



## OVERVIEW

Studio 5000 (formerly RSLogix 5000) is the design software used to program and configure ControlLogix and CompactLogix programmable automation controllers and modules. In order for Studio 5000 to recognize a device that is not included with the installation of Studio 5000, the device's Electronic Data Sheet (or .eds file) must be registered in Studio.

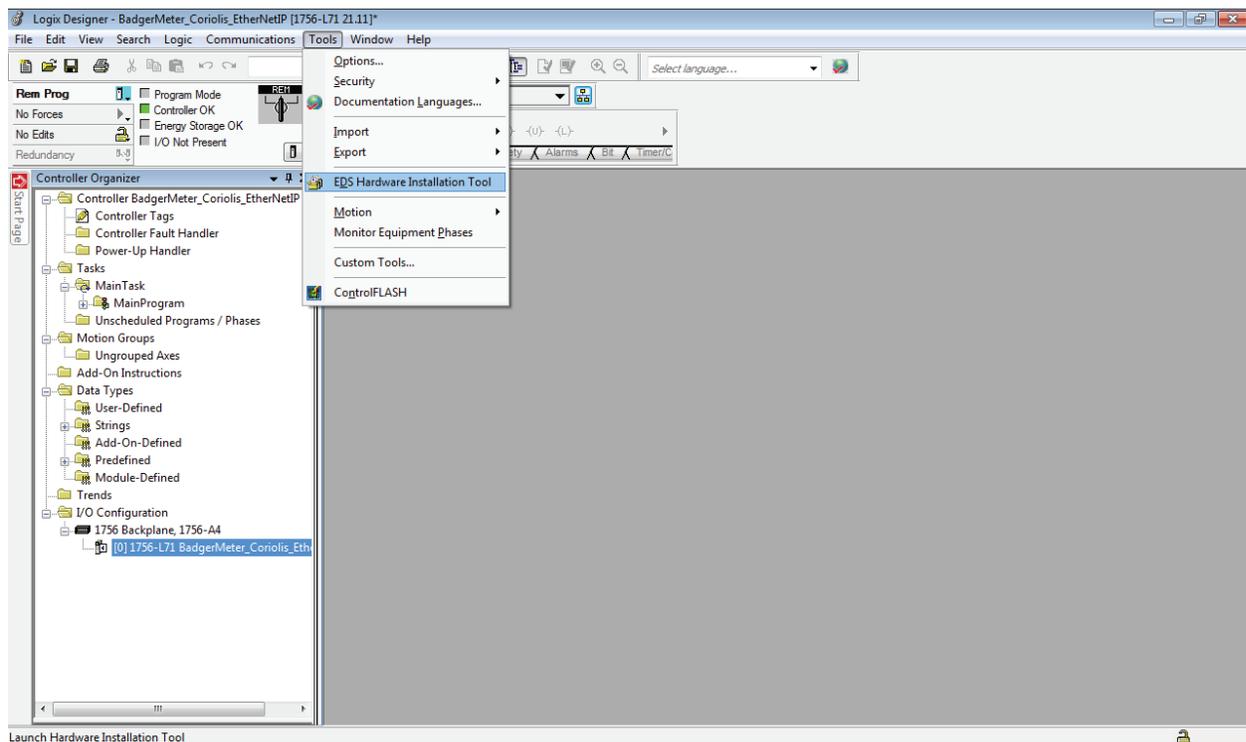
These are the steps to register a file and add the meter. The example is for an RCT 1000 Coriolis Meter. These are general instructions intended for personnel who understand ControlLogix and CompactLogix controllers as well as the safe operation and program practices of controllers and the systems that are controlled by the ControlLogix and CompactLogix controllers.

## Summary of Steps

- Install the meter .eds file into Studio 5000.
- Add and configure the meter in Studio 5000.

## INSTALLING AN EDS FILE

1. Download the .eds file from [www.badgermeter.com](http://www.badgermeter.com).
2. Open a new or existing project in Studio 5000 and make sure the controller is powered and connected via USB to your computer.
3. To upload the .eds file to Studio 5000, go to the **Tools** menu and select **EDS Hardware Installation Tool**. The EDS Wizard opens.

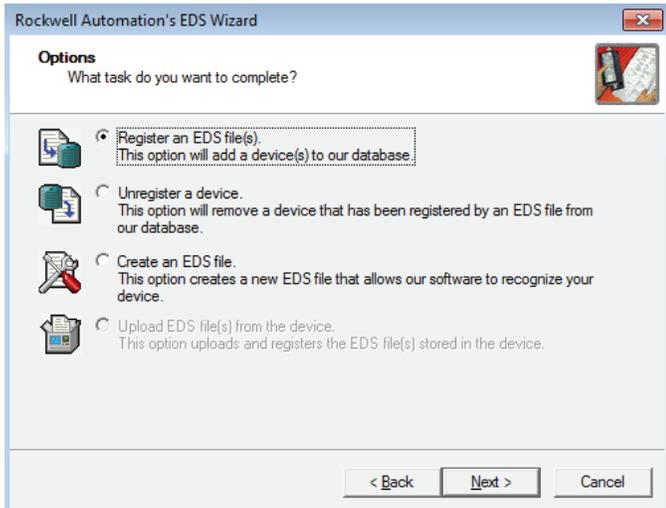


You can use the EDS Wizard to register or unregister a device, change the graphic associated with a device, or create a file from an unknown device. In this instance, it is assumed you have a valid .eds file and are only registering:

4. Select **Next**.



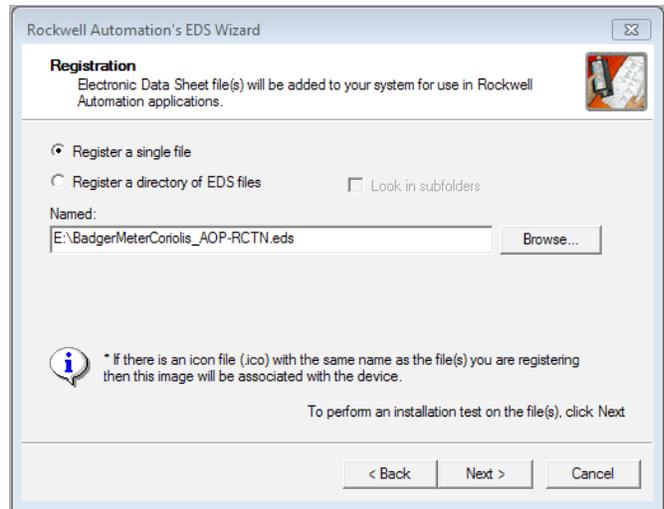
5. Registering a file is the default option so simply select **Next**.



Use the registration page to select the number of files to register and where those files are located. Unless you are uploading a directory of files, the default option is to register a single file.

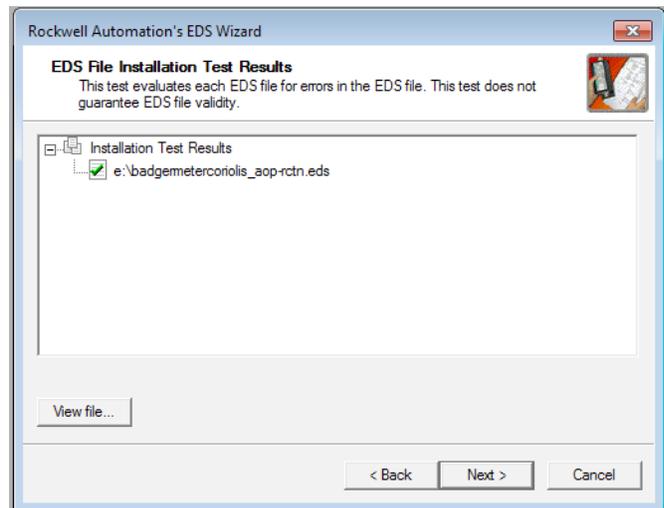
6. Click **Browse** and select the .eds file to upload, or type the directory path of your file into the *Named* field.

7. Make sure the correct file was chosen and select **Next**.

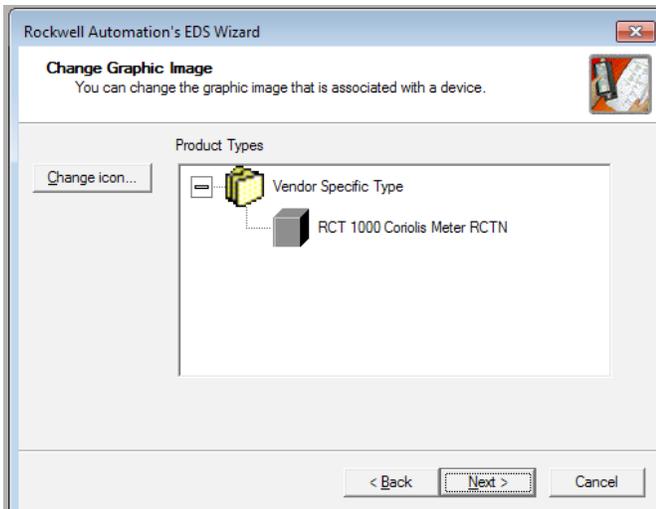


The Wizard checks the selected file for errors.

8. Make sure the file you selected is the same one being checked. If so, select **Next**. If not, go back to step 6.

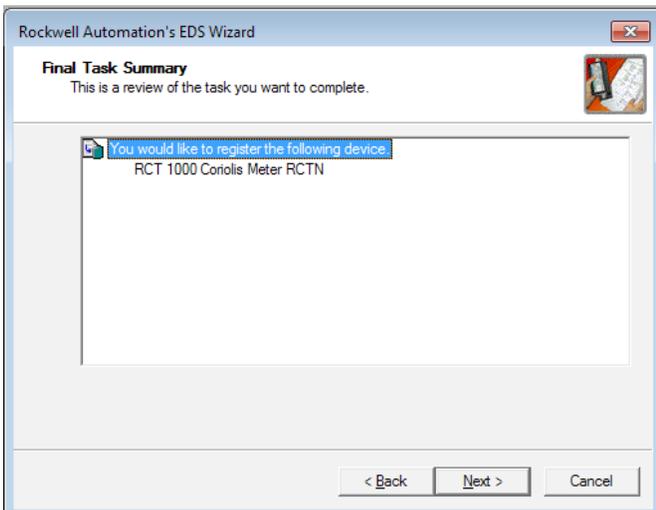


9. To change the icon for your newly registered device, highlight the Coriolis Meter and then select **Change Icon**. Select from the default set of icons or browse for an icon you have previously uploaded to your computer. To leave the icon as the default gray cube, select **Next**. The icon you select displays next to the RCT 1000 Coriolis Meter.

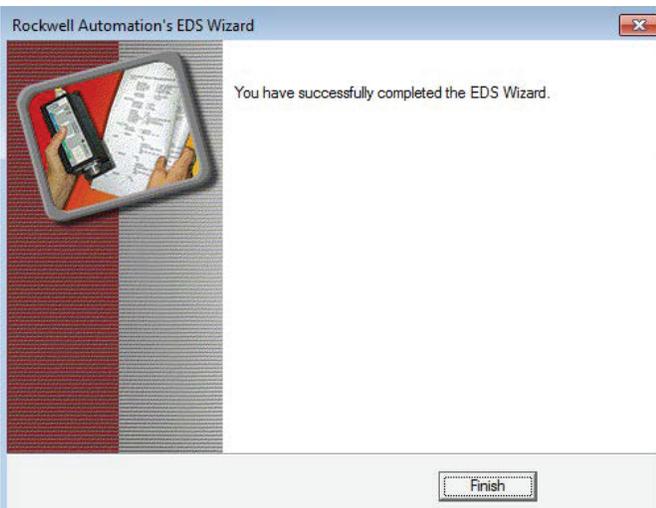


A final check ensues. Make sure the uploaded file registers an *RCT 1000 Coriolis Meter*.

10. Select **Next**.



11. The wizard is now complete. Select **Finish** to exit the wizard.



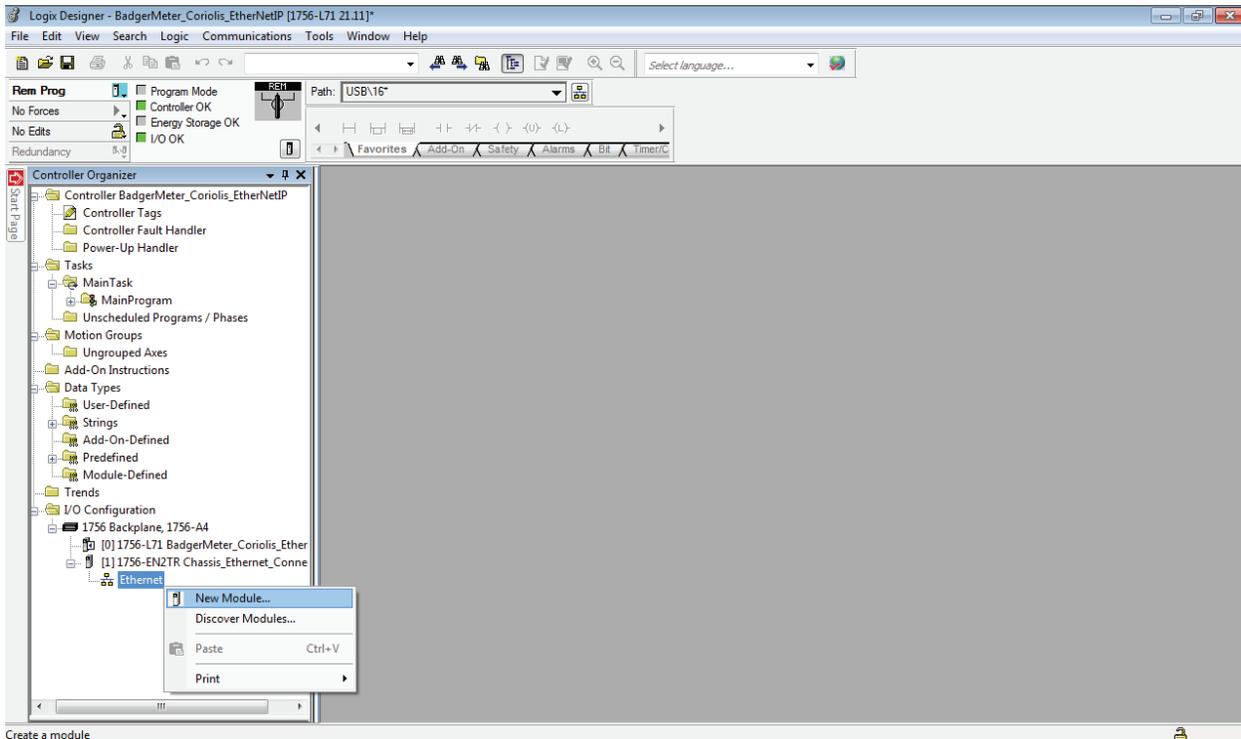
## ADDING AND CONFIGURING THE METER

Depending on your controller, you may need to install a separate Ethernet module so the meter can communicate with the controller.

- CompactLogix controllers have the Ethernet connection built in to the controller.
- ControlLogix controllers require a separate Ethernet module to be able communicate on an Ethernet network. Install an Ethernet module in the chassis and locate the module in Studio 5000. See *“Adding an Ethernet Module” on page 8* for instructions.

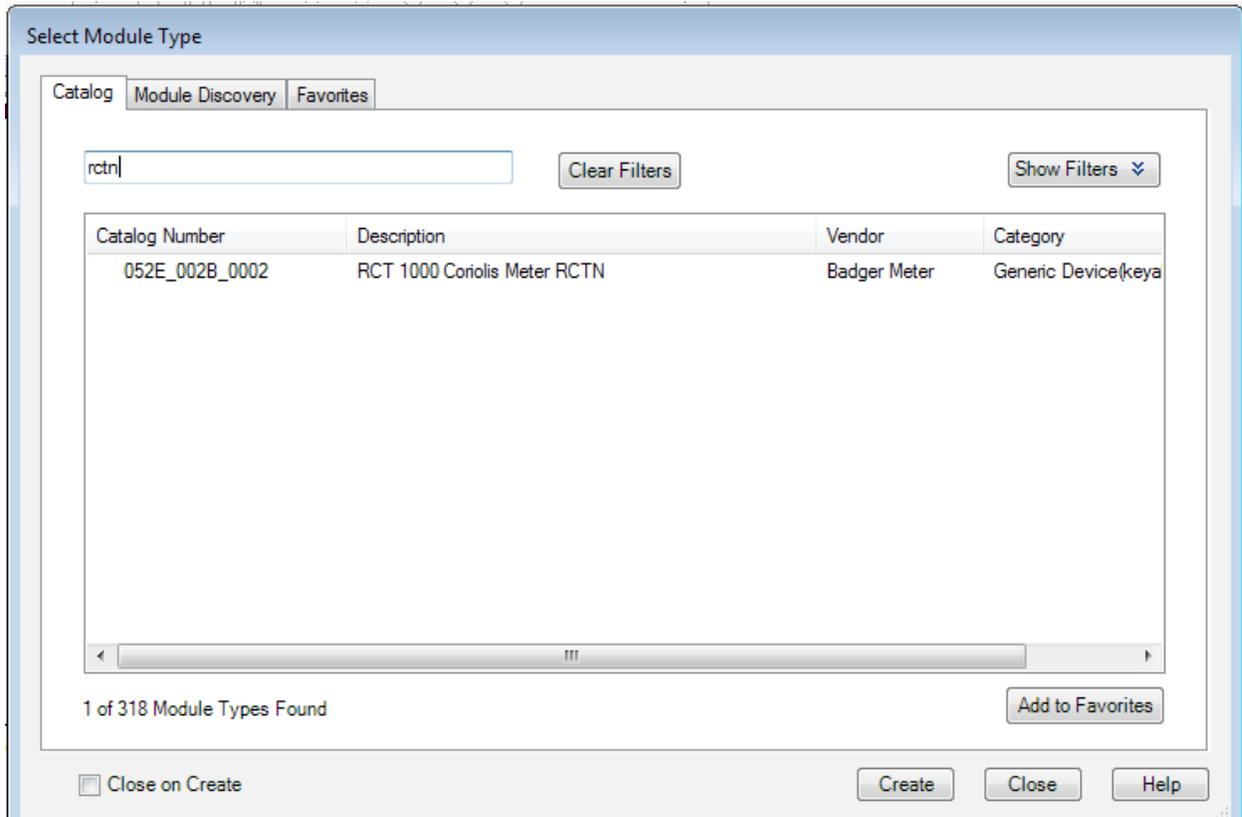
After the Ethernet module is set up, you must configure the connection to the meter.

12. Right-click on the new Ethernet tab at the bottom of the left menu and select **New Module**.



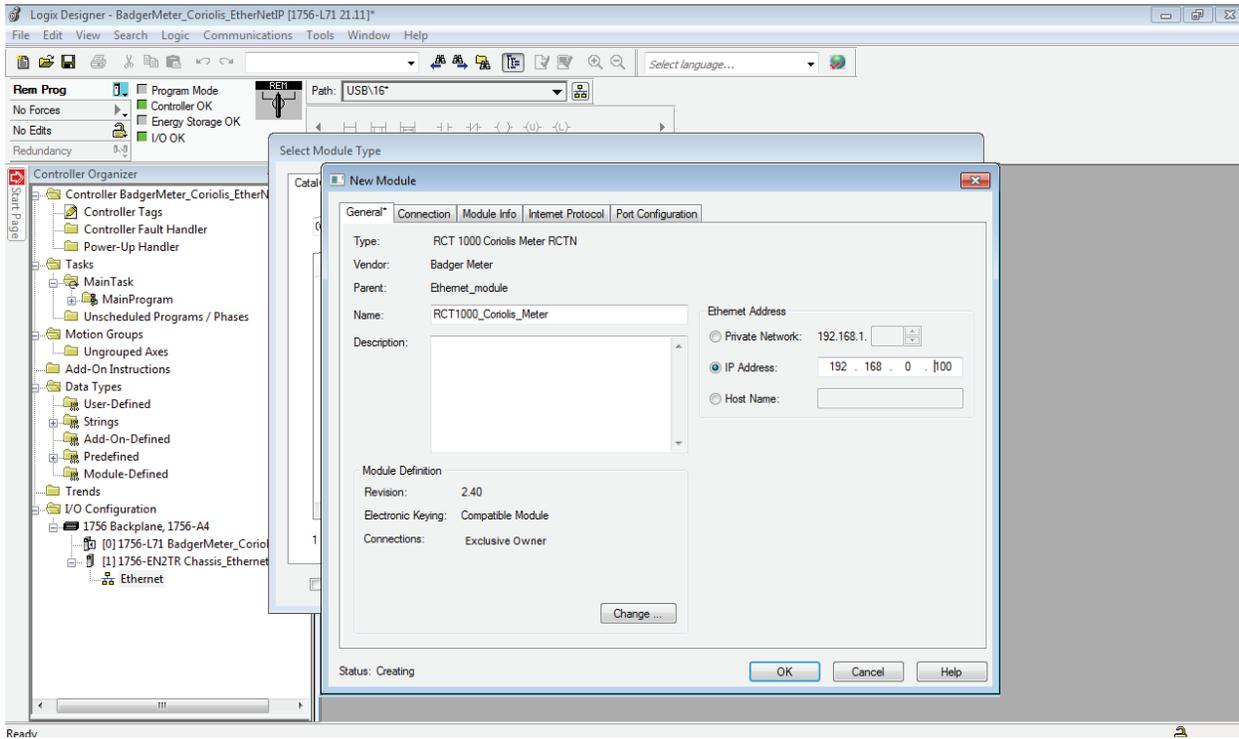
13. In the *Filters* field, type “Coriolis” and then select the RCT 1000 Coriolis Meter from Badger Meter.

14. Select **Create**.

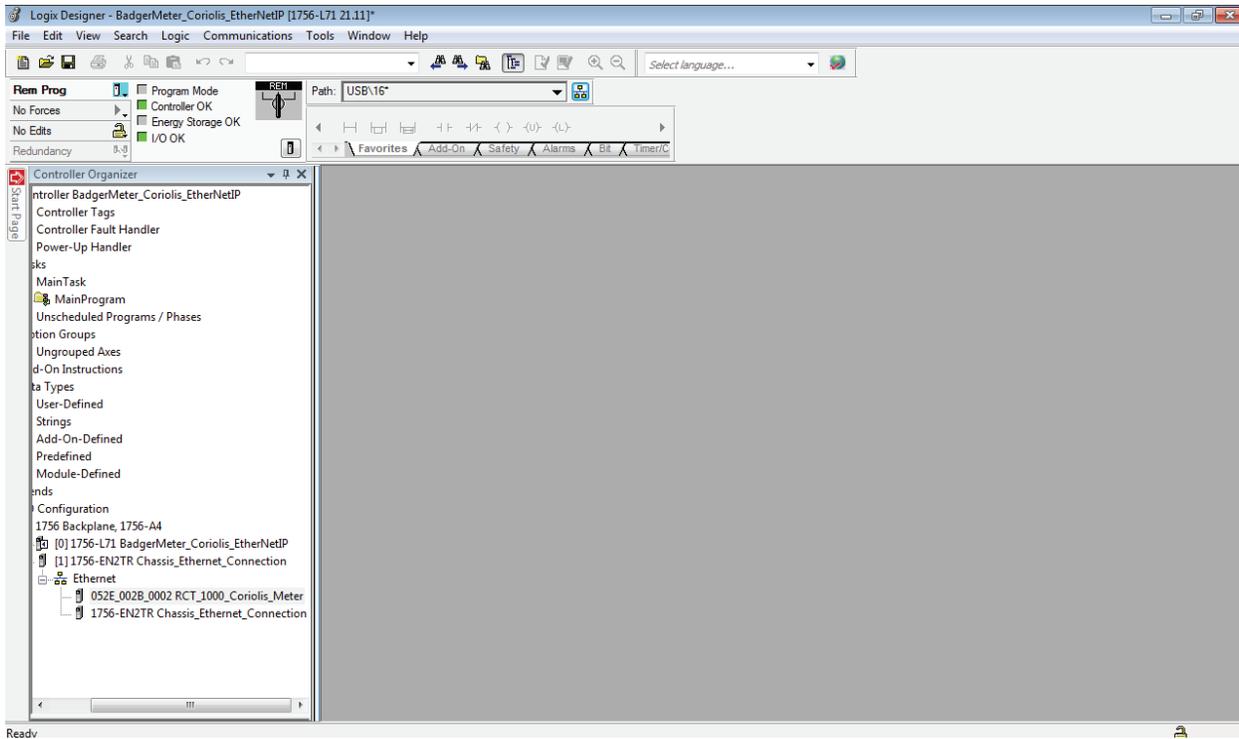


15. Name your meter and set the IP address. For RCT 1000 Coriolis meters, the default IP address is 192.168.0.100.

16. Select **OK**.



Your meter is now listed under the *Ethernet* module.



17. All the tag names and data types are automatically set up. To see the values and names for each of the tags, look under the organizer and select **Controller Tags**.

The screenshot displays the 'Controller Organizer' window for 'RCT1000\_Coriolis\_EtherNetIP\_AOP'. The left pane shows a hierarchical tree view with 'Controller Tags' expanded. The right pane shows a table of tag details.

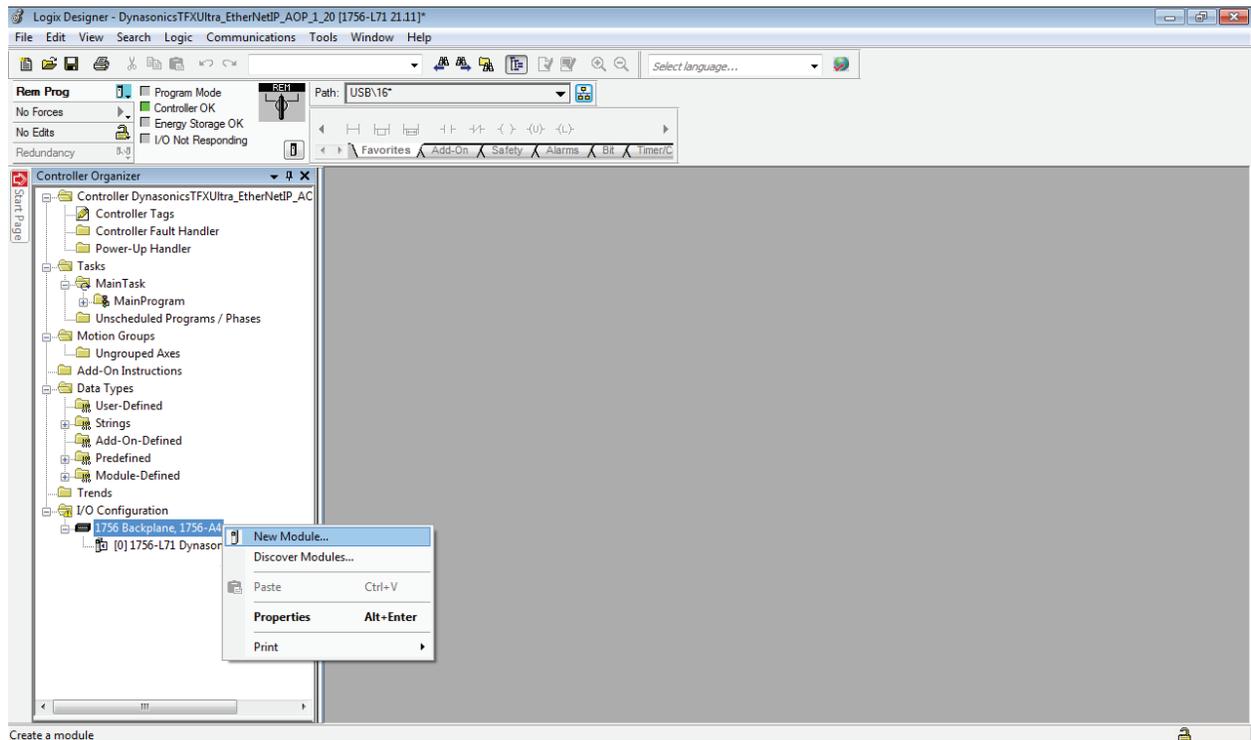
Name	Value	Force Mask	Style	Data Type	Description	Constant
RCT1000_Coriolis_Meter.I	{...}	{...}				<input type="checkbox"/>
- RCT1000_Coriolis_Meter.I.ConnectionFaulted	0		Decimal	BOOL		
- RCT1000_Coriolis_Meter.I.Filtered_Mass_Flow_Rate	0.0		Float	REAL		
- RCT1000_Coriolis_Meter.I.Resettable_Mass_Totalizer	0.0		Float	REAL		
- RCT1000_Coriolis_Meter.I.Volumetric_Flow_Rate	0.0		Float	REAL		
- RCT1000_Coriolis_Meter.I.Volume_Totalizer	0.0		Float	REAL		
- RCT1000_Coriolis_Meter.I.Temperature_1	0.0		Float	REAL		
- RCT1000_Coriolis_Meter.I.Temperature_2	0.0		Float	REAL		
- RCT1000_Coriolis_Meter.I.Density	0.0		Float	REAL		
- RCT1000_Coriolis_Meter.I.Tube_Resonant_Frequency	0.0		Float	REAL		
- RCT1000_Coriolis_Meter.I.Drive_Level	0.0		Float	REAL		
- RCT1000_Coriolis_Meter.I.Coil_A_voltage	0.0		Float	REAL		
- RCT1000_Coriolis_Meter.I.Coil_B_voltage	0.0		Float	REAL		
- RCT1000_Coriolis_Meter.I.Percentage_mass_flow_rate	0.0		Float	REAL		
+ RCT1000_Coriolis_Meter.I.Error_Record_1	0		Decimal	INT		
+ RCT1000_Coriolis_Meter.I.Error_Record_2	0		Decimal	INT		
+ RCT1000_Coriolis_Meter.I.Error_Record_3	0		Decimal	INT		
+ RCT1000_Coriolis_Meter.I.Error_Record_4	0		Decimal	INT		
+ RCT1000_Coriolis_Meter.I.Error_Record_5	0		Decimal	INT		
+ RCT1000_Coriolis_Meter.I.Error_Record_6	0		Decimal	INT		
+ RCT1000_Coriolis_Meter.I.Error_Record_7	0		Decimal	INT		
+ RCT1000_Coriolis_Meter.I.Error_Record_8	0		Decimal	INT		
- RCT1000_Coriolis_Meter.I.Batch_Totalizer	0.0		Float	REAL		
- RCT1000_Coriolis_Meter.I.ReadOnly_Batch_Set_Point	0.0		Float	REAL		
+ RCT1000_Coriolis_Meter.I.ReadOnly_Batch_Mode	0		Decimal	INT		
+ RCT1000_Coriolis_Meter.I.ReadOnly_Controls_Batching_...	0		Decimal	INT		
+ RCT1000_Coriolis_Meter.I.ReadOnly_Extend_batching_by...	0.0		Float	REAL		

## ADDENDUM

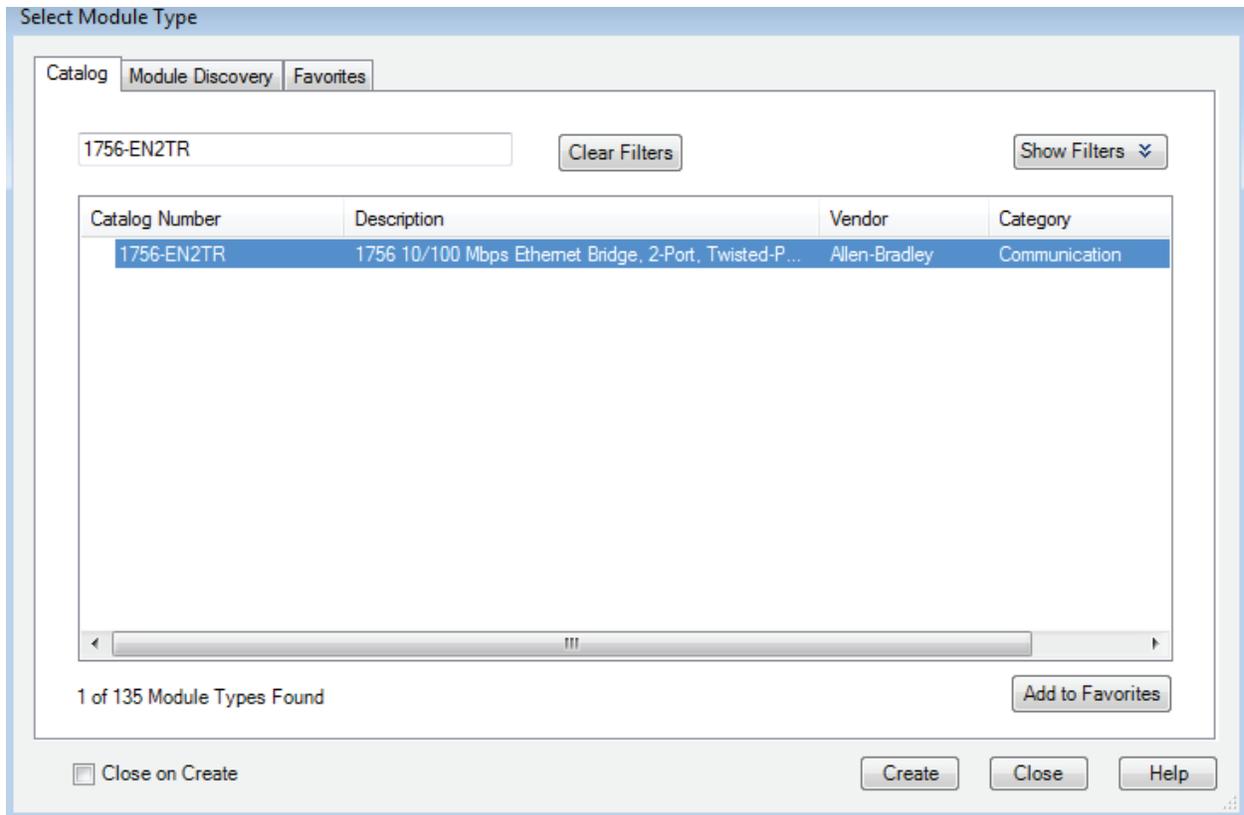
### Adding an Ethernet Module

ControlLogix controllers require a separate Ethernet module to be able communicate on an Ethernet network. Install an Ethernet module in the chassis and locate the module in Studio 5000

1. Right-click on the **Backplane** at the bottom of the left menu and select **New Module**.



2. If you know the module, such as a 1756-EN2TR Ethernet module, you can type it into the filter to locate it easily. If you do not know what type it is, pull the module free of the chassis and look at the product tag on the side. An easier way is to select the **Module Discovery** tab and let the controller find the module for you. However, your Logix controller and module must both be properly connected and the controller needs to be connected to the computer and online in Studio 5000. When you find the module, select **Create**.



3. Specify the module name, description and IP address. Name the module something that you will recognize. When setting the IP address, *make sure it is not the same as the controller or the meter* or it will not function.

**NOTE:** The default address for the Coriolis meter is 192.168.0.100, which will be set up later.

4. When finished, select **OK**.

Your module displays under the backplane with the name you selected.

The screenshot shows the 'New Module' dialog box with the following configuration:

- General\* Tab:**
  - Type: 1756-EN2TR 1756 10/100 Mbps Ethernet Bridge, 2-Port, Twisted-Pair Media
  - Vendor: Allen-Bradley
  - Parent: Local
  - Name: 1756\_EN2T
  - Description: (empty)
  - Module Definition:
    - Revision: 4.4
    - Electronic Keying: Compatible Module
    - Connection: None
    - Time Sync Connection: None
- Ethernet Address:**
  - Private Network: 192.168.1. (disabled)
  - IP Address: 192 . 168 . 0 . 101 (selected)
  - Host Name: (empty)
- Slot:** 1

Status: Creating

Buttons: OK, Cancel, Help

## Changing the IP Address of the Coriolis Meter

**NOTE:** See the user manual for details.

1. Open a web browser and type "192.168.0.100" into the URL field.
2. When prompted for a username and password, type "admin" as the username and leave the password blank.
3. Select **OK** to continue.
4. Select **Configuration** at the bottom of the main page. This will lead to a new page in which editing different fields is allowed, and halfway down the list is *Network Settings*.
5. Select **Edit** under *Network Settings* to bring up a small window that allows you to change the IP configuration.
6. Select the text next to IP Address and type in another valid address.

**NOTE:** This should not be the same as the computer or any other object on the network.

7. Select **Save Settings** to keep the new IP address.

## Setting the Controller to ONLINE Mode (Used with the *Find* Module)

It may be desirable to have Logix find your connected modules itself. However, in order to do this the controller must be online and working properly.

1. Make sure the power for both the controller and meter are correctly wired and plugged in.
2. Verify that there is an Ethernet connection between the computer, controller, and meter and that the three are connected to an Ethernet.
3. Verify that an A-to-B USB cable connects the controller to your computer.
4. Start Suite 5000 and select your project.
5. To set a communications path, select the  button next to *Path* in the upper middle portion of your screen. Once selected, it will bring you to a screen showing your workstation and three different expanding tabs.
6. Select the (+) next to the USB tab and select the name of the controller that is shown. This will open up the four top options on the right of the tab.
7. Select **Go Online**. You will be prompted to download your project from Suite 5000 to the controller.
8. Press **Download** again.

Your controller is now online and able to locate modules for you.

## Control. Manage. Optimize.

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