



Omron NX-Series PLC Startup Guide



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OVERVIEW

Omron NX-Series PLCs are powerful devices for automating robotic cells.

This guide walks you through how to configure an Omron PLC in Sysmac Studio and Forge/OS.

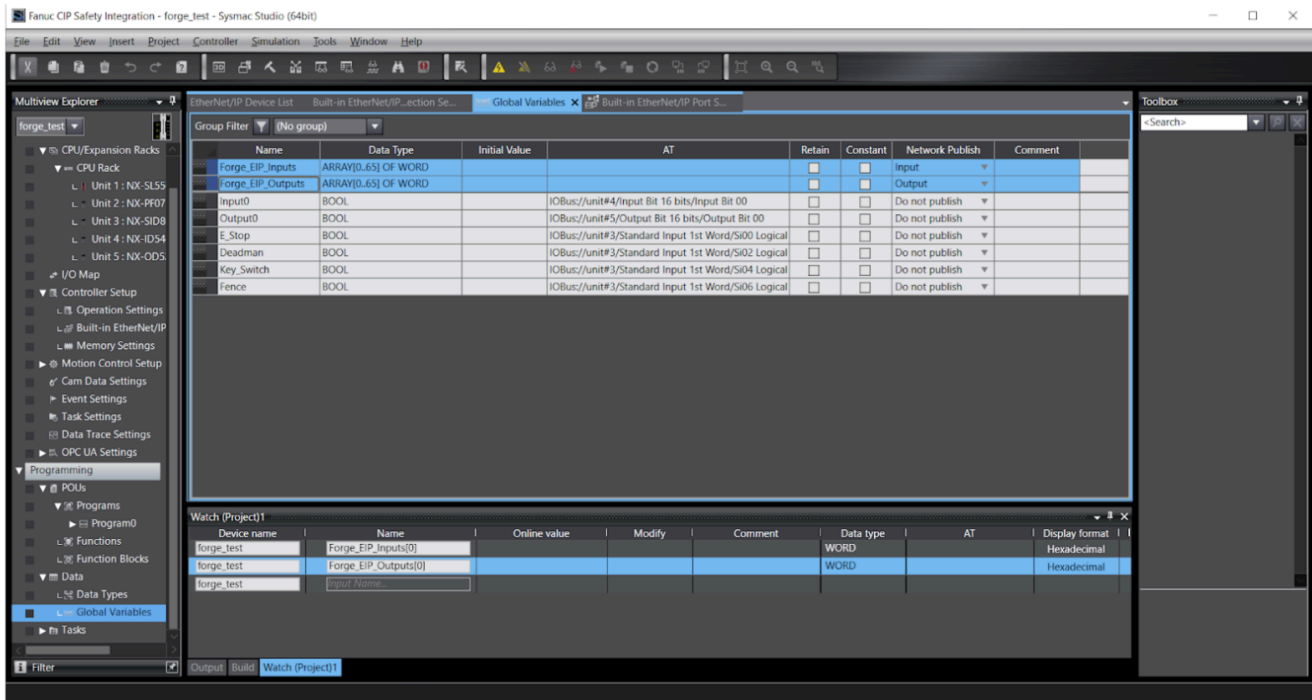
Let's get started!



CONFIGURING THE PLC IN SYSMAC STUDIO

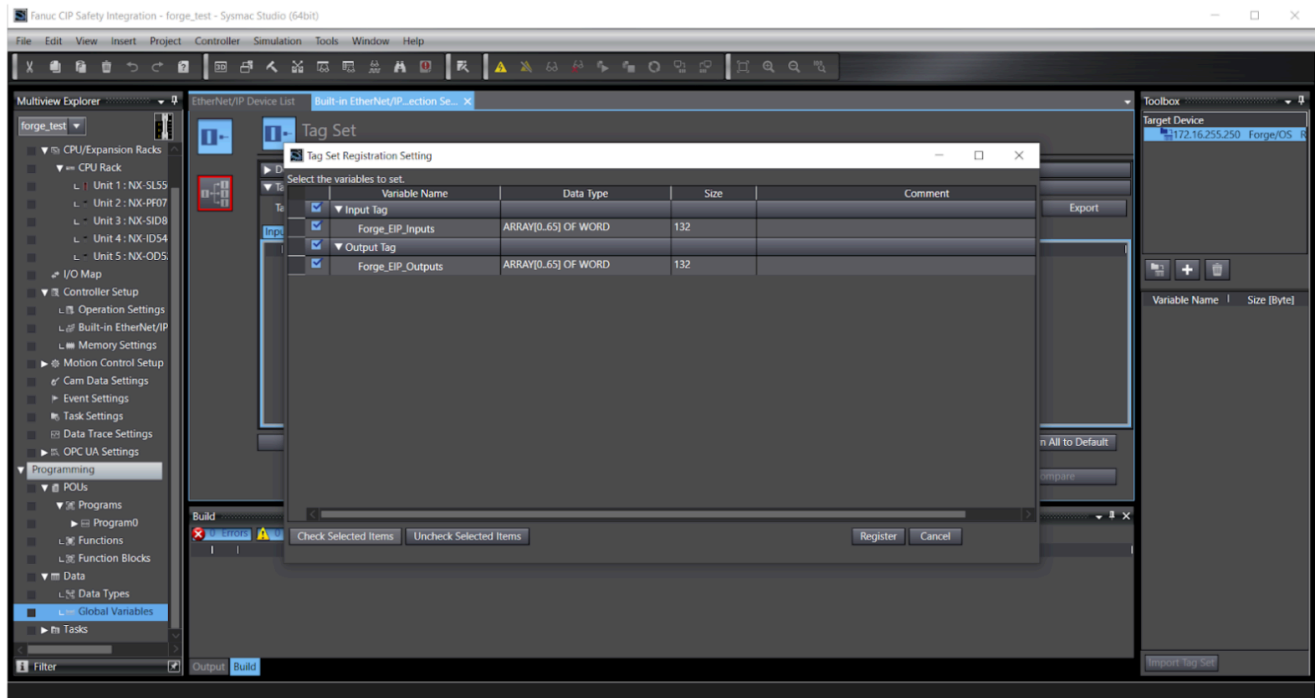
This section assumes that you have Sysmac Studio installed on a computer.

- 1 Put the forgeos.eds file in the following folder: *C:\Program Files(x86)\OMRON\Sysmac Studio\IODeviceProfiles\EipConnection\Eds*
- 2 Create the following highlighted global variables with 132 bytes each. Configure the network publish dropdown as shown below.



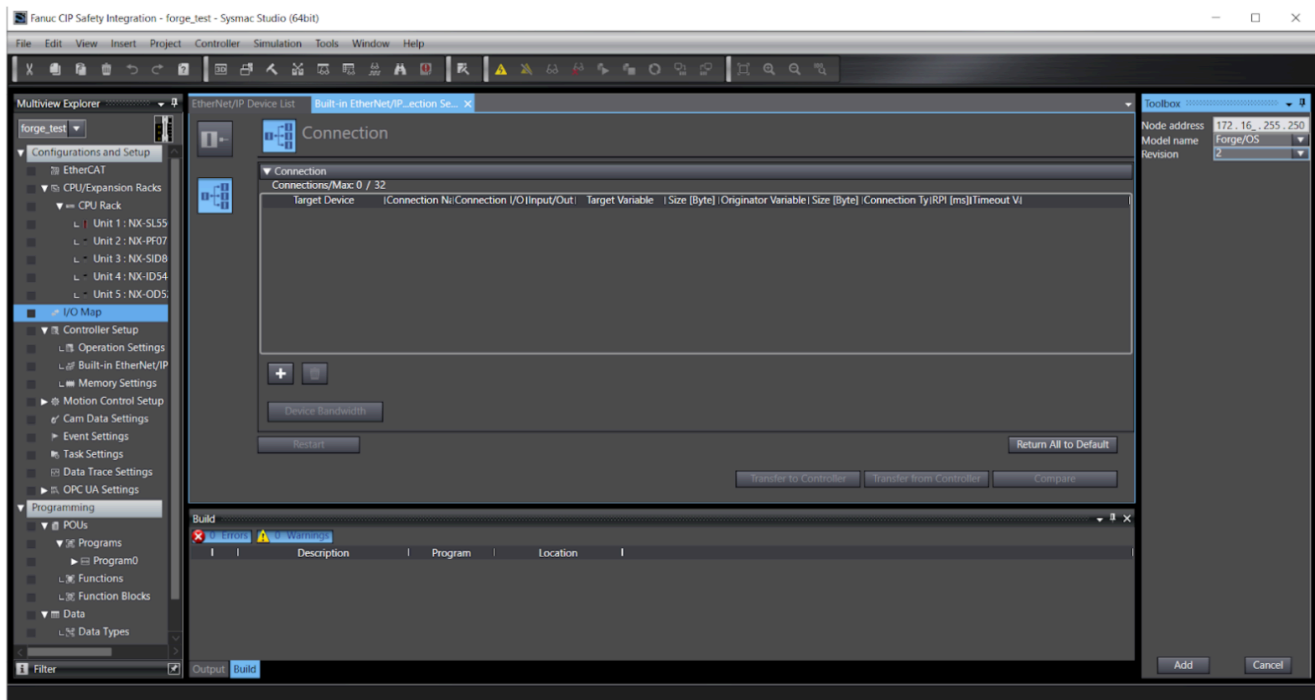
- 3 Go to **Tools-> Ethernet/IP Connection Settings**.

4 Click **Registration All** and select the global variables that were created in Step 2.

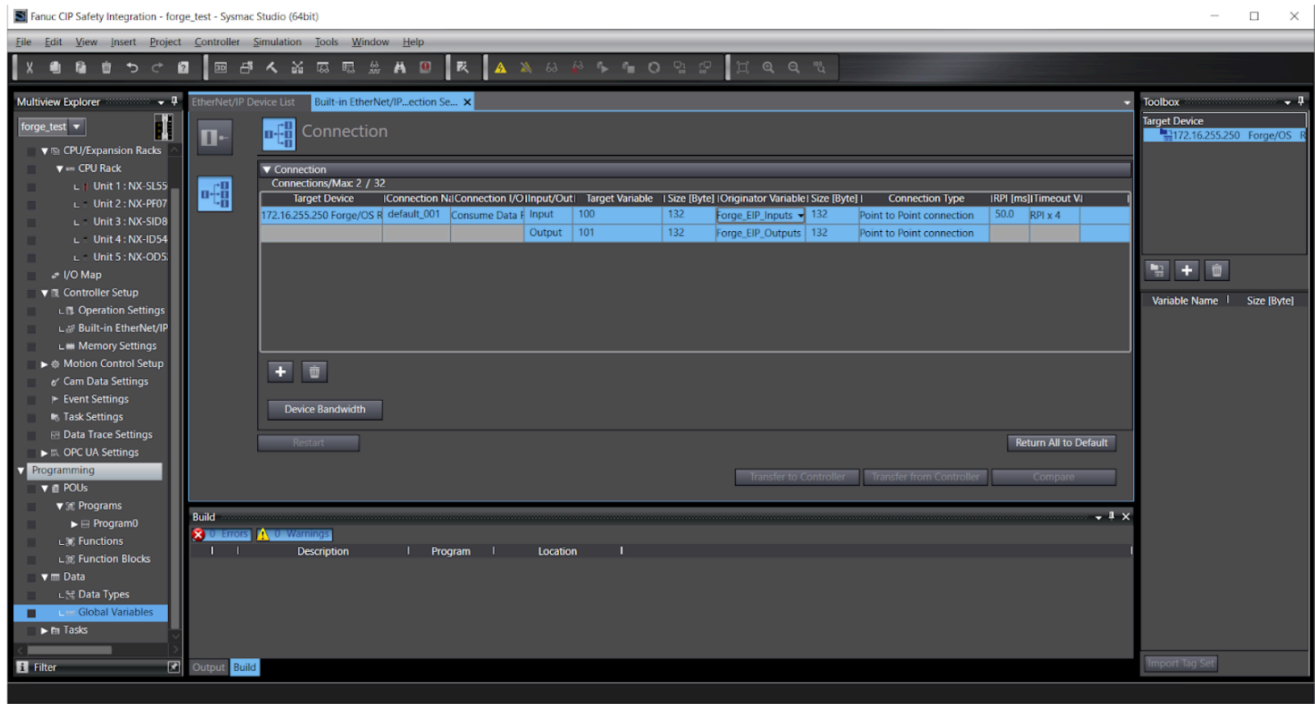


5 Go to the **Connection** tab.

6 Create a new device in the right pane. Select the Forge/OS device and enter the IP address.



7 Populate all the fields as shown below.



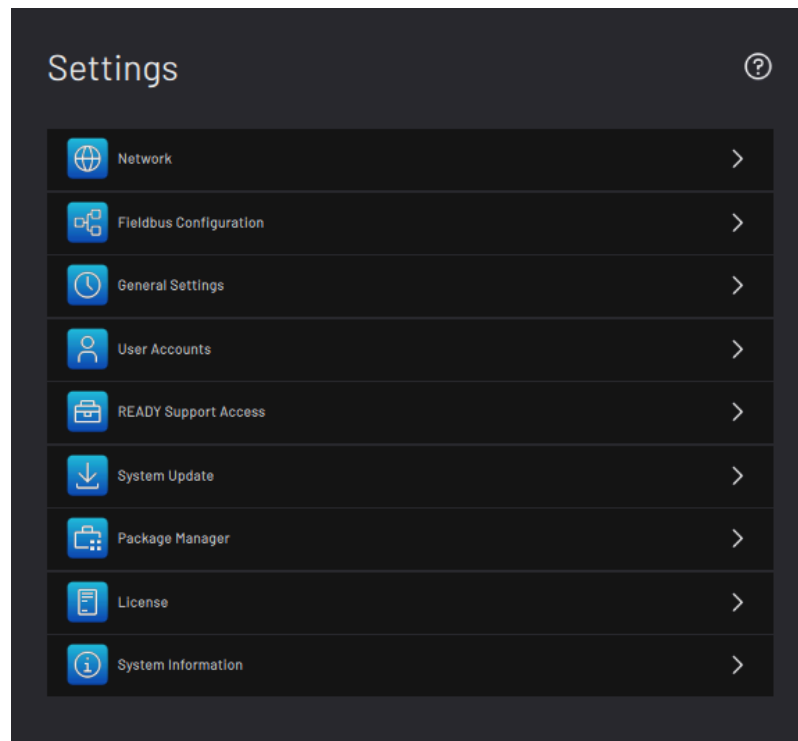
8 Use the created global variables in the user program to send and receive data.

CONFIGURING THE PLC IN FORGE/OS

Once the PLC is configured in Sysmac Studio, you can add it in Forge/OS.

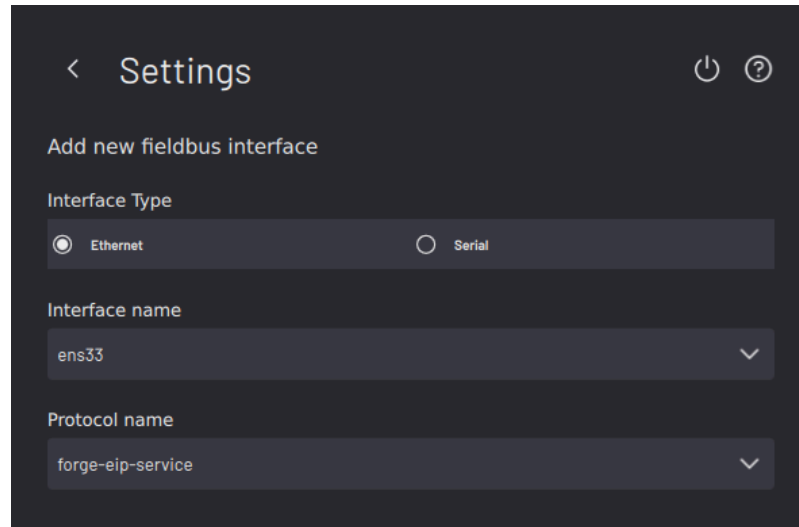
1 Follow these substeps to add an Ethernet/IP fieldbus interface.

a In the **Settings App**, tap **Fieldbus Configuration**.

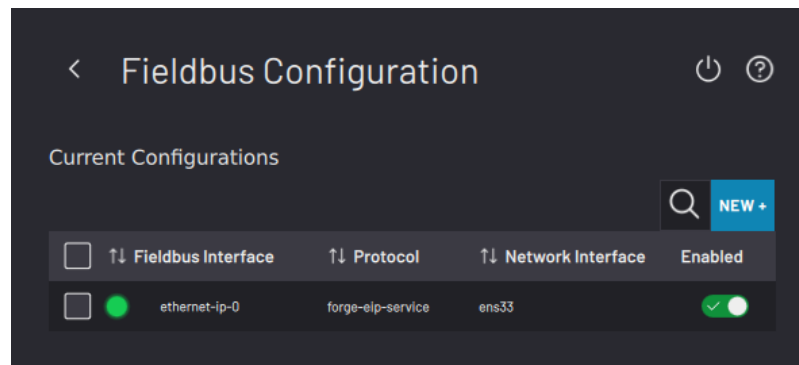


b Tap **NEW +** to create a new fieldbus configuration.

c Create an interface with a type of **Ethernet**.

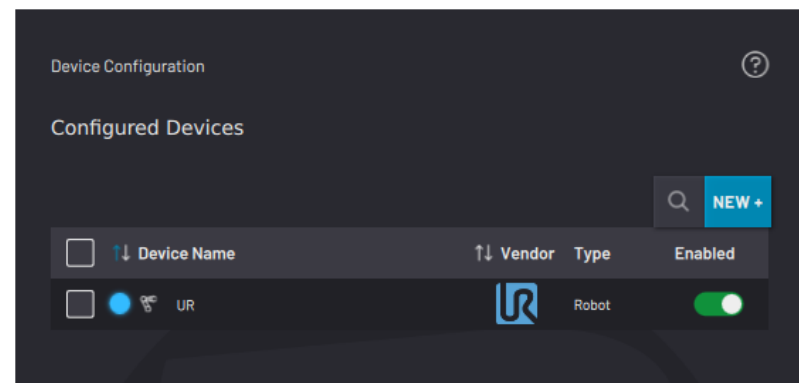


d Tap **SAVE**. Make sure that the new Ethernet/IP fieldbus interface appears in the list of current configurations and is enabled.



2 In the Forge/OS **Device Configuration** app, follow these substeps:

a Tap **NEW+**.



b Select **EtherNet/IP Forge/OS Adapter** (Network device type).

Device Library

Filter by

Network ▼

1 item(s) selected Cancel

↑↓ Device Name	↑↓ Vendor	↑↓ Type	Version
<input checked="" type="radio"/> EtherNet/IP Forge/OS adapter		Network	1.1.0
<input type="radio"/> EtherNet/IP Forge/OS device		Network	1.1.0
<input type="radio"/> EtherNet/IP Generic Device		Network	1.3.0
<input type="radio"/> Modbus TCP Generic Device		Network	1.1.0
<input type="radio"/> Rockwell Automation Logix PAC		Network	1.0.0
<input type="radio"/> Teknic ClearLink 4-13 Ethernet/IP Motion Controller		Network	1.0.0

- c Give the device a name, select the Ethernet/IP fieldbus interface that you created at the beginning of this section, and tap **NEXT**.

EtherNet/IP Forge/OS adapter ?

Device Name *

Description

Fieldbus Interface ethernet-ip-0 v *

Fieldbus Interfaces are configured in the Settings App

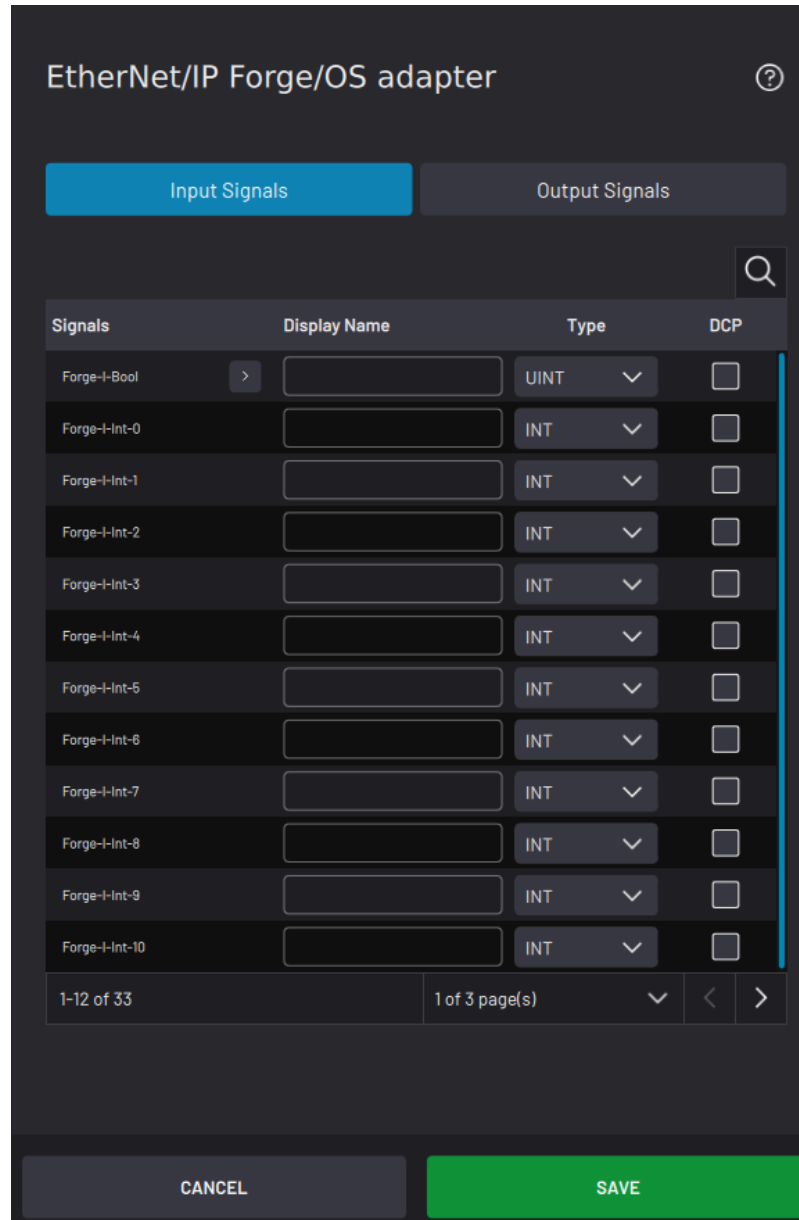
Runtime Fault on Device Error

Name	Assembly Instance	Size	Data Type Size
Input	100	33	32-bit
Output	101	33	32-bit
Config	1	0	Unknown

* Required Field

CANCEL
NEXT

d Configure any **Input/Output (I/O)** signals that you want to view in the Device Control app.



e Tap **SAVE**.