![ifm efector logo]

Ifm Programmable 4.3" HMI Controller for Industrial Systems

Requirements

1. Install the latest Codesys x64 from Codesys website (admin rights required) – SP19 runtime.
http://us.store.codesys.com

2. Download ecomat display firmware and package on ifm website.
https://www.ifm.com/us/en/product/CR1140?tab=documents
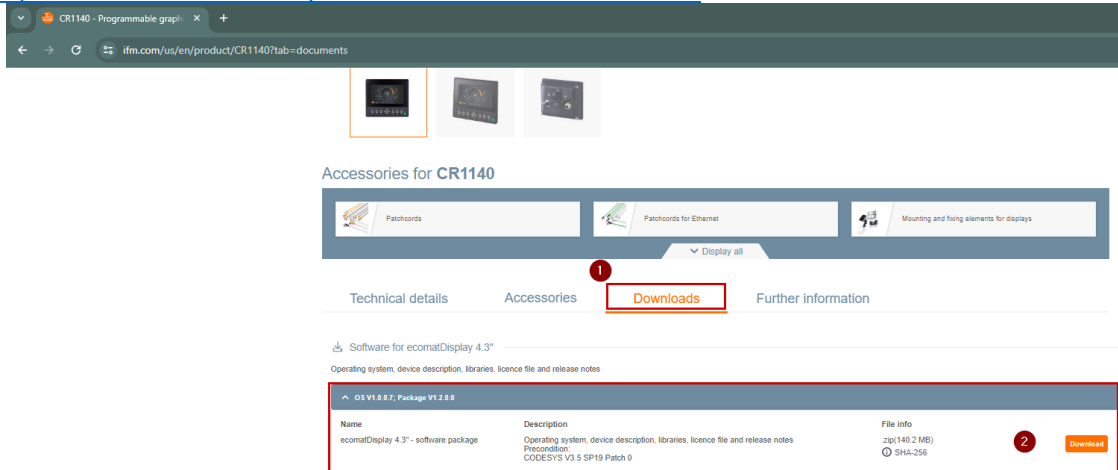
3. Controller programming, set up and support videos
https://www.ifm.com/us/en/us/industrial-controls---i4.0/setup-and-support/setup-and-support

4. Codesys online training courses
https://us.store.codesys.com/events.html

   a. Codesys V3 Essential Training (for beginners – no programming background)

   CODESYS V3 Essentials Training - LIVE ONLINE - Jan 2023
   2108100015-T-2023-01-23
   $1,000.00

   More Details

   This 16-hour training is targeted for individuals who are new to CODESYS and need to get started with a good foundation. Through a mix of lectures and hands-on exercises, this class teaches the basic features and concepts of CODESYS and the IEC 61131-3 programming languages.
   Learn More

   b. Codesys V3 Intensive Training (for end users with PLC programming background)

   CODESYS V3 Intensive Training - Beverly, MA - March 2023
   2108100012-T-2023-03-28
   $2,500.00

   Available: 2 of 10
   Mar 28, 2023 (08:00 EDT) - Mar 31, 2023 (17:00 EDT)
   Beverly, MA

   More Details

   This 30-hour training is targeted for experienced control engineers transitioning to CODESYS, or for engineers wishing to take their knowledge of CODESYS to the next level. It combines basic and advanced training modules to give participants a comprehensive understanding of the capabilities of CODESYS, alternating between lectures and hands-on labs. It includes hints, tricks, and best practices compiled from many years of experience.
   Learn More

Hardware overview

M12 ethernet connection

M12 A coded for power and CAN communication
Pin 1: Service (boot device into set up mode)
Pin2: 24 V DC
Pin 3: GND

Designation	M12 connector 1 (supply, CAN, service)	Operating voltage	Nominal value fuse	Required triggering characteristics
VBB_{30}	pin 2	8...32 V DC	max. 3 A	$T_{fuse} \leq 120$ s at max. 6.25 A
Service input	pin 1	8...32 V DC	max. 3 A	$T_{fuse} \leq 120$ s at max. 6.25 A

Firmware Installation

1. Recovery App
On delivery, the recovery app runs on the device.
Current recovery app version is 1.0.0.7

2. Use local Recovery App
Use "INSTALL FROM FILE" to install *.swu- or *.upd-package from USB memory device.
After successful installation, "RESTART" device.
(Use "NETWORK SETUP" to change network parameters for web recovery app.)

3. Use Web Recovery App
Connect device to network.
Enter device url: http://192.168.82.245:8080
Select or drag & drop the *.swu package here.

Recovery App 0.1.0.1
Software Update
Click here, or drag and drop a software update image file to this area.
Update not started.
Restart
Messages
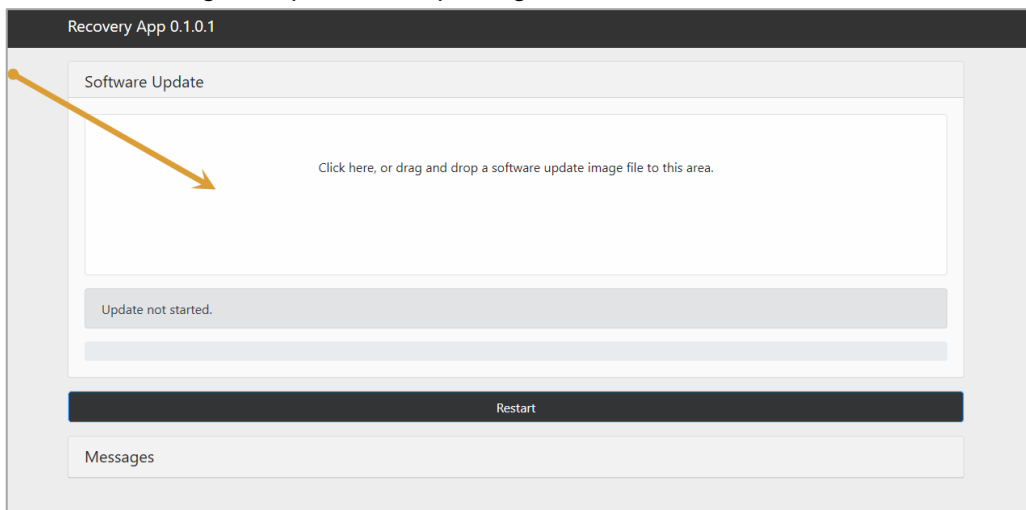
Wait until firmware is successfully loaded.
Restart the device.

4. Attention: Launch Application ⚠
To start Codesys runtime, device application must be launch.

Press ⏻ to exit the setup mode.
- If a valid application program is saved: The application starts.
- If no valid application program is saved: A blank screen appears. Accessing the device with CODESYS is possible.

Device Info	System	Device	Display
IOs	OS Release	20230530	
	Recovery Version	0.0.1.0	
Setup	RAM	989 MB	
	Flash 1	3.47 GB	
Ethernet	Ethernet	1	
	CAN Interfaces	1	
Services	USB	0	
Backup	Keyboard	1	
	Touchscreen	0	
Tests			
CAN Test			
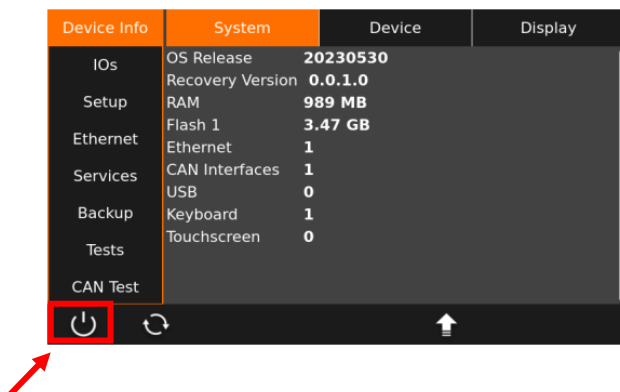
ifm ecomat Display Package Installation

Install Codesys Package
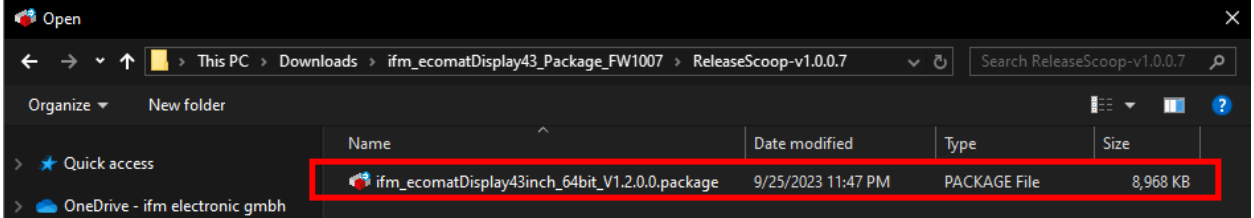
1. **Open Codesys Installer with Administration Rights**
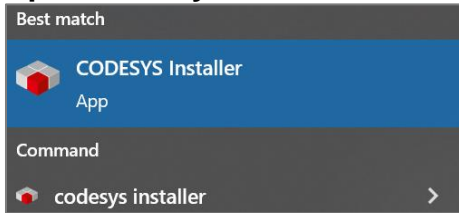
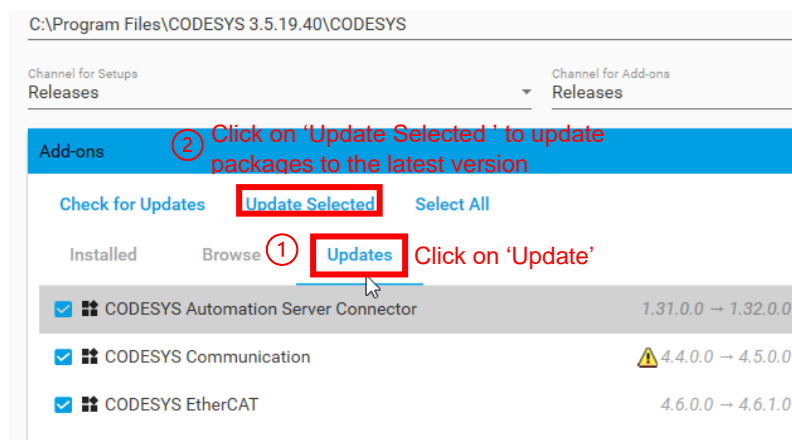2. **Follow the steps below to install ecomat display codesys package.**
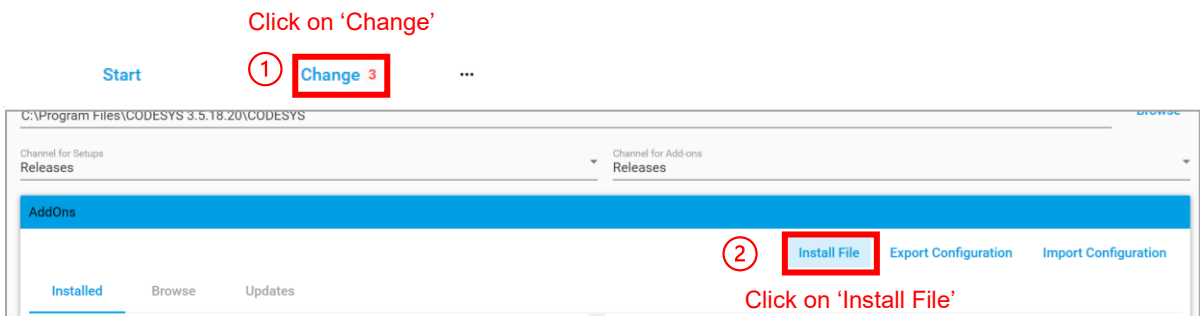
Select the correct package.
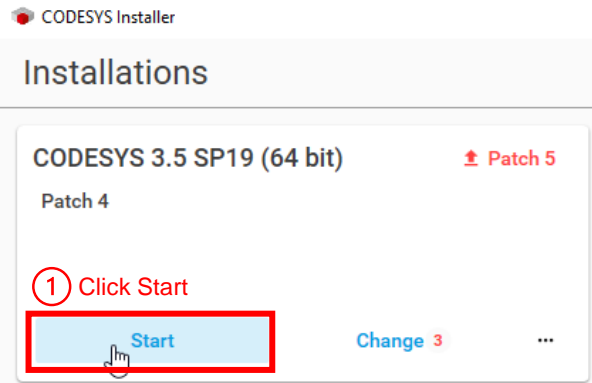

③ Select target package and follow prompt to install

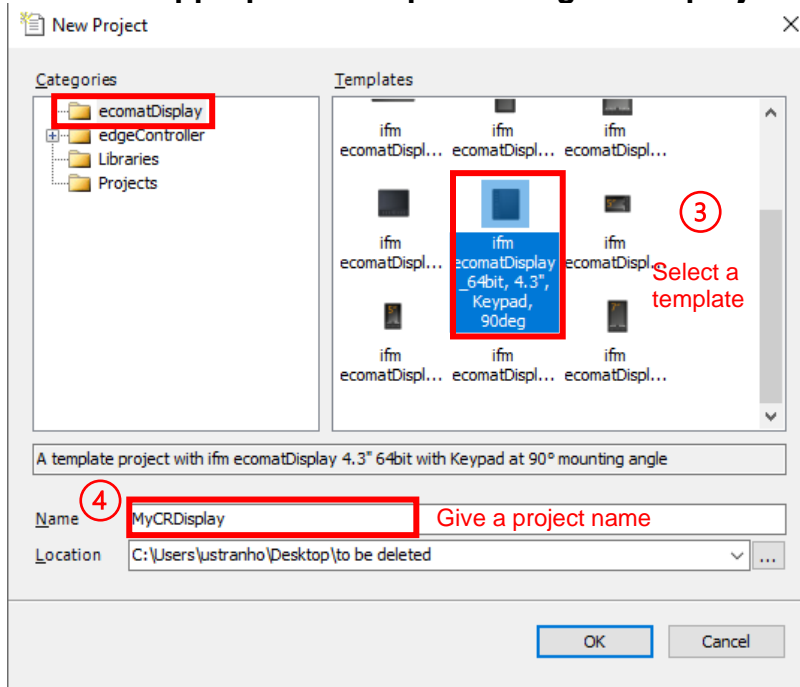3. Update all to latest packages

Create a new Codesys Project

1. Open Codesys Installer

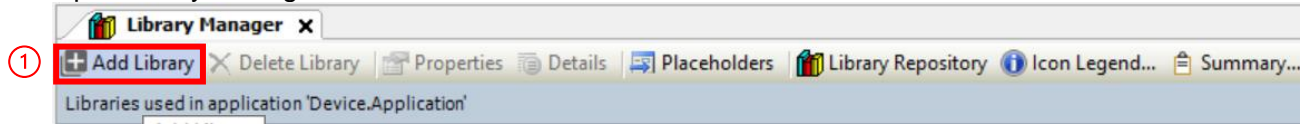① Click Start

2. Create a new Project

② Click New Project

3. Select an appropriate Template and give the project a Name

③ Select a template

④ Give a project name

4. Add libraries to current project

Open library manager

Select ifmEIP and click OK

① Add Library
② Type library name in search bar
③ Select library
④ OK
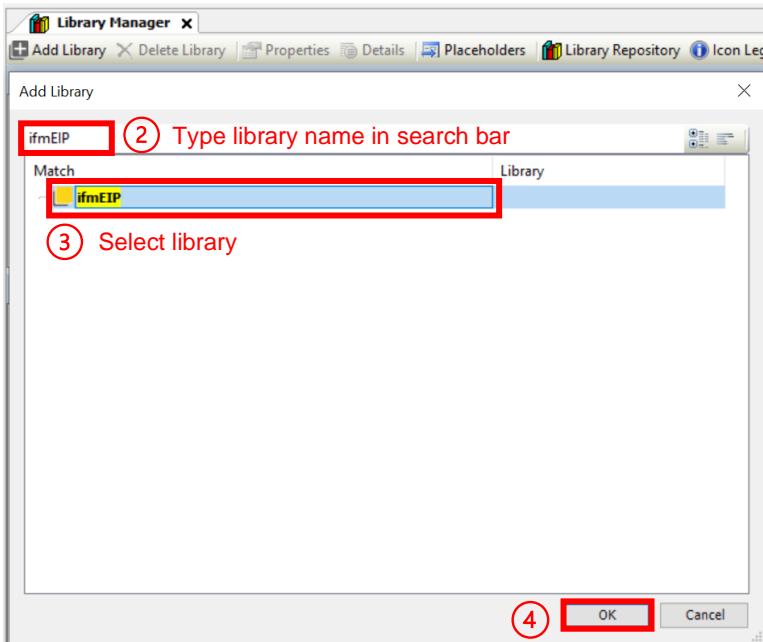
5. Add ethernet device to the ethernet tree

① Right click on Ethernet
② Click 'Add Device'
③ Select Ethernet_ecomatDisplay4.3
④ Add Device

6.

Add an ethernet/IP Scanner

Click on Ethernet_ecomatdisplav
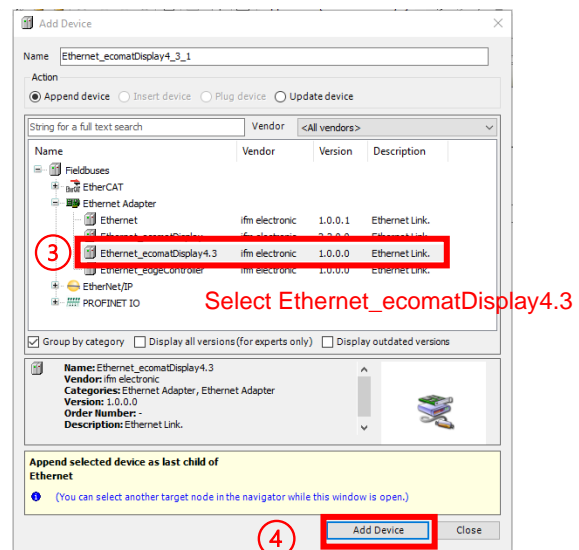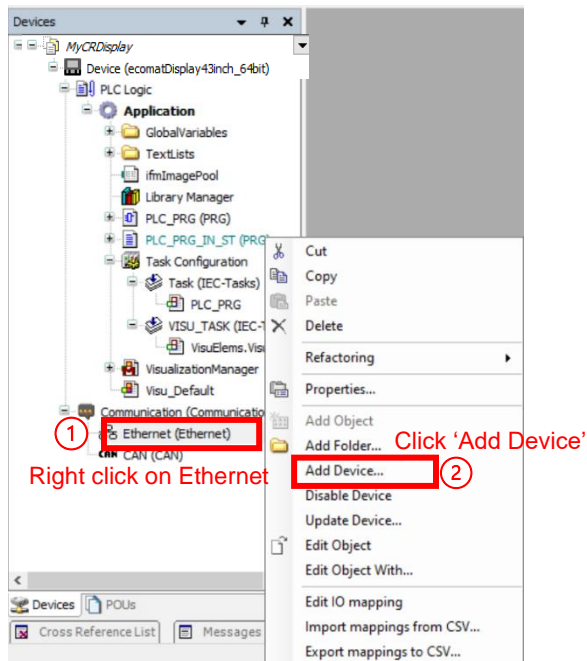
Select 'Ethernet/IP Scanner'
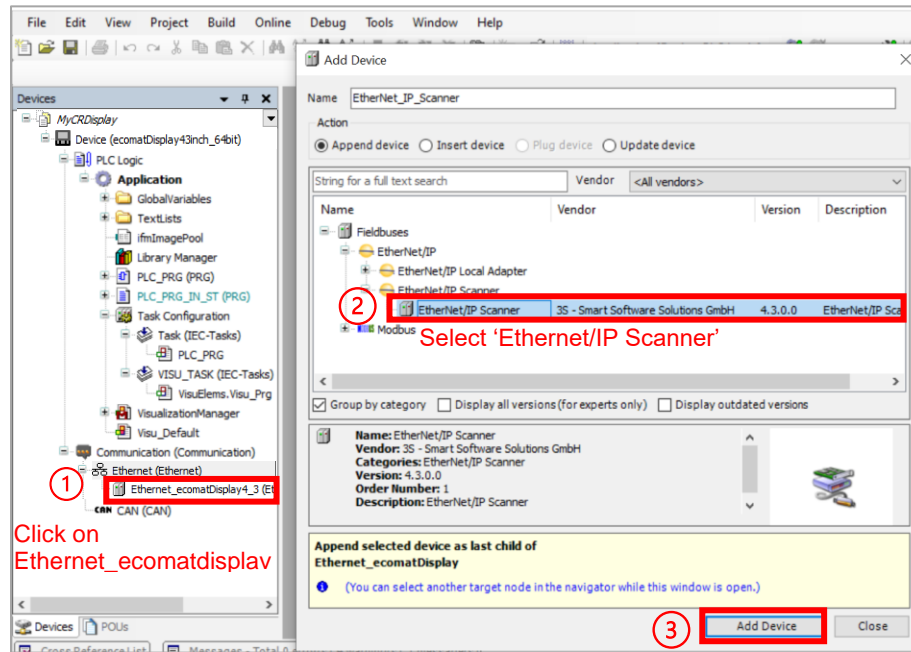
Add an Ethernet module

Give module a name

Select module

Click on Ethernet_IP_Scanner
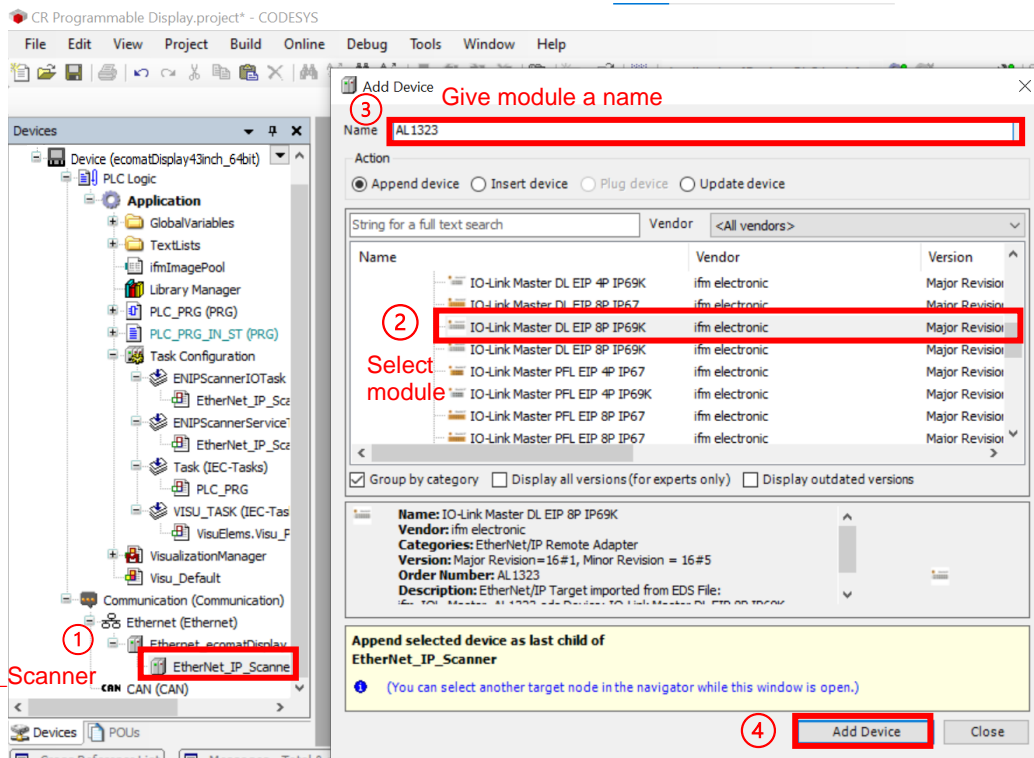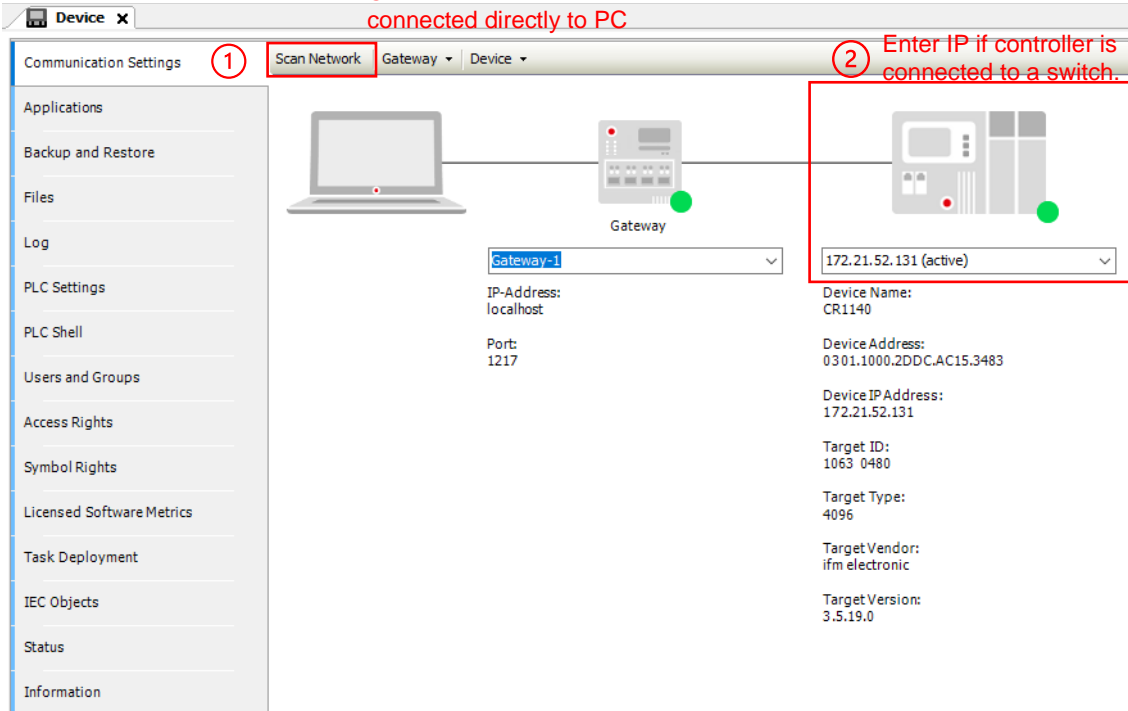
Go Online with the Project and Controller

1. Scan Device

Click 'Scan Network' if controller is connected directly to PC
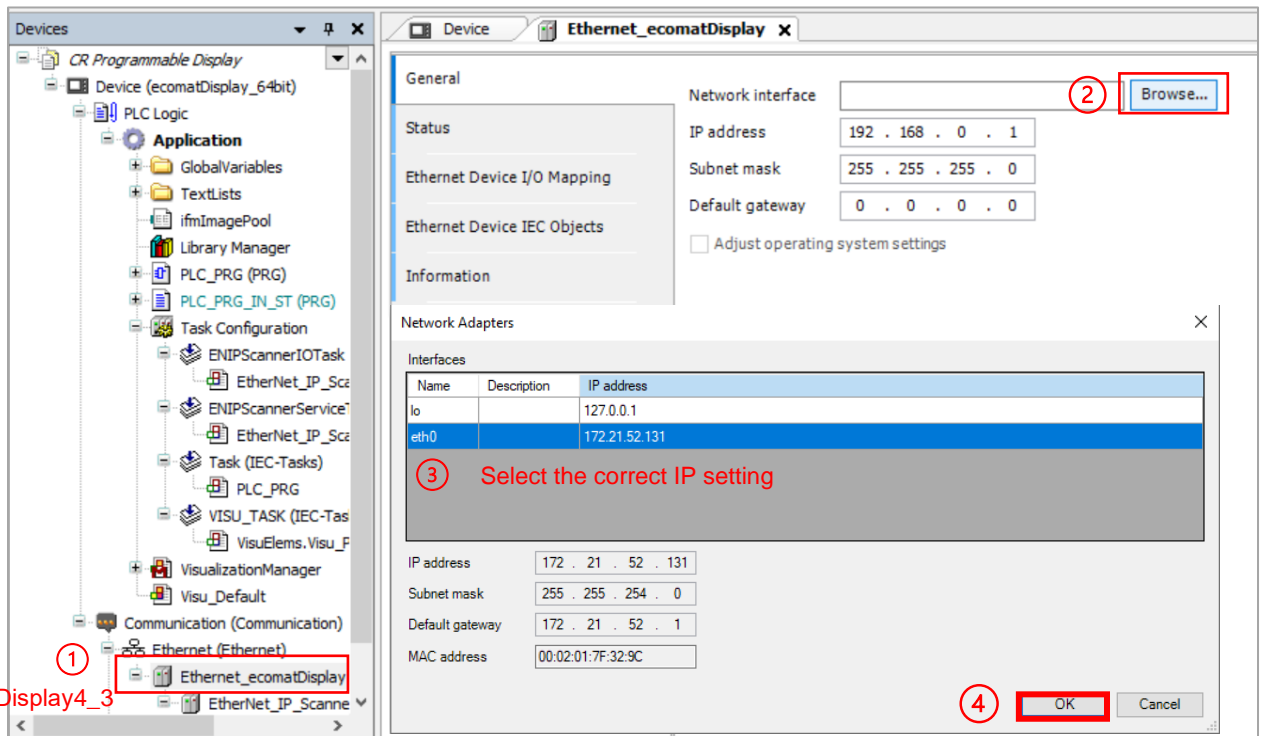
Enter IP if controller is connected to a switch.

2. Set Ethernet Connection

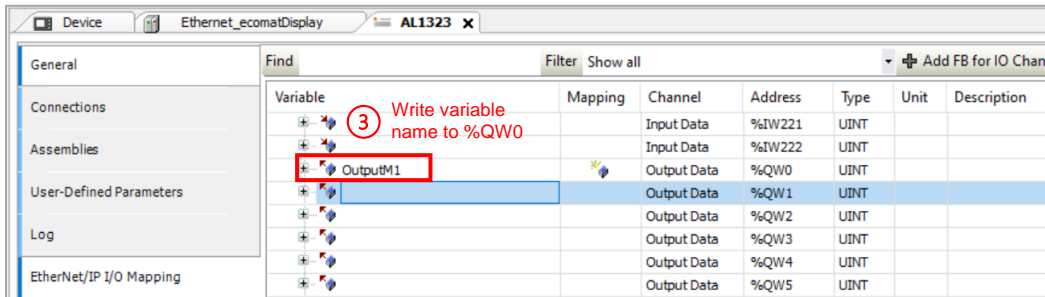Double click on 'Ethernet_ecomatDisplay4_3

Select the correct IP setting

Project gets update with the right settings.

3. Ethernet module set up

① Double click on module

② Enter module's IP address
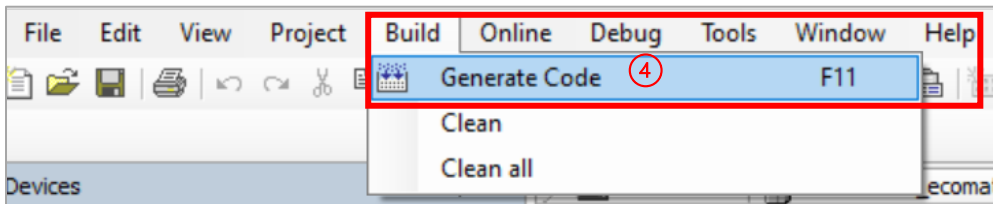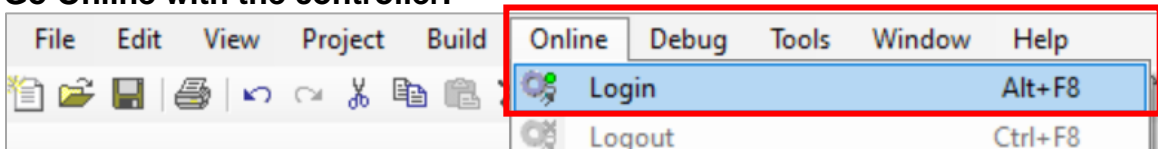

③ Click on Ethernet/IP I/O Mapping

④ Change Always update variable to Enable 2
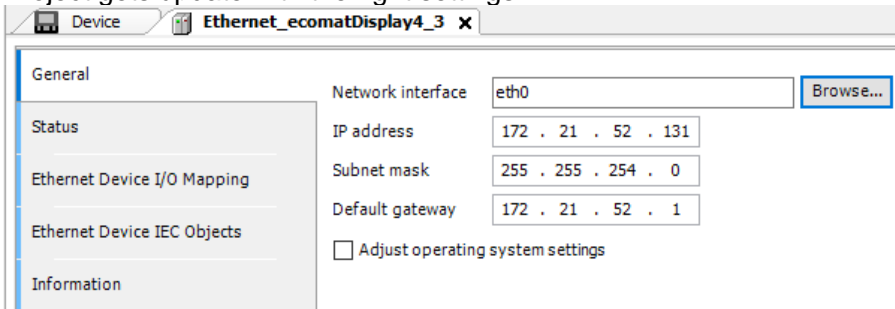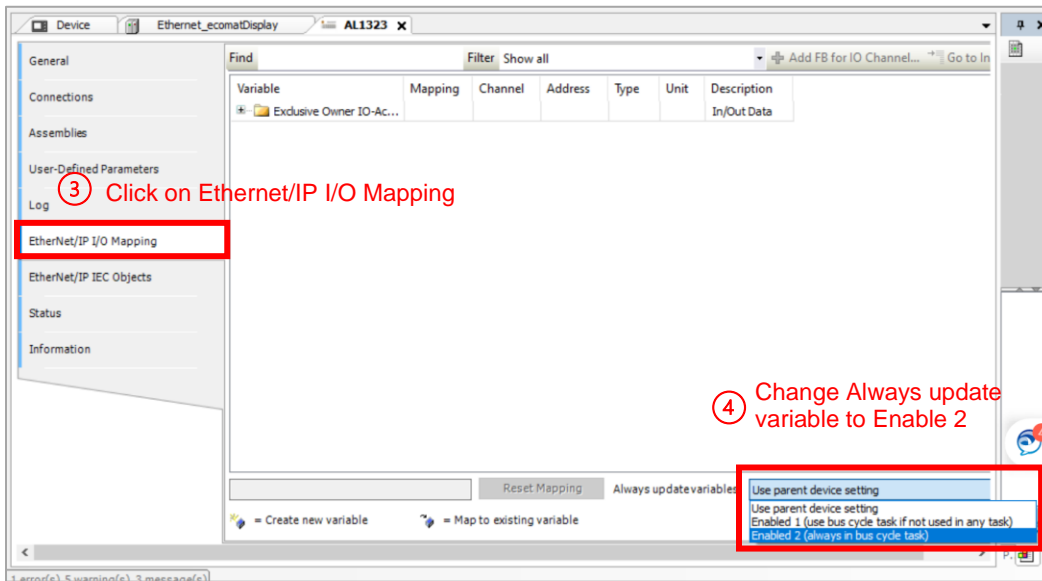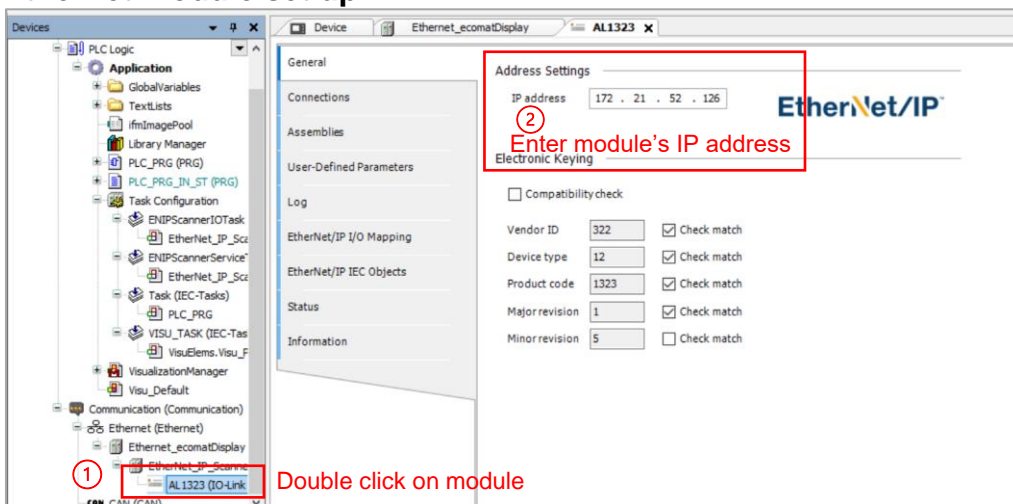
Assign input/output variable to array.
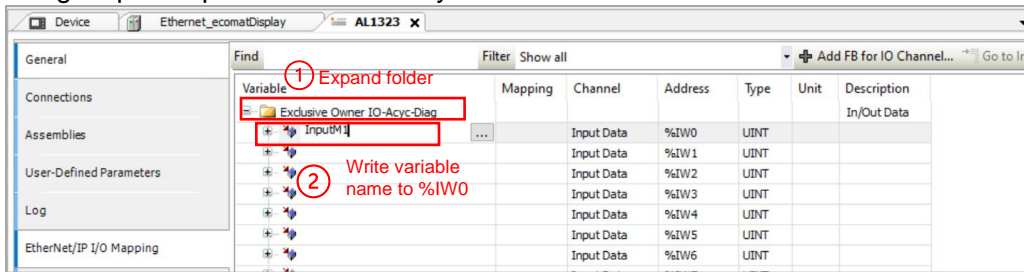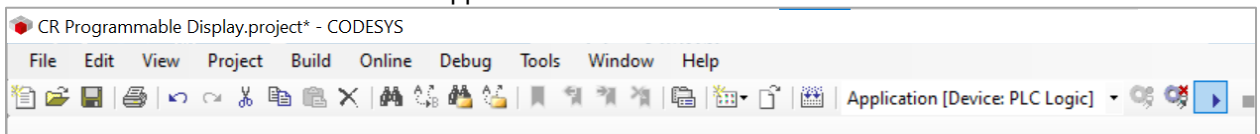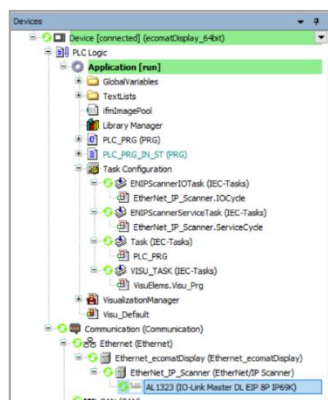

Generate Code to check for errors.

4. **Go Online with the controller.**

① Click 'Online' > 'Login'

Click the Start icon or F5 to start the application.

Green circles indicate everything is communicating.

For additional technical support, please reach out to us at info.us@ifm.com or call into 800-441-8246 and one of our technical engineers will be able to assist you with your questions.