.1.22	User2	Password2
3	192.168.1.23	User3	Password3
4	192.168.1.24	User4	Password4

Each line corresponds to one gateway. The three columns describe the IP address of the gateway, user login account and password.

NOTICE

UNINTENDED ACCESS TO CONFIDENTIAL DATA

- Once all the devices are updated, encrypt the file and protect it with a password to save the file integrity and confidentiality. Most compression utilities can perform such operation.
- Store the encrypted archive file in a location on a PC or a network directory where access controls are enforced to help prevent any unauthorized access to the file.

Failure to follow these instructions can result in unauthorized or unintended access to data.

Procedure for Updating Link150 Firmware

Prerequisites

The following prerequisites are required for updating the firmware:

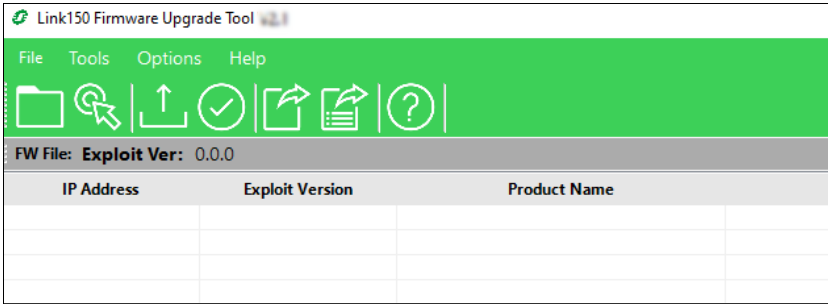

- Modbus TCP interface should be enabled
- Modbus TCP server port number should be 502
- FTP should be enabled for device with firmware version \leq 005.001.015







Firmware Update Procedure

NOTICE
<p>HAZARD OF EQUIPMENT DAMAGE</p> <ul style="list-style-type: none"> • The Link150 gateway must be continuously powered during the firmware update. • The connection with the Link150 gateway must be uninterrupted during the firmware update. <p>Failure to follow these instructions can result in equipment damage.</p>

Once the firmware update starts, all the options in the window will be disabled until the firmware update process is completed. The device status is automatically updated. Depending on the initial firmware version of a gateway, the firmware update process can last from 5 to 15 minutes.

Follow the procedure to update the firmware of the Link150 gateway:

Step	Action
1	<p>Double-click the Link150fwupgradetool.exe file to open the Link150 Firmware Upgrade Tool.</p>  <p>NOTE: The Link150 Firmware Upgrade Tool is compatible with Microsoft® Windows® 10 and later.</p>
2	<p>Click  icon to select the firmware version for update.</p> <p>This action can also be done through Tools > Select Firmware.</p>

Step	Action
3	<p>Select the Link150_Delivery_Package_Vxxx.xxx.xxx.zip file and click OK. The xxx.xxx.xxx in the zip file name refers to the latest firmware version.</p>  <p>NOTE: The Link150_Delivery_Package_Vxxx.xxx.xxx.zip file can be downloaded from www.se.com.</p>
4	<p>Click  icon to select the .csv file.</p> <p>This action can also be done through File > Open.</p> <p>NOTE: The tool will load the data retrieved from all units:</p> <ul style="list-style-type: none"> • Current firmware versions • Device status
5	<p>Ensure that the required devices are selected and then click  icon to start the firmware update of the gateway(s).</p> <p>A safety message is displayed. Read the message and click I UNDERSTAND to continue.</p> <p>This action can also be done through Tools > Upload Firmware.</p> <p>NOTE: When the firmware update is completed, a new device version is displayed in the Exploit Version column.</p>
6	Select the devices to verify the firmware consistency with the latest firmware version available.
7	<p>Click  icon to start the verification.</p> <p>This action can also be done through Tools > Check FW Consistency.</p> <p>NOTE: The recommendation as per device firmware information is available in the Status column .</p>
8	Click  icon to save the firmware update logs of selected devices.
9	Click  icon to export the firmware update result.

Upgrade Status Error Messages

Status Message	Description
Invalid device IP format	Device IP mentioned in .csv file is not in standard IP format.
Device connection failed	<ul style="list-style-type: none"> • Application could not connect to device while retrieving device information. • Any connection exception occurred from the device.
Get device info operation failed	Any exception occurred while retrieving the device information.
Device is not communicating	Application is not able to read current device exploit version.
Upgrade not allowed	Device version is greater than target firmware version.
Device firmware version not supported	Target firmware version is not supported by the application.
Firmware upload failed	Any error occurred during HTTP or FTP file transfer.

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