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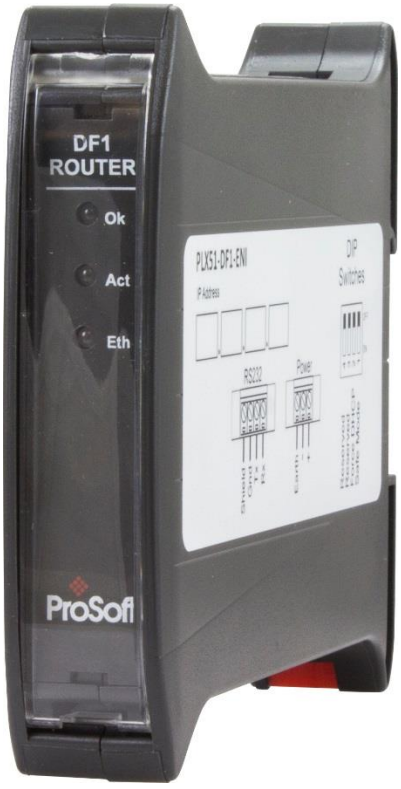

PLX51-DF1-ENI

DF1 Router

RSLogix500 Programming of SLC500/MicroLogix via PLX51-DF1-ENI

December, 2017

TECHNICAL NOTE

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1. PREFACE

1.1. PURPOSE OF THIS DOCUMENT

This document assists you in the setup of the PLX51-DF1-ENI to allow remote RSLogix 500 programming of an SLC/MicroLogix PLC.

1.2. ADDITIONAL INFORMATION

The following resources contain additional information that can assist you with the module installation and operation.

Resource	Link
PLX50 Configuration Utility Software	www.prosoft-technology.com
PLX51-DF1-ENI User Manual PLX51-DF1-ENI Datasheet Example Code & UDTs	www.prosoft-technology.com
Ethernet wiring standard	www.cisco.com/c/en/us/td/docs/video/cds/cde/cde205_220_420/installation/guide/cde205_220_420_hig/Connectors.html
CIP Routing	The CIP Networks Library, Volume 1, Appendix C:Data Management
Map PLC/SLC messages	SLC to CompactLogix Migration Guide: Chapter 3 – Map PLC/SLC Messages (1769-ap001_-en-p.pdf) EtherNet/IP Network Configuration: Chapter 5 – Mapping Tags (enet-um001_-en-p.pdf)

2. APPLICATION DESCRIPTION

The ProSoft PLX51-DF1-ENI can be used to enable multiple modern Ethernet devices to communicate to legacy SLC500 and MicroLogix devices via their DF1 serial ports. In the application example below, a remote RSLogix 500 programming station can communicate with, and program an SLC500 PLC.

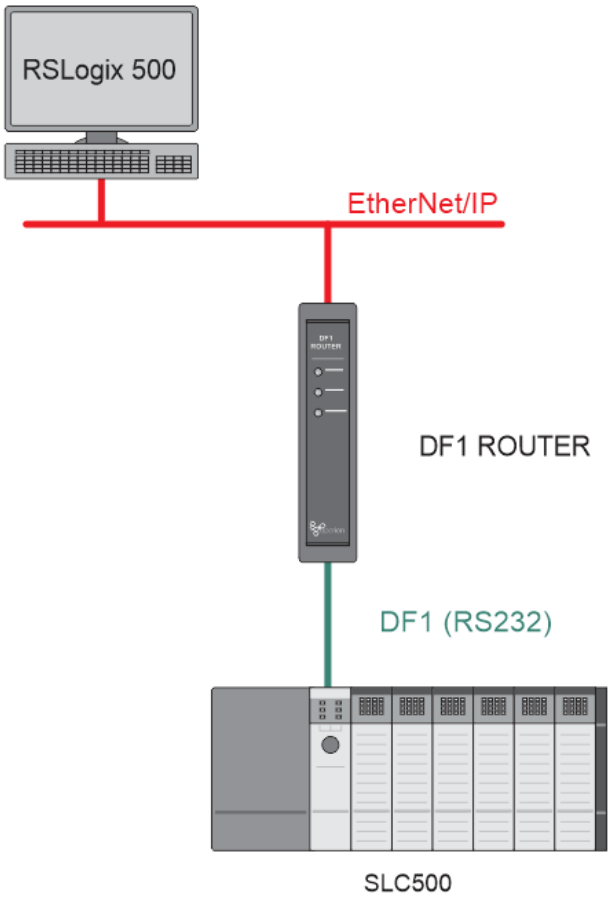

FIGURE 1 - EXAMPLE OF A TYPICAL NETWORK SETUP

3. SETUP

The following sections describe the installation and configuration of the required devices in the network.

3.1. SERIAL CABLE WIRING

The serial cable pinout is shown in the figure below:

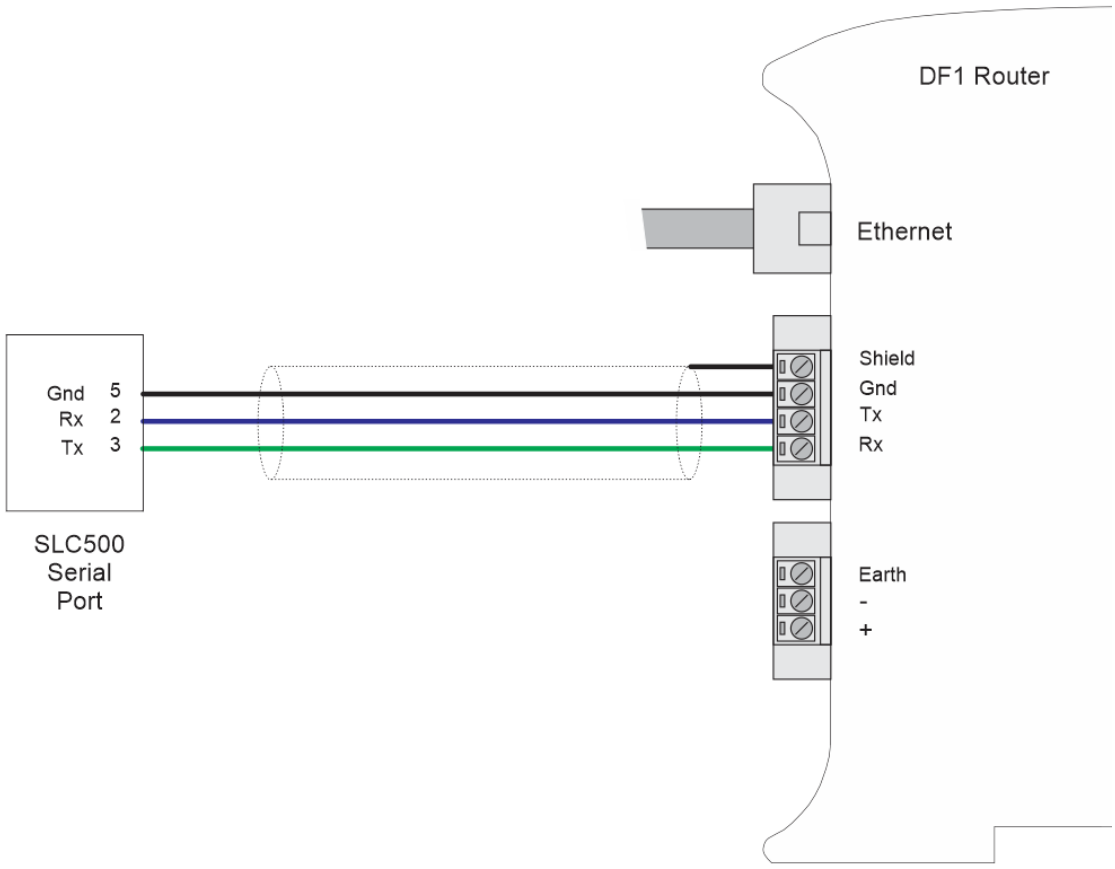

FIGURE 2 – SERIAL CABLE PINOUT

3.2. PLX51-DF1-ENI SETUP

The PLX51-DF1-ENI must be configured in Bridge mode, as shown below.

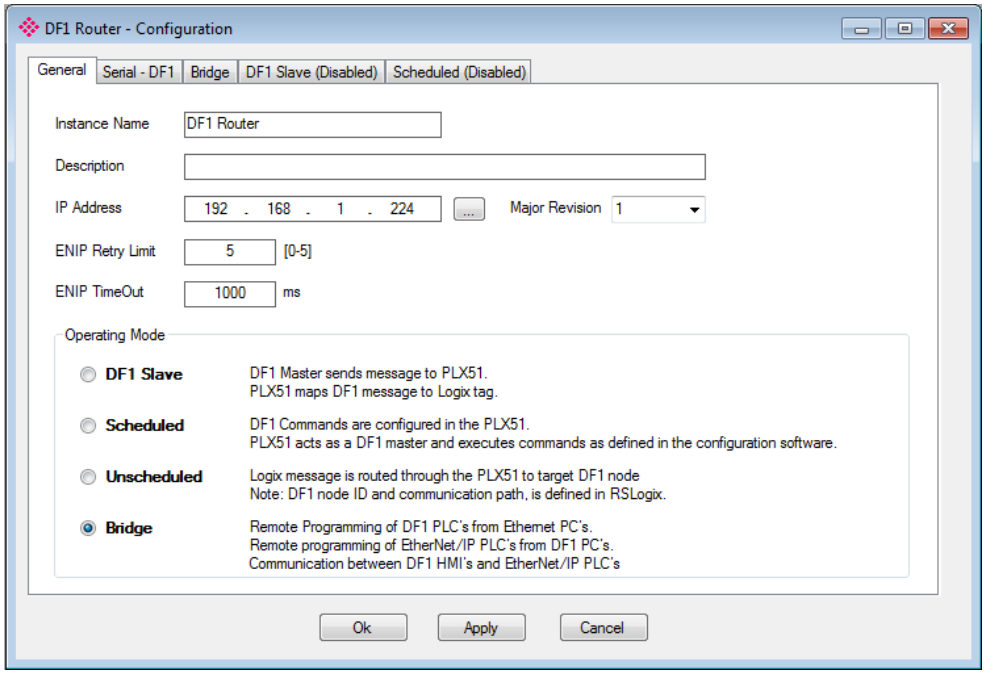

FIGURE 3 – DF1 GENERAL CONFIGURATION

In the Serial-DF1 settings, the protocol must be set to Full Duplex. The BAUD Rate, Parity and Error Detection must match that of the SLC device (as configured using RSLogix 500).

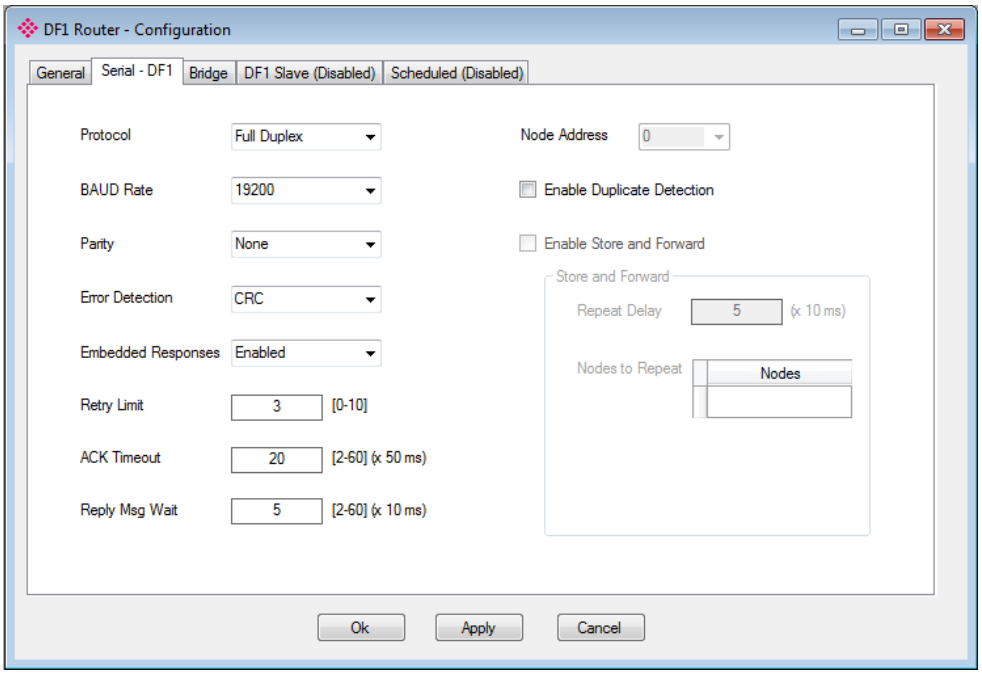

FIGURE 4 – DF1 SERIAL CONFIGURATION

No Bridge mapping items are required to be configured.

3.3. SLC500 SETUP (RSLOGIX 500)

Using RSLogix500, the DF1 serial port must be configured to match that of the PLX51-DF1-ENI's serial port settings with respect to BAUD rate, Parity and Error Detection.

NOTE: The DF1 Full Duplex must be selected, and the Duplicate Packet Detect option must be removed.

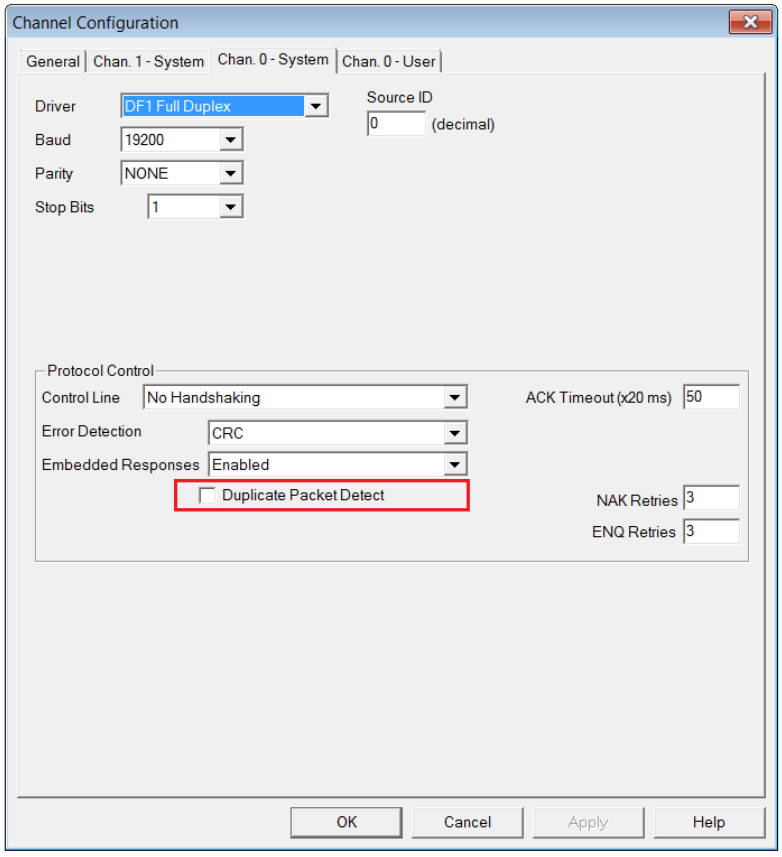

FIGURE 6 – SLC SERIAL CHANNEL CONFIGURATION

3.4. RSLINX SETUP

The PLX51-DF1-ENI's EDS file must be registered on the programming PC. This can be achieved in two ways:

- Uploading the EDS file from the PLX51-DF1-ENI online, or
- Downloading the EDS file from the ProSoft website and manually registering it.

NOTE: Older revisions of RSLinx may not support the uploading of the EDS file option.

UPLOADING EDS FILE FROM MODULE

Add the PLX51-DF1-ENI module in RSLinx. Under the Communications menu, select the Configure Drivers menu item.

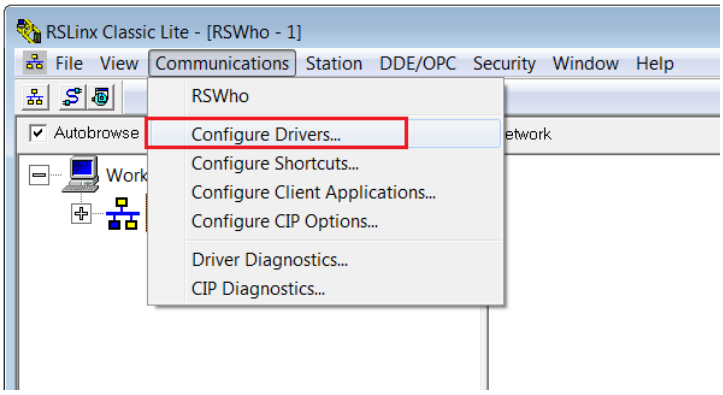

FIGURE 7 – RSLINX DRIVER CONFIGURATION

In the Configure Drivers window, add the Ethernet Devices driver.

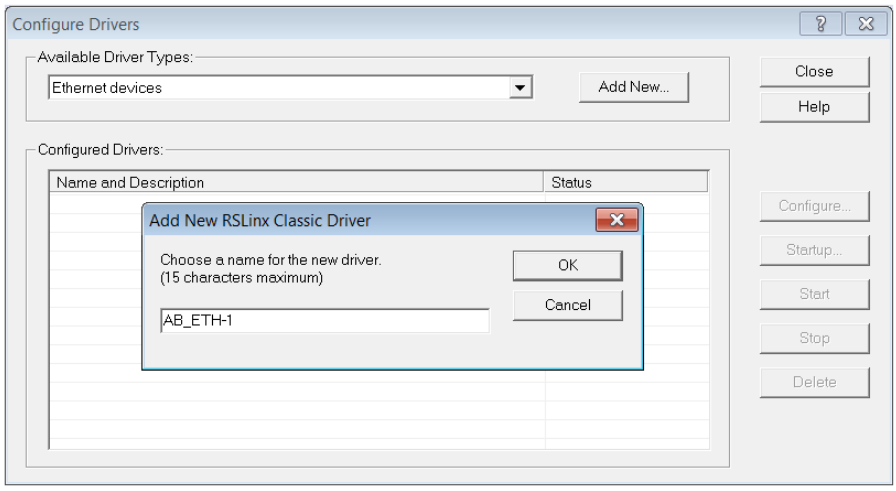

FIGURE 8 – RSLINX ETHERNET DEVICES DRIVER

Add the IP address of the PLX51-DF1-ENI.

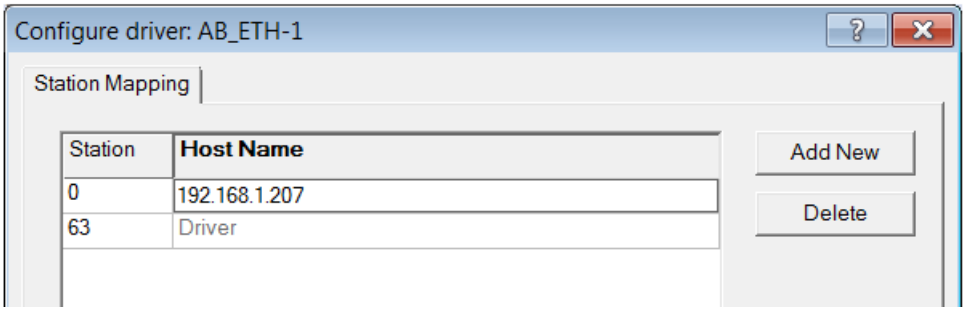

FIGURE 9 – RSLINX ETHERNET IP ADDRESS

If the PLX51-DF1-ENI is powered and connected on the network, it appears in the RSLinx RSWho browse window. Note that the device icon is a yellow question mark, as the EDS file has not yet been registered.

Right-click on the PLX51-DF1-ENI in the RSWho browser and select the Upload EDS file from device option.

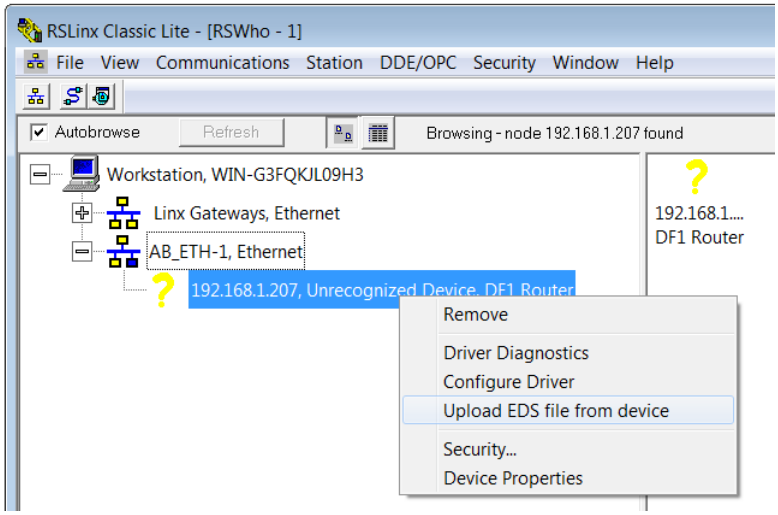

FIGURE 10 – RSLINX UPLOAD EDS FILE FROM DEVICE

The Rockwell Automation EDS Wizard launches. Follow the steps by pressing the Next button and complete the EDS file registration.

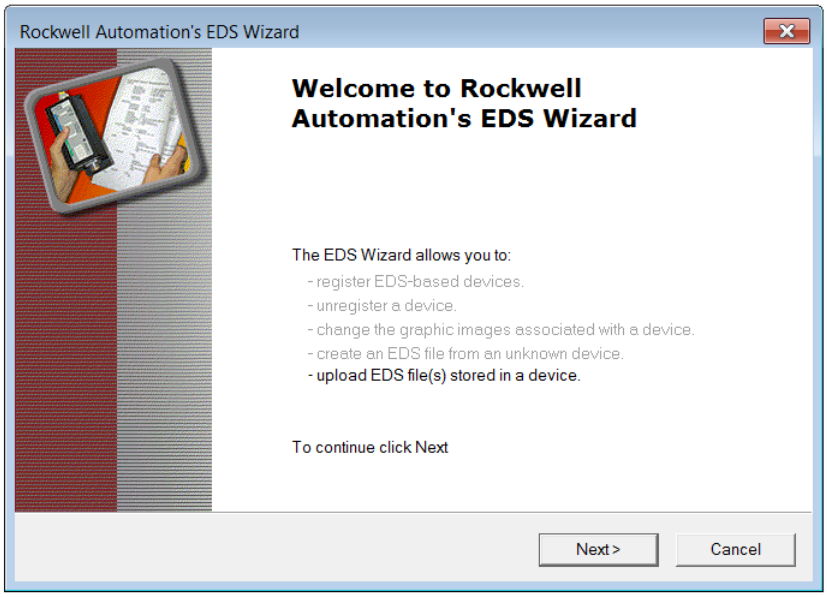

FIGURE 11 – EDS WIZARD

NOTE: Depending on the RSLinx revision, RSLinx may need to be shut down and restarted. If RSLinx is running as a service, make sure the service is shut-down completely before restarting.

After restarting RSLinx, the PLX51-DF1-ENI appears in the RSWho browser. It also shows the underlying DF1 Port and, when expanded, shows the underlying SLC500.

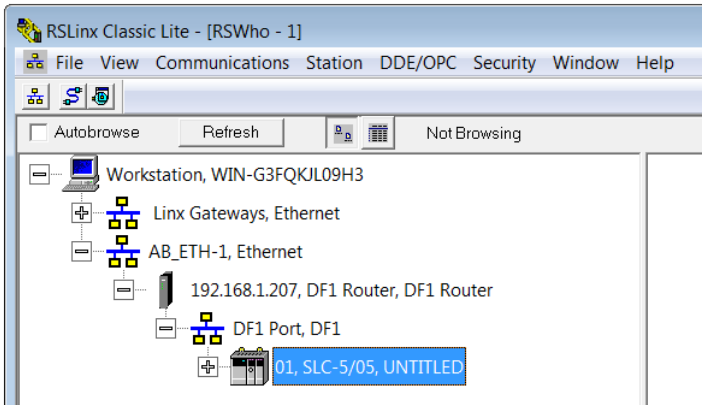

FIGURE 12 – BROWSING SLC500 VIA PLX51-DF1-ENI

MANUALLY INSTALLING THE EDS FILE

To install the PLX51-DF1-ENI's EDS file manually, it must first be downloaded from the ProSoft website: www.prosoft-technology.com

The EDS file and associated icon are zipped in a single file. Save the file to your local hard drive and unzip the file.

Using the Windows start button, launch the Rockwell Software's EDS Hardware Installation Tool.

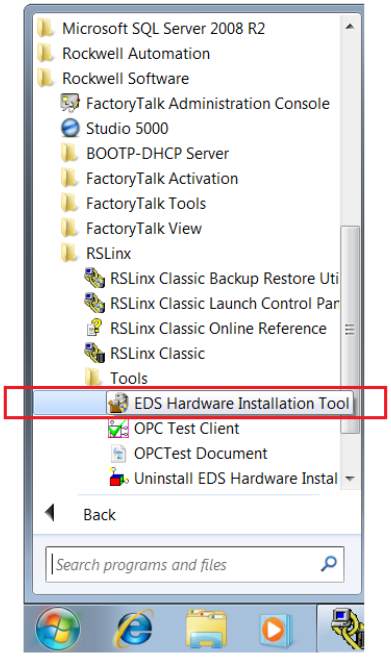

FIGURE 13 – LAUNCH EDS HARDWARE INSTALLATION TOOL

In the Hardware Installation Tool, select the Add option.

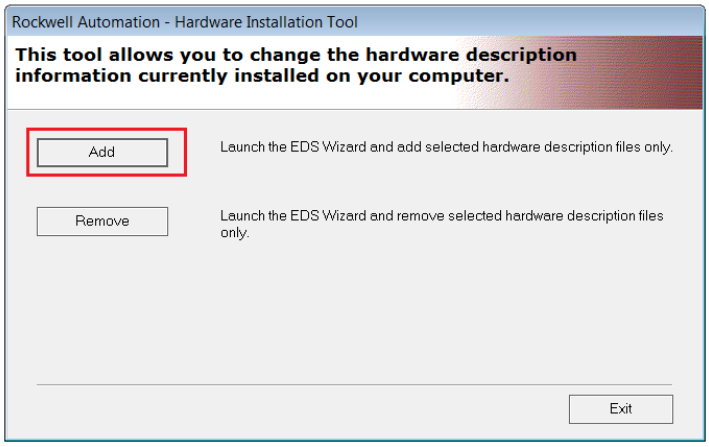

FIGURE 14 – HARDWARE INSTALLATION TOOL - ADD

Use the Browse button to navigate to the folder where the EDS file was unzipped, and select the EDS file.

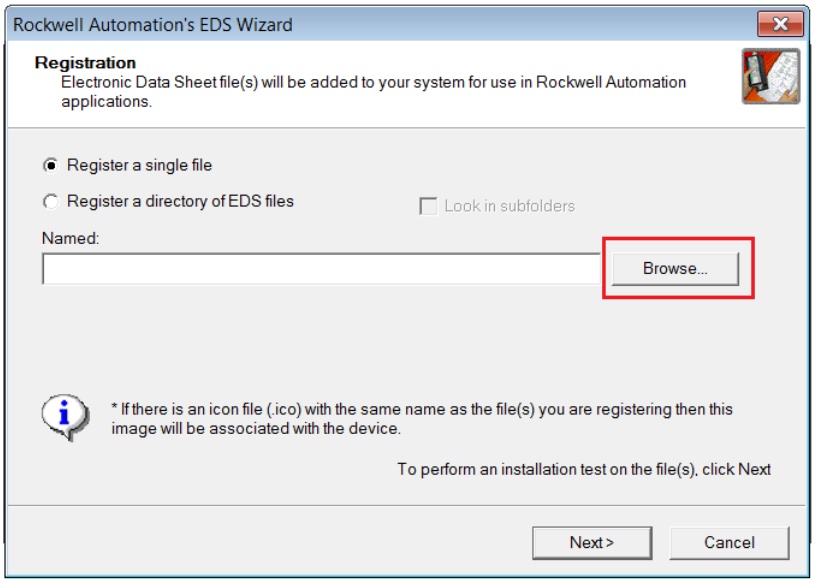

FIGURE 15 – EDS REGISTRATION

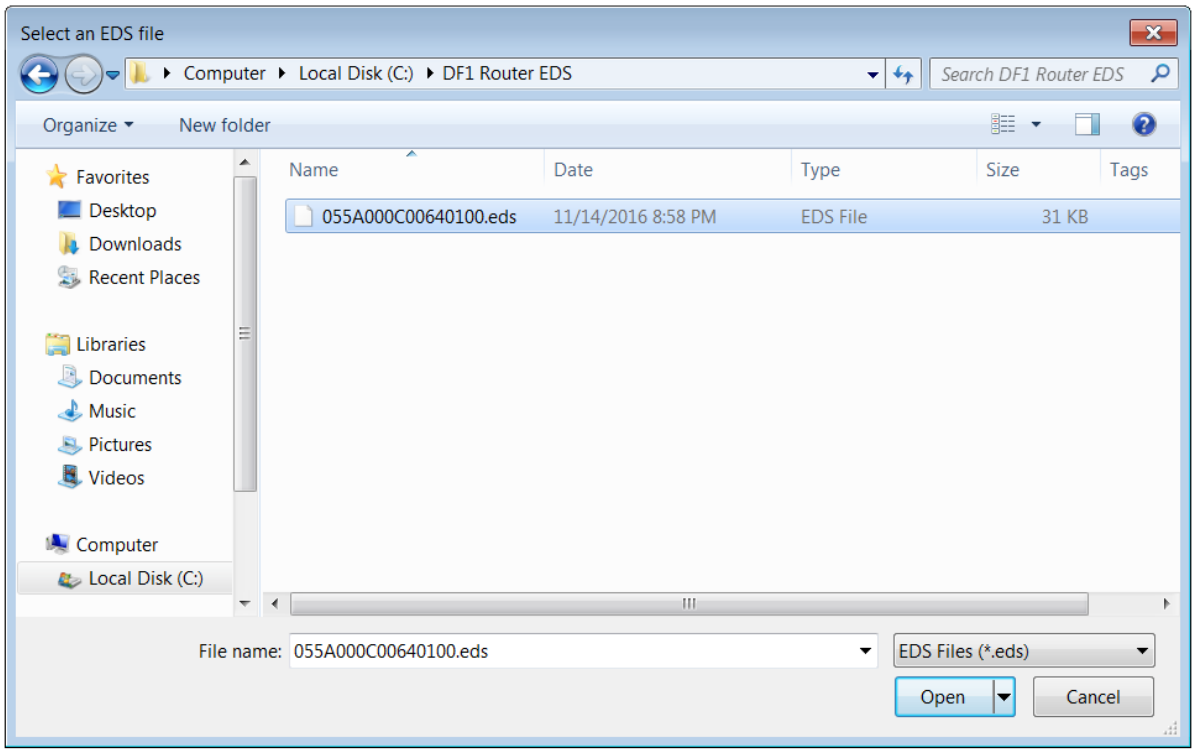

FIGURE 16 – EDS FILE SELECT

Follow the prompts and select the Next button to complete the EDS file registration.

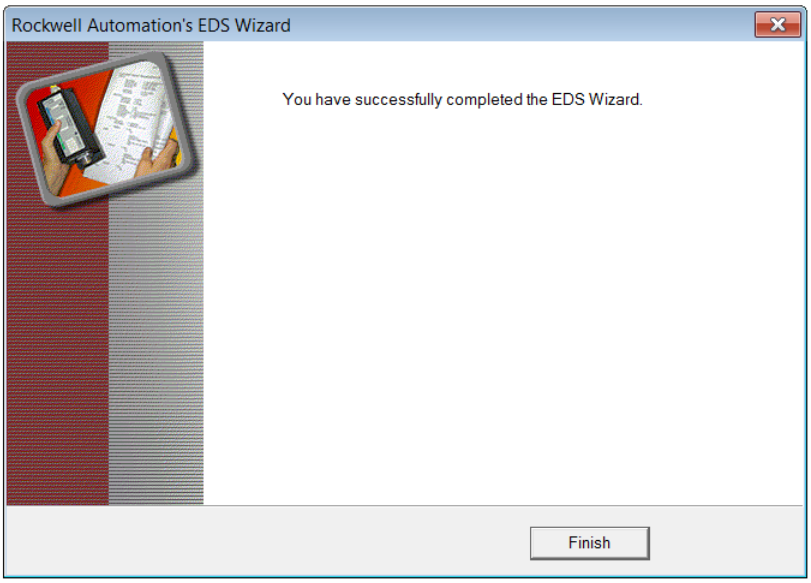

FIGURE 17 – EDS REGISTRATION COMPLETE

NOTE: Depending on the RSLinx revision, RSLinx may need to be shut down and restarted. If RSLinx is running as a service, make sure the service is shut down completely before restarting.

3.5. RSLOGIX 500

In RSLogix500 under the Comms menu, select System Comms.

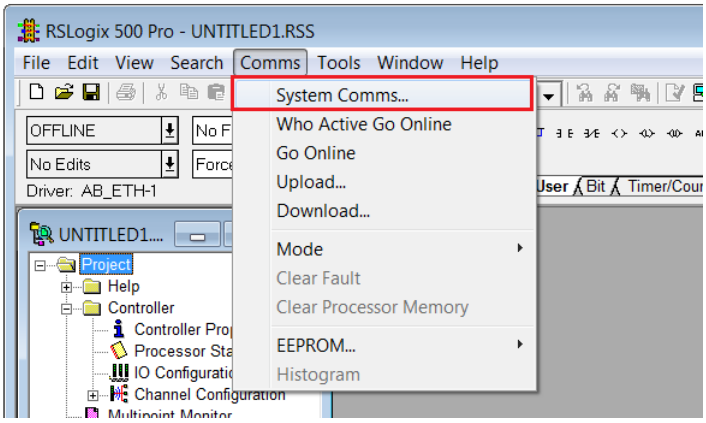

FIGURE 18 – SYSTEM COMMUNICATION

In the Communications window, browse to the SLC500 device under the PLX51-DF1-ENI, and select Online. Upload or Download as required.

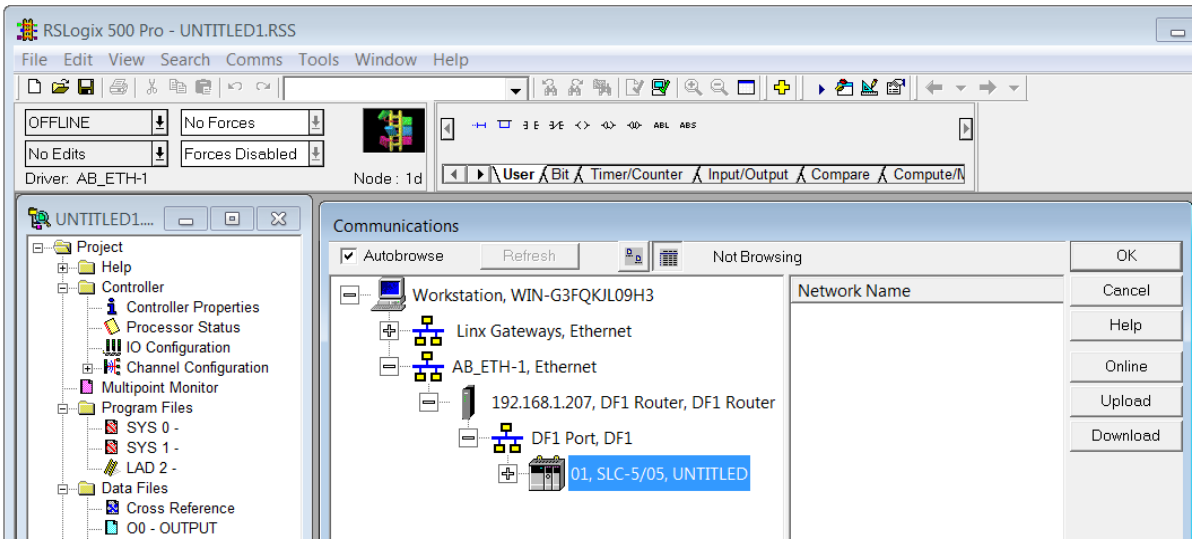

FIGURE 19 – SELECT DEVICE

4. SUPPORT, SERVICE & WARRANTY

4.1. CONTACTING TECHNICAL SUPPORT

ProSoft Technology, Inc. is committed to providing the most efficient and effective support possible. Before calling, please gather the following information to assist in expediting this process:

1. Product Version Number
2. System architecture
3. Network details

If the issue is hardware related, we will also need information regarding:

1. Module configuration and associated ladder files, if any.
2. Module operation and any unusual behavior
3. Configuration/Debug status information
4. LED patterns
5. Details about the serial, Ethernet or Fieldbus devices interfaced to the module, if any.

Note: *For technical support calls within the United States, ProSoft's 24/7 after-hours phone support is available for urgent plant-down issues. Detailed contact information for all our worldwide locations is available on the following page.*

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