



**Load CODESYS to AXC F 2152**



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## 1. Overview

This guide will go over the process on how to import a 'Codesys Control for PLCnext SL' license into the Codesys IDE, load the Codesys runtime onto a PLCnext AXC F 2152 and apply the license.

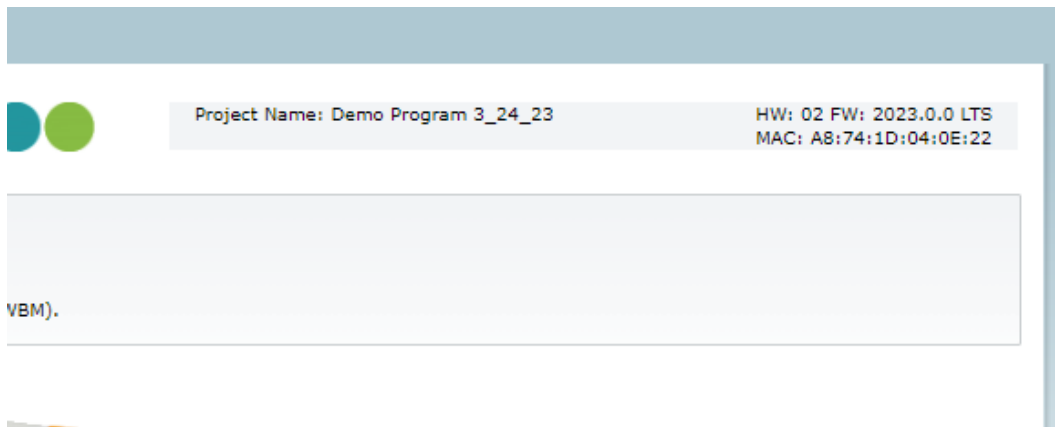
## 2. General Information

This is what is needed to complete this guide:

- Codesys Development System V3.5.17.0 or higher
- Codesys Control for PLCnext SL
- AXC F 2152 PLC
- PLCnext firmware version 2023.0 LTS

### 3. Check and Update Firmware of PLC

1. Confirm the firmware version on the 2152. Connect your PC to the PLC and change the network settings of the PC to be on the same subnet as the PLC. (192.168.1.x) Check the firmware version of the PLC by logging into the web-based management tool. This is done by entering 192.168.1.10/wbm into any web browser. User: admin and Password: is printed on the face of the PLC.



2. If the PLC is not on firmware version 2023.0 LTS, go to the 2152 product page at: <https://www.phoenixcontact.com/en-us/products/controller-axc-f-2152-2404267>
3. Scroll down to Firmware expand this section and expand Version 2023.0.0 LTS and download the zip file.

Firmware

Hardware Version

All


Compatible Tools

All

With the firmware updates, your controllers are always kept up to date with the latest technological developments.

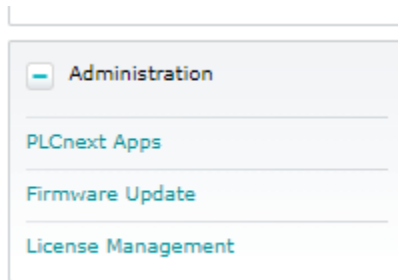
Select your combination of hardware and firmware versions and click on the download symbol to the left.

Version 2023.0.0 LTS

File	Hardware Version	Compatible Tools
<div>  AXC_F_2152_FW_2023_0_LTS.zip (716 MB) </div> <div> SHA256 Checksum:  5661e7a7d2e823346183d2a2f70d1efd1161fe4d7ec96efdac9bab36711c0100 </div>	02, 03, 04, 05	PLCnext Engineer 2019.0 LTS PLCnext Engineer 2021.3 PLCnext Engineer 2021.0 LTS PLCnext Engineer



4. Unzip the downloaded firmware update file and locate the .raucb file.
5. Navigate to the Firmware update page under the Administration tab in the web based management tool.



6. Browse for the .raucb file and Start the update. This will update the firmware and the PLC will reset.

#### **Firmware Update**

A screenshot of the 'Firmware Update' page in the web-based management tool. The page has a light gray background. At the top, there is a section titled 'Select the update container file'. Below this title, there is a 'Browse...' button and a text input field containing the filename 'axcf2152-2023.0.0.65-LTS.raucb'. Below the input field, there is a 'Start Update' button. Underneath the button, the following information is displayed: 'Name: axcf2152-2023.0.0.65-LTS.raucb', 'Size: 172.2 MB', and 'Type: raucb'.

7. Once the PLC is finished restarting you can check that the firmware is updated in the web-based management tool.



## 4. Import 'CODESYS Control for PLCnext SL'

1. Open the 'CODESYS Installer' from the CODESYS IDE under the Tools tab.
2. Confirm that "CODESYS Control for PLCnext SL" is installed. If not installed, download from the CODESYS store and import using CODESYS Installer.

NOTE: This will run for free for two hours before requiring a license or hardware reboot

## 5. Import License to IDE

1. Here are the license options, it is only necessary to have 'CODESYS Control for PLCnext SL' to run CODESYS on an AXC F 2152.

<b>CODESYS Control for PLCnext SL *</b>  1 x CODESYS Control for PLCnext SL + <b>\$132.00</b>	<b>CODESYS Control PLCnext MultiCore SL</b>  <input type="checkbox"/> 1 x CODESYS Control for PLCnext MC SL + <b>\$66.00</b>	<b>CODESYS KNX SL</b>  <input type="checkbox"/> 1 x CODESYS KNX SL + <b>\$180.00</b>
<b>CODESYS BACnet SL</b>  <input type="checkbox"/> 1 x CODESYS BACnet SL + <b>\$360.00</b>	<b>CODESYS Control SoftMotion SL</b>  <input type="checkbox"/> 1 x CODESYS SoftMotion SL + <b>\$264.00</b>	<b>CODESYS SoftMotion CNC+Robotics SL (Option CODESYS SoftMotion SL is required)</b>  <input type="checkbox"/> 1 x CODESYS SoftMotion CNC+Robotics SL + <b>\$132.00</b>

2. A key should be emailed or can be found in the 'My Orders' section of your CODESYS account, after purchasing a license
3. Open CODESYS and navigate to the License Repository under the Tools tab.
4. Import your Ticket containing the license.



## 6. Apply CODESYS Runtime to PLC

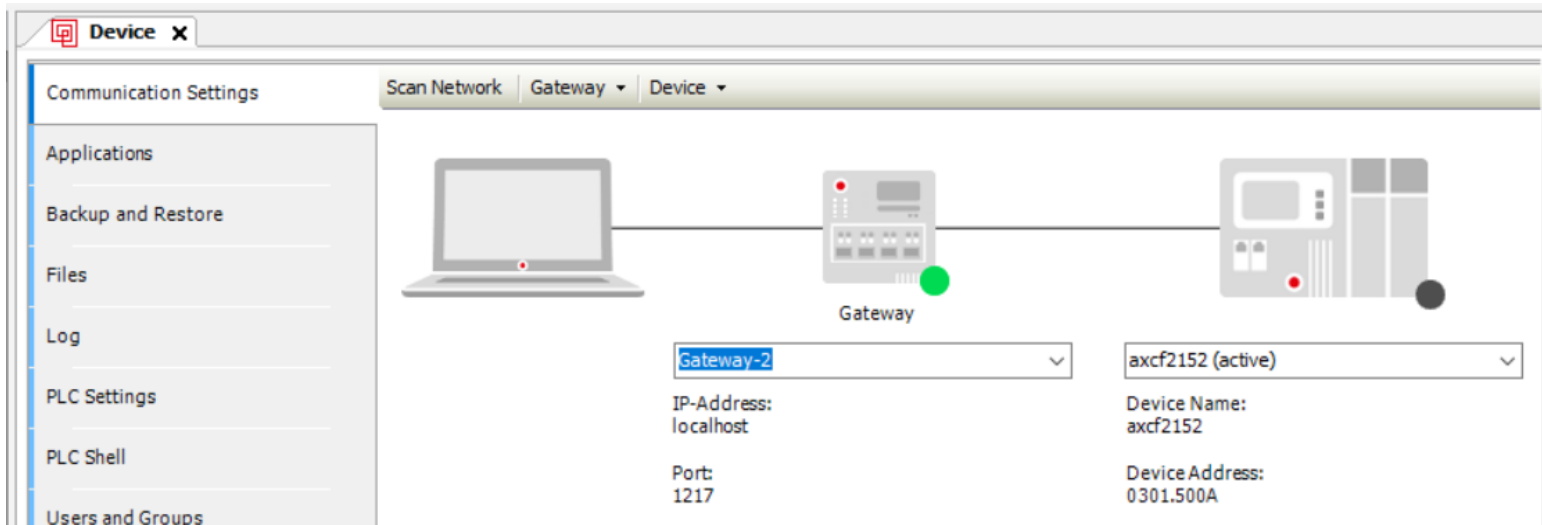
1. Open update PLCnext under the Tools tab.
2. Using the same login credentials as the WBM, populate the Username and Password.
3. Manually type in IP address or Scan.
4. There should be a Runtime Package version, but if there is not locate the 'CODESYS Control for PLC' on your laptop.
5. Click the Install button below the CODESYS Runtime Package.
6. Once the install process is complete Click Start underneath Runtime.

The screenshot shows the PLCnext software interface. It has a title bar with 'PLCnext' and standard window controls. The interface is divided into several sections:

- Login credentials:** Includes fields for 'Username' (containing 'admin') and 'Password'. There is an unchecked checkbox for 'SSH login based on key'.
- Select target:** Includes an 'IP Address' field (containing '192.168.1.10') and a 'Scan' button.
- CODESYS Runtime Package:** Includes a 'Version' dropdown menu (showing '4.9.0.0 (plcnext, armhf)'), 'Install' and 'Remove' buttons, and a 'Package directory' field (containing 'C:\Users\dspethma\CODESYS Control for PLC') with a browse button ('...').
- Additional Packages:** Includes 'Install...' and 'Manage...' buttons.
- System:** Includes 'System Info' and 'Reboot Target' buttons.
- Runtime:** Includes 'Start' and 'Stop' buttons, and a 'Disable Application' button at the bottom.

## 7. Apply License to PLC

1. Start a new standard project and double click the Device under the Devices window.
2. The below window will open.
3. Connect to the PLC by Scanning the network



4. Once connected to the PLC, open the License Manager under the Tools tab.
5. Select Device, Select Soft container, click the PLC and then OK
6. Highlight the License and Install