DataSite Accelerator Toolkit

Quick Start

Hardware Selection
System Layout and Wiring
DataSite and Logix Integration
DataSite Workbench and Screen Builder Integration
FactoryTalk View Integration
System Validation

ALLEN-BRADLEY • ROCKWELL SOFTWARE
Rockwell Automation

Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (publication SGI-1.1 available from your local Rockwell Automation sales office or online at http://literature.rockwellautomation.com) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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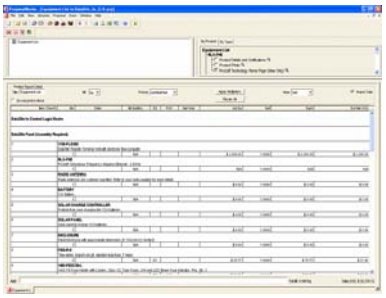
Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

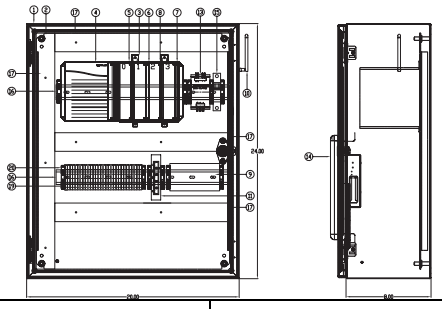
WARNING 	Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.
IMPORTANT	Identifies information that is critical for successful application and understanding of the product.
ATTENTION 	Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence
SHOCK HAZARD 	Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.
BURN HAZARD 	Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.

Follow this path to complete your DataSite application.

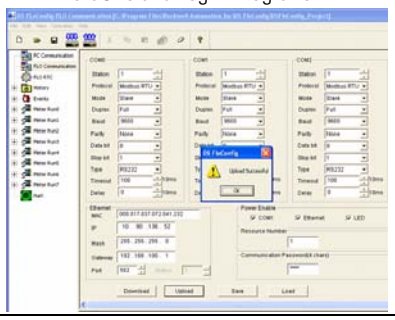
Chapter 1
Hardware Selection



Chapter 2
System Layout and Wiring

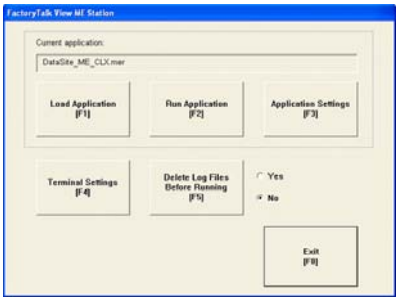


Chapter 3
DataSite and Logix Integration



Chapter 4
DataSite Workbench and Screen Builder Integration

Chapter 5
FactoryTalk View Integration



Chapter 6
System Validation

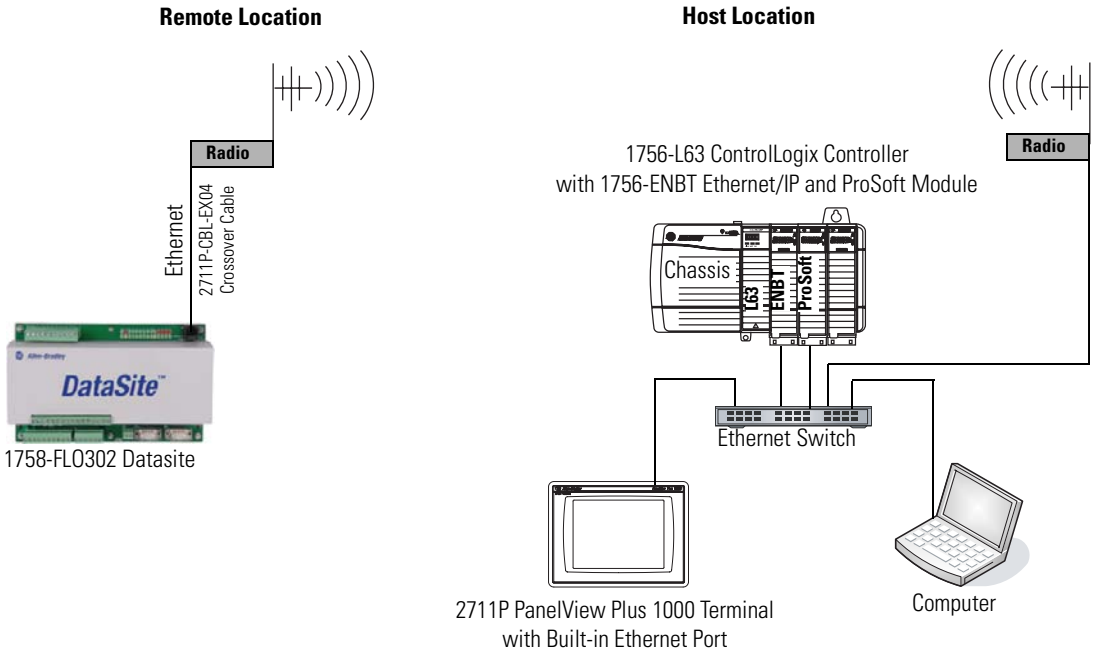
DataSite Configurations

This quick start shows how to set up and configure three functional DataSite configurations.

- DataSite to ControlLogix master (Chapter 1 through 6)
- DataSite to FactoryTalk View ME master (Appendix A)
- DataSite to FactoryTalk View SE master with data logging capabilities (Appendix B)

Chapter 1 through 6 cover the DataSite to ControlLogix Master configuration. In this configuration, a DataSite unit communicates via RF radio modems to a ControlLogix L63 controller and displays the natural gas flow data on a PanelView Plus 1000 terminal.

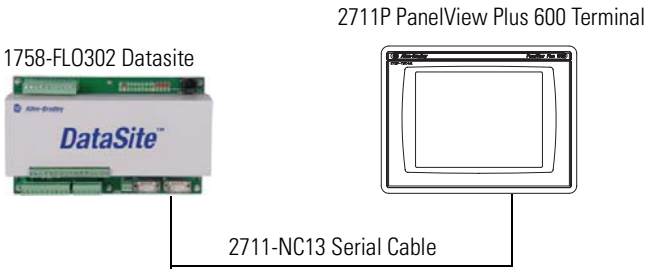
DataSite to ControlLogix Master



All devices connect to Ethernet switch using Ethernet straight-through cables.

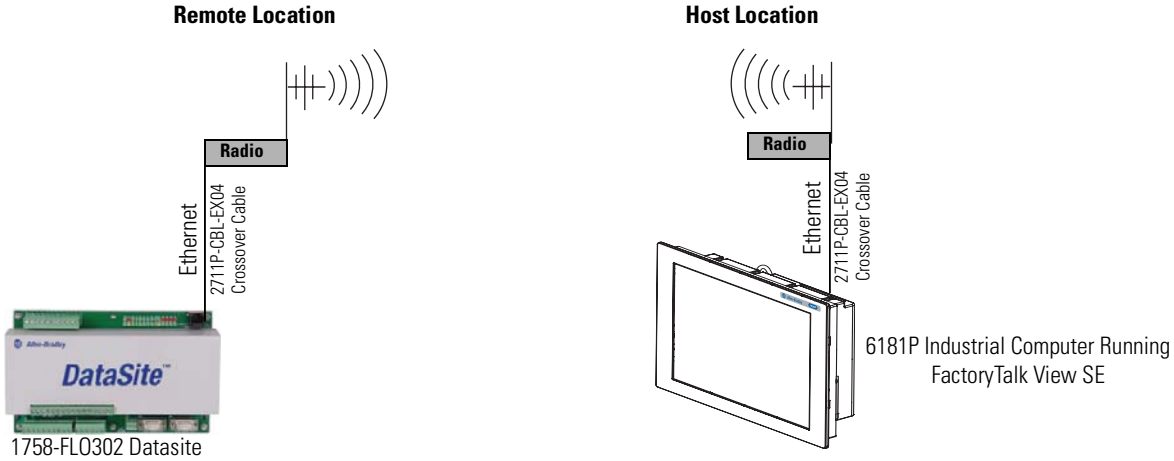
The DataSite to FactoryTalk View ME Master configuration is good for small applications that don't require a ControlLogix controller to poll multiple DataSite units. The PanelView Plus 600 terminal communicates with the DataSite unit using Modbus serial communication.

DataSite to FactoryTalk View ME Master



The Factory Talk View SE Master configuration is good for small applications that don't require a ControlLogix controller but do require data logging capabilities. The industrial computer running FactoryTalk View SE communicates with the DataSite using Modbus TCP/IP Ethernet communication.

DataSite to FactoryTalk View SE Master



About This Publication

This quick start provides step-by-step instructions on how to set up and configure three functional DataSite configurations.

- DataSite to a ControlLogix master (Chapter 1 through 6)
- DataSite to a FactoryTalk View Machine Edition (ME) master (Appendix A)
- DataSite to a FactoryTalk View Site Edition (SE) master with data logging capabilities (Appendix B)

The examples are designed to get devices installed and communicating with each other in the simplest way possible. The programming is not complex and offers easy solutions to verify that devices are communicating properly

To assist in the design and installation of your DataSite configuration, application files and other information is provided on the DataSite Accelerator Toolkit CD, publication IASIMP-SP011. This CD provides CAD drawings for panel layout and wiring, base Logix control programs, FactoryTalk View HMI application files, and more. For a copy of the CD, contact your local Rockwell Automation distributor or sales representative. With these tools and the built-in best-practices design, you can focus on the design of your system and not on design overhead tasks.

IMPORTANT Before using this quick start and the contents of the DataSite Accelerator CD, read the Terms and Conditions on the CD.

The beginning of each chapter contains the following information. Read these sections carefully before beginning work in each chapter.

- **Before You Begin** - This section lists the steps that must be completed and decisions that must be made before starting that chapter. The chapters in this quick start do not have to be completed in the order in which they appear, but this section defines the minimum amount of preparation required before completing the current chapter.
- **What You Need** - This section lists the tools that are required to complete the steps in the current chapter. This includes, but is not limited to, hardware and software.
- **Follow These Steps** - This illustrates the steps in the current chapter and identifies which steps are required to complete the examples using specific networks.

Software Requirements

You need the following software to use this toolkit.

Rockwell Automation Software	Version
DataSite Workbench	5.2
DataSite Screen Builder	1.3
DS FloConfig	1.0
RSLogix 5000	16
FactoryTalk View Studio, including: • Machine Edition (ME) • Site Edition (SE)	5.0
Proposal Works	6.1
Java Runtime Environment	6, Update 7
DataSite Accelerator Toolkit CD	Not applicable

Conventions

This quick start uses the following conventions.

Convention	Meaning	Example
Click	Click the left mouse button once. (Assumes cursor is positioned on object or selection.)	Click Browse.
Double-click	Click the left mouse button twice in quick succession while the cursor is positioned on object or selection.	Double-click the application icon.
Right-click	Click the right mouse button once while the cursor is positioned on object or selection.	Right-click the Fieldbus Networks icon.
Drag and drop	Click and hold the left mouse button on an object, move the cursor to where you want to move the object, and release the mouse button.	Drag and drop the desired block into the Strategy window.
Select	Click to highlight a menu item or list choice.	Select New Module from the pull-down list.
Check or uncheck	Click to activate or deactivate a checkbox.	Check the Disable Keying checkbox.
>	Shows nested menu selections as menu name followed by menu selection.	Select File>New.
Expand	Click the + to the left of a given item /folder to show its contents.	Expand the Main Task.

Additional Resources

Resource	Description
DataSite Natural Gas Flow Meter and Remote Terminal Unit Installation Instructions, publication 1758-IN001	Describes how to install and wire the Datasite unit.
DataSite Electronic Flow Meter and Remote Terminal User Manual, publication 1758-UM001	Describes how to design, install, program, or troubleshoot control systems that use DataSite controllers.
Customized Function Blocks for DataSite Reference Manual, publication 1758-RM001	Describes the customized function blocks that are used to program DataSite units using DataSite Workbench software.
DataSite Electronic Flow Meter and Remote Terminal, Software User Manual, publication 1758-UM002	Describes the software tools that are used to configure and monitor the DataSite controller, such as DS settings, DS FloConfig, and DS NP3.
http://www.ab.com/programmablecontrol/plc/datasite	Provides information related to the DataSite unit.
Rockwell Automation Configuration and Selection Tools, available at http://www.rockwellautomation.com/en/e-tools/	These online tools install on your personal computer so that you can quickly access information on our products. • Proposal Works • Industrial Computer Selector • Operator Interface Selection Tool • Programmable Controller Family Selector
http://www.rockwellautomation.com/solutions/integratedarchitecture/	Provides information on integrated architecture tools and resources including accelerator toolkits.
http://www.prosoft-technology.com/	Provides information regarding ProSoft Technology products and technical support. The Modbus TCP/IP Communication Module (MVI56-MNET) used in this quick start is a product of ProSoft Technology. Contact technical support by emailing support@prosoft-technology.com or calling 1 + (661) 716-5100.

You can view or download publications at http://literature.rockwellautomation.com. To order paper copies of technical documentation, contact your local Rockwell Automation distributor or sales representative.

Hardware Selection

Introduction

In this chapter, you select the hardware for your application. You can select any of the three DataSite configurations covered in this quick start. Within each configuration, you have the option to purchase a pre-assembled DataSite panel or one that requires assembly. This chapter provides step-by-step instructions on how to use the Bill of Materials (BOM) provided with the DataSite Accelerator Toolkit CD.

Before You Begin

Verify that your computer meets the software requirements of Proposal Works software.

What You Need

- DataSite Accelerator Toolkit CD, publication IASIMP-SP011
  For a copy of the CD, contact your local Rockwell Automation distributor or sales representative.
- Personal computer with Internet access for downloading software.

Review Basic Panel Component Listings

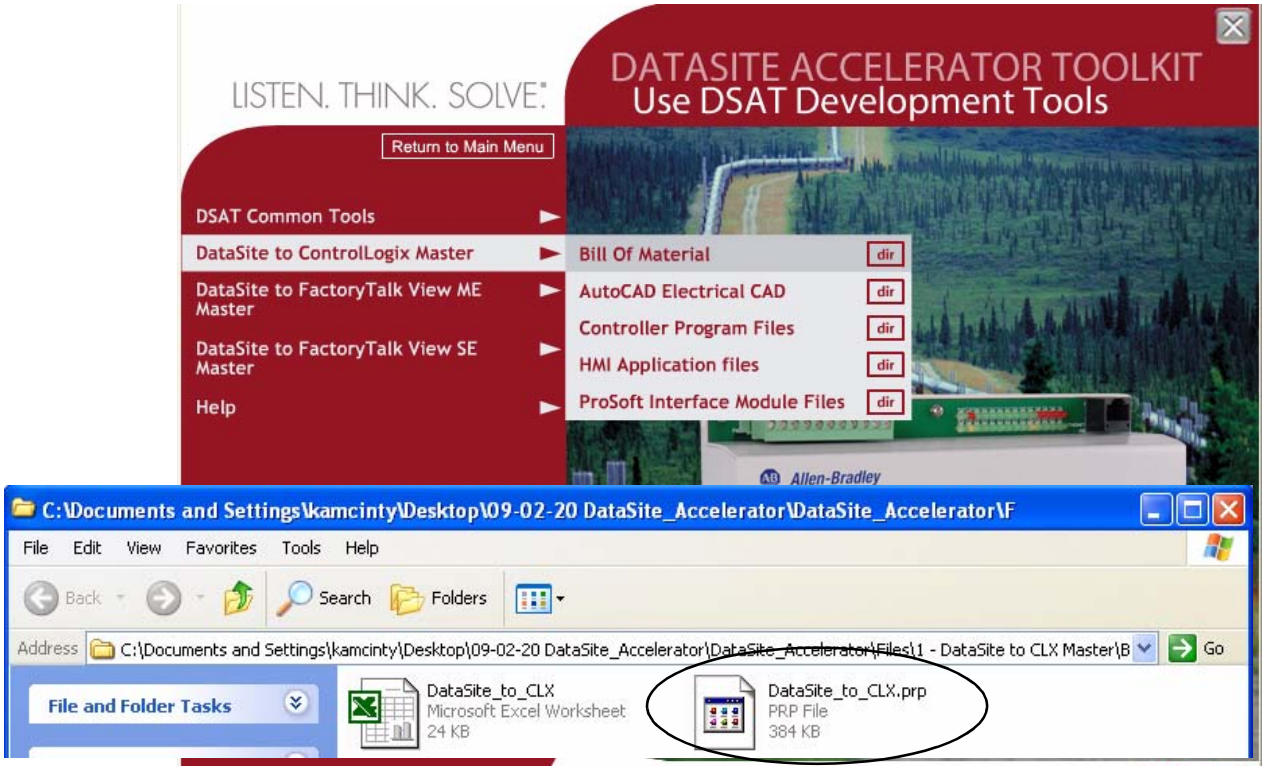
The bill of materials (BOM) on the DataSite Accelerator Toolkit CD includes the necessary components to duplicate the three DataSite configurations covered in this quick start. Review the component listings and compare with your specific application needs.

Follow these steps to view the BOM on the DataSite Accelerator Toolkit CD for the DataSite to ControlLogix Master configuration.

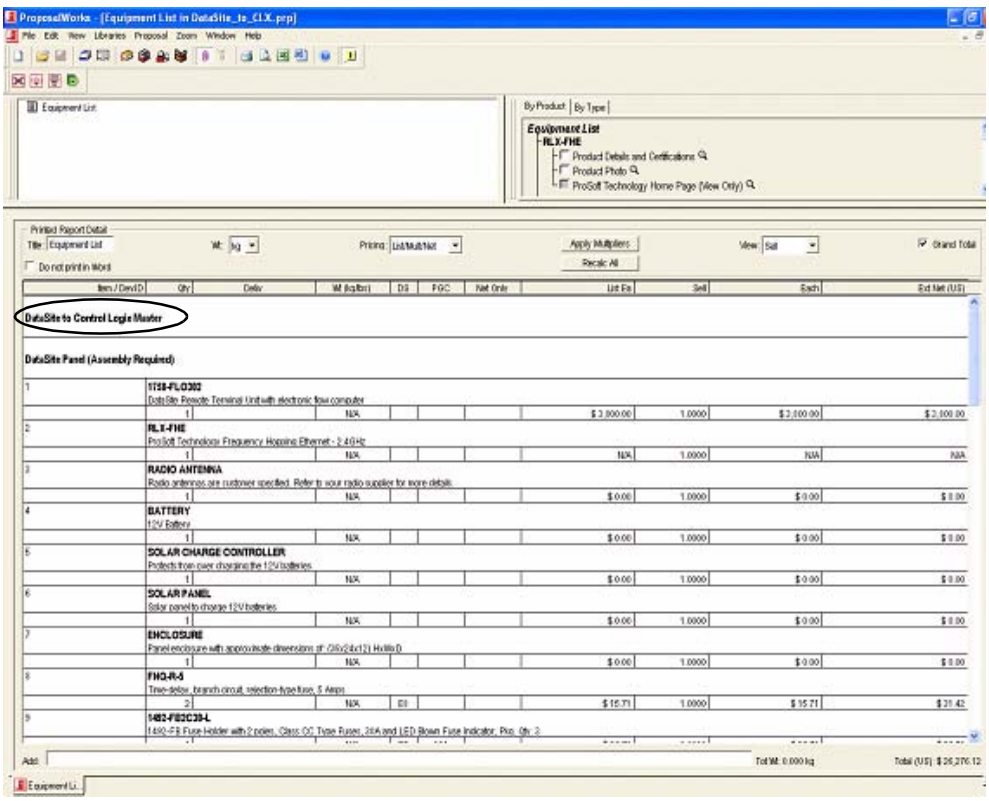
1. Launch the DataSite Accelerator Toolkit CD.

2. Select DataSite Development Tools.

3. Choose DataSite to ControlLogix Master>Bill of Material, then double-click DataSite_to_CLX.prp.



Proposal Works launches and displays the BOM for the DataSite to ControlLogix Master configuration.



4. Review the BOM and modify to fit your application.

TIP Double-click a bolded part number to launch the configurator where you can modify components on the bill of material

1	**1758-FLO302** 1758 DataSite Electronic Flow Meter, 4-20mA I/O		
	1		N/A

5. After finalizing the BOM, click the Word icon on the toolbar to convert the BOM to a Word document.

   Word launches and displays the BOM.

6. Repeat steps 2 - 5 to view the BOMs for the other two DataSite configurations.
   - DataSite Development Tools>DataSite to FactoryTalk View ME Master>Bill of Material>DataSite_to ME_.prp.
   - DataSite Development Tools>DataSite to FactoryTalk View SE Master>Bill of Material>DataSite_to_SE.prp.

System Layout and Wiring

Introduction

In this chapter, you plan the panel layout and wiring for your DataSite system. You can use the AutoCAD electrical drawings supplied on the DataSite Accelerator Toolkit CD to add or remove components in your DataSite system.

Before You Begin

Complete your system hardware selection (Chapter 1).

What You Need

- DataSite Accelerator Toolkit CD, publication IASIMP-SP011
  For a copy of the CD, contact your local Rockwell Automation distributor or sales representative.
- AutoCAD electrical software to open DWG or DXF files.

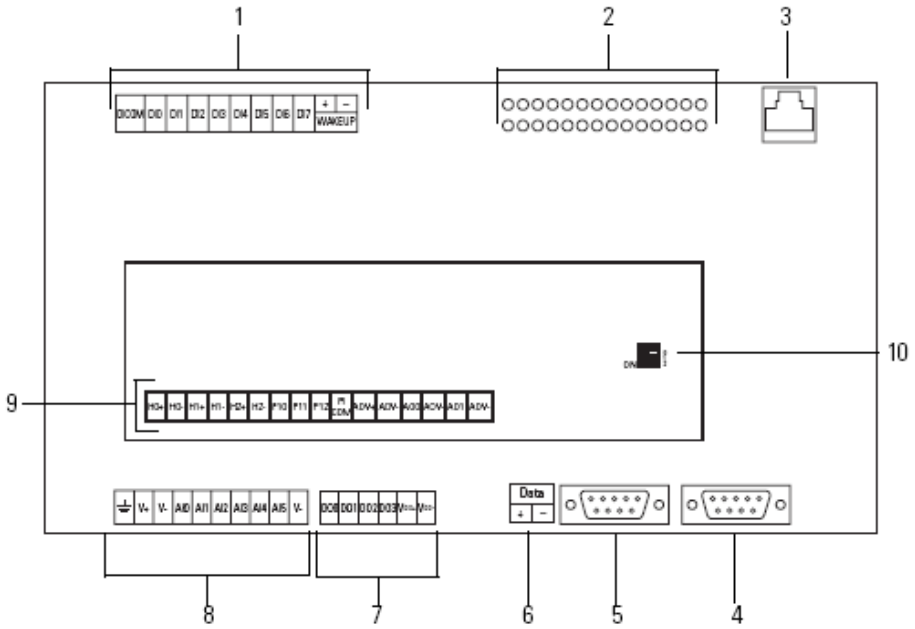
  TIP Use AutoCAD electrical software to take advantage of advanced features of the project provided.

- Adobe Acrobat Reader software to open PDF files.
- System Design for Control of Electrical Reference Manual, publication GMC-RM001.
- Documentation for your other Allen-Bradley products.
  Go to Literature Library at http://literature.rockwellautomation.com for access to Rockwell Automation publications.

Follow These Steps

Review DataSite Connections
page 18
Plan Your DataSite Panel Layout and Wiring
page 19
Verifying Your Basic Panel Layout
page 20
Download Other Allen-Bradley CAD Drawings
page 24

Review DataSite Connections



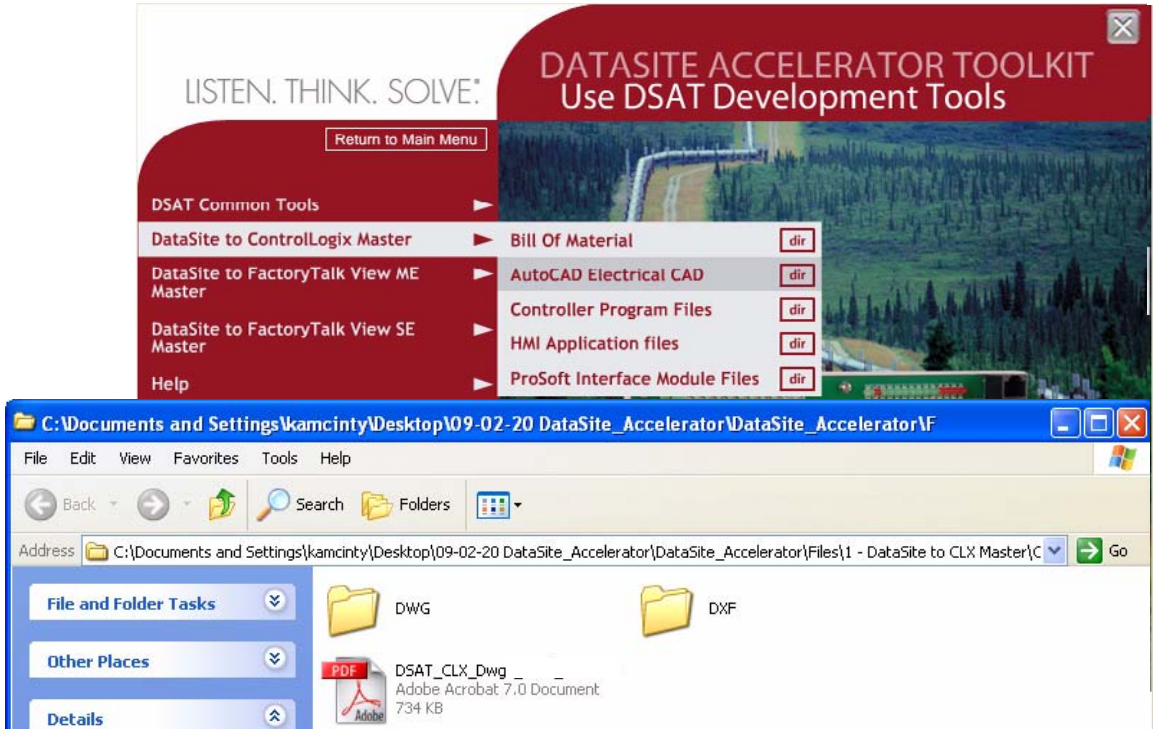
Item	Description	Item	Description
1	Discrete inputs and wake-up connectors	6	RS-485 COM 1 connector
2	Status indicators	7	Discrete output connectors
3	Ethernet connector	8	Power input and analog input connectors
4	RS-232 COM 2 connector	9	HART, pulse input, and analog output connectors
5	RS-232 COM 1 connector	10	Pulse input filter switches

Plan Your DataSite Panel Layout and Wiring

The DataSite Accelerator Toolkit CD includes AutoCAD Electrical project files that include panel layout and wiring diagrams that you can easily modify for your specific application. Individual DWG, DXF, and PDF files are available for use in standard AutoCAD and non-AutoCAD drawing and image software packages. The drawings are designed to optimize panel space and minimize electrical noise.

Follow these steps to load CAD files from the DataSite Accelerator Toolkit CD.

1. On the toolkit CD, select DataSite Development Tools.
2. Choose DataSite to ControlLogix Master>AutoCAD Electrical CAD.



3. Open the DWG or DXF folder.

TIP The PDF file contains the same information as the individual DXF and DWG files. Use Adobe Acrobat Reader to open the PDF file.

4. Use your CAD program to open the DWG or DXF files.
5. Identify additional layout needs specific to your application.
6. Repeat steps 2 - 5 to view the CAD files for the other two DataSite configurations.
   - DataSite to FactoryTalk View ME Master>AutoCAD Electrical CAD
   - DataSite to FactoryTalk View SE Master>AutoCAD Electrical CAD

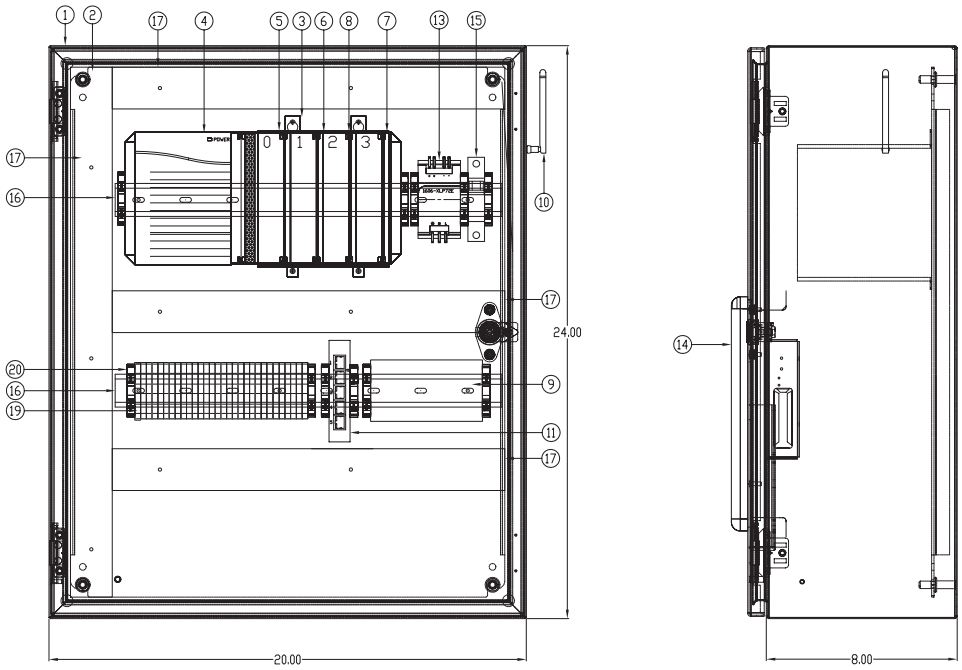
Verifying Your Basic Panel Layout

The AutoCAD Electrical project includes panel layouts and wiring diagrams for each of the three DataSite configurations. Add or remove components as needed.

Panel Layouts for the DataSite to ControlLogix Master Configuration

The DataSite to ControlLogix Master configuration includes panel layouts for host and remote locations. Refer to the bill of material below each layout to review the items in each panel.

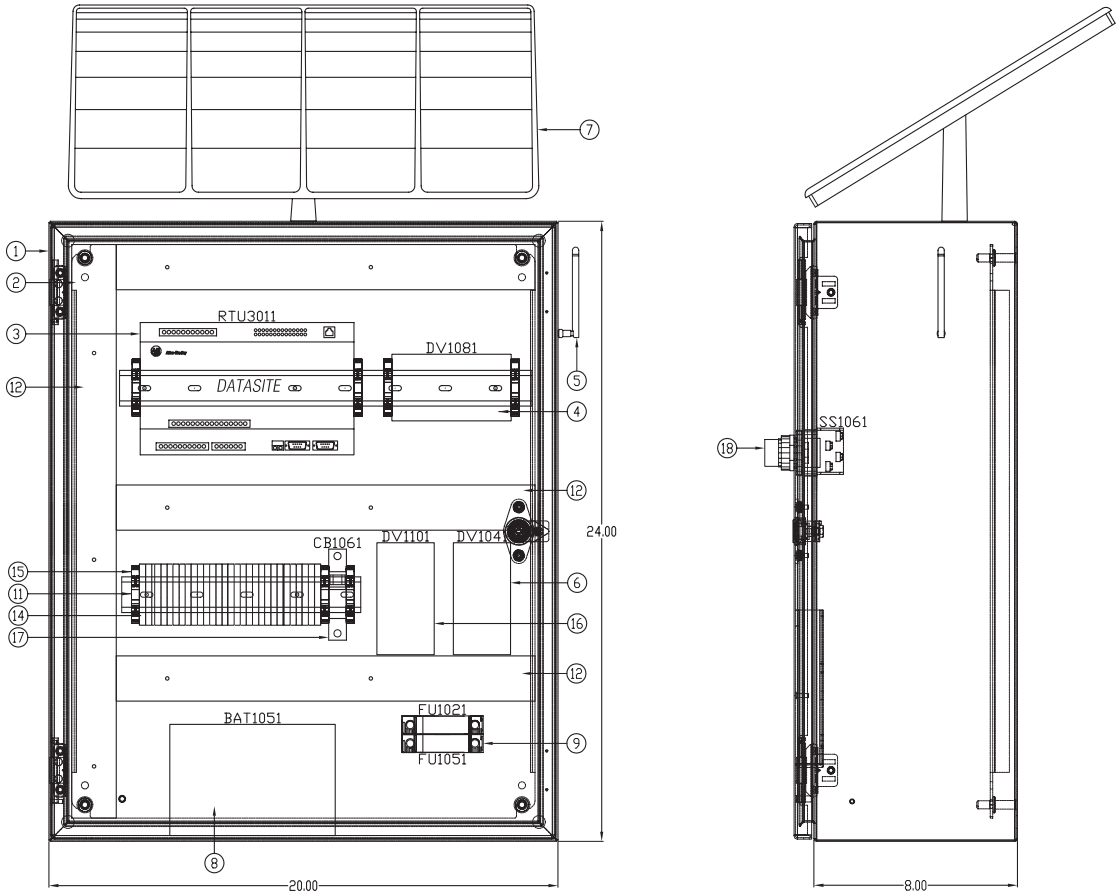
Host DataSite Location - Panel Layout



Sample Bill of Material - Host DataSite Panel Layout

ITEM	QTY	DESCRIPTION	MFG	CATALOG
		CONTROL LOGIX MASTER PANEL		
1	1	NEMA1 ENCLOSURE 24"x20"x8"	HOFFMAN	CSD242008
2	1	PANEL FOR ENCLOSURE	HOFFMAN	CP2420
3	1	4 SLOT CONTROL LOGIX CHASSIS	AB	1756–A4
4	1	POWER SUPPLY, 85–265VAC (5V @ 10 AMP)	AB	1756–PA72
5	1	CONTROL LOGIX PROCESSOR	AB	1756–L63
6	1	CLX ETHERNET/IP 10/100 BRIDGE MODULE	AB	1756–ENBT
7	1	SLOT FILLER	AB	1756–N2
8	1	PROSOFT TECHNOLOGY MODBUS TCP/IP COMMUNICATION MODULE	PROSOFT	MV156–MNET
9	1	PROSOFT TECHNOLOGY FREQUENCY HOPPING ETHERNET – 2.4GHz	PROSOFT	RLX–FHE
10	1	RADIO ANTENNA		
11	1	5 PORT ETHERNET SWITCH	AB	1783–US05T
12	5	ETHERNET CABLE, STRAIGHT THROUGH RJ45	AB	RJ45
13	1	COMPACT POWER SUPPLY, 24–28V, 72w, 120/240VAC INPUT	AB	1606–XLP72E
14	1	PANELVIEW PLUS 1000	AB	2711P–T10C4A1
15	1	CIRCUIT BREAKER, 15 AMP	AB	1489–A1C150
16	–	35mm DIN RAIL	AB	199–DR1
17	–	PANDUIT WIRE DUCT, 1.5" x3" WHITE	PANDUIT	F1.5X3WH6
18	–	PANDUIT WIRE DUCT COVER, 1.5" WHITE	PANDUIT	C1.5WH6
19	–	TERMINAL BLOCK	AB	1492–J4
20	–	END ANCHOR	AB	1492–EAJ35

Remote DataSite Location - Panel Layout



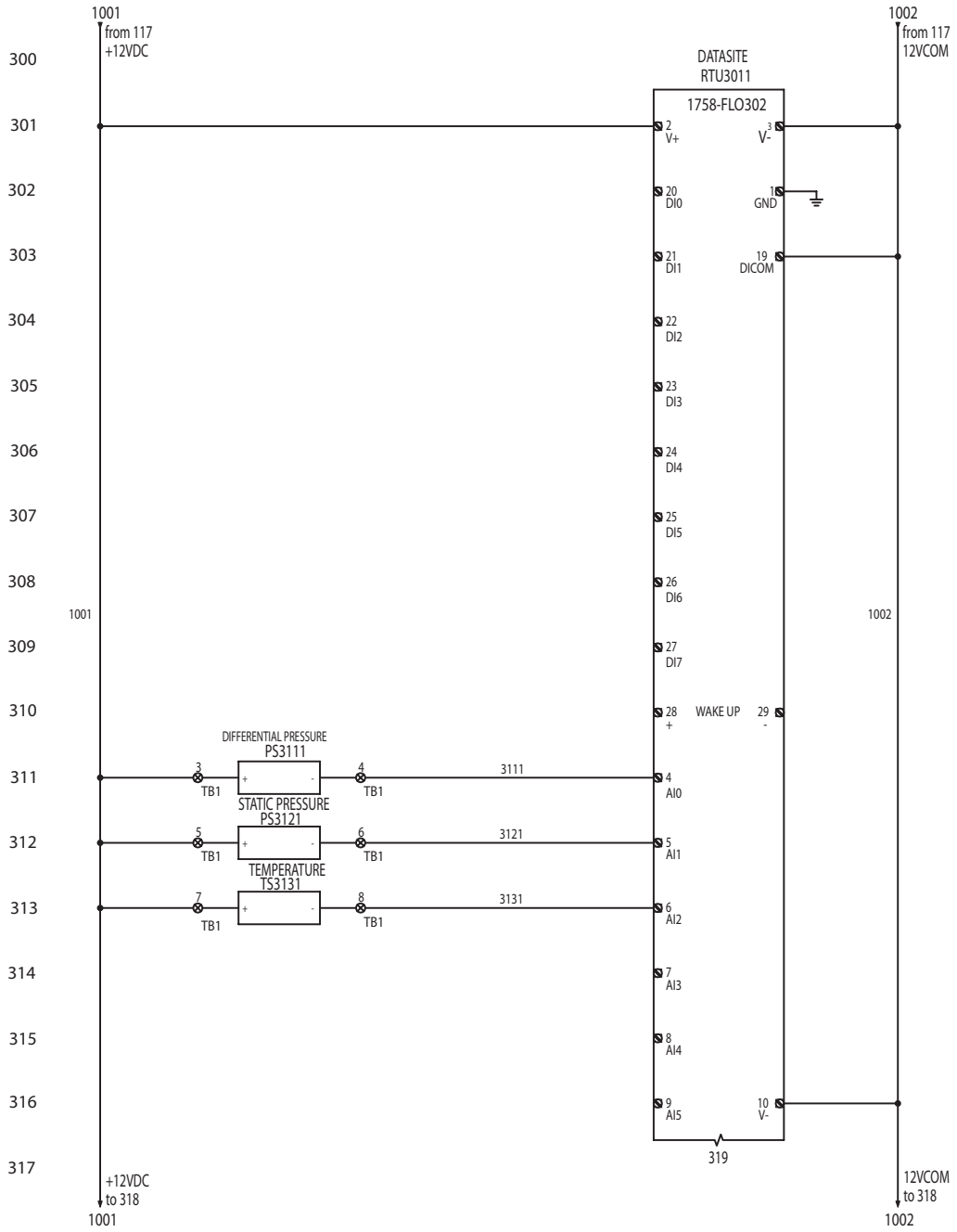
Sample Bill of Material - Remote DataSite Location

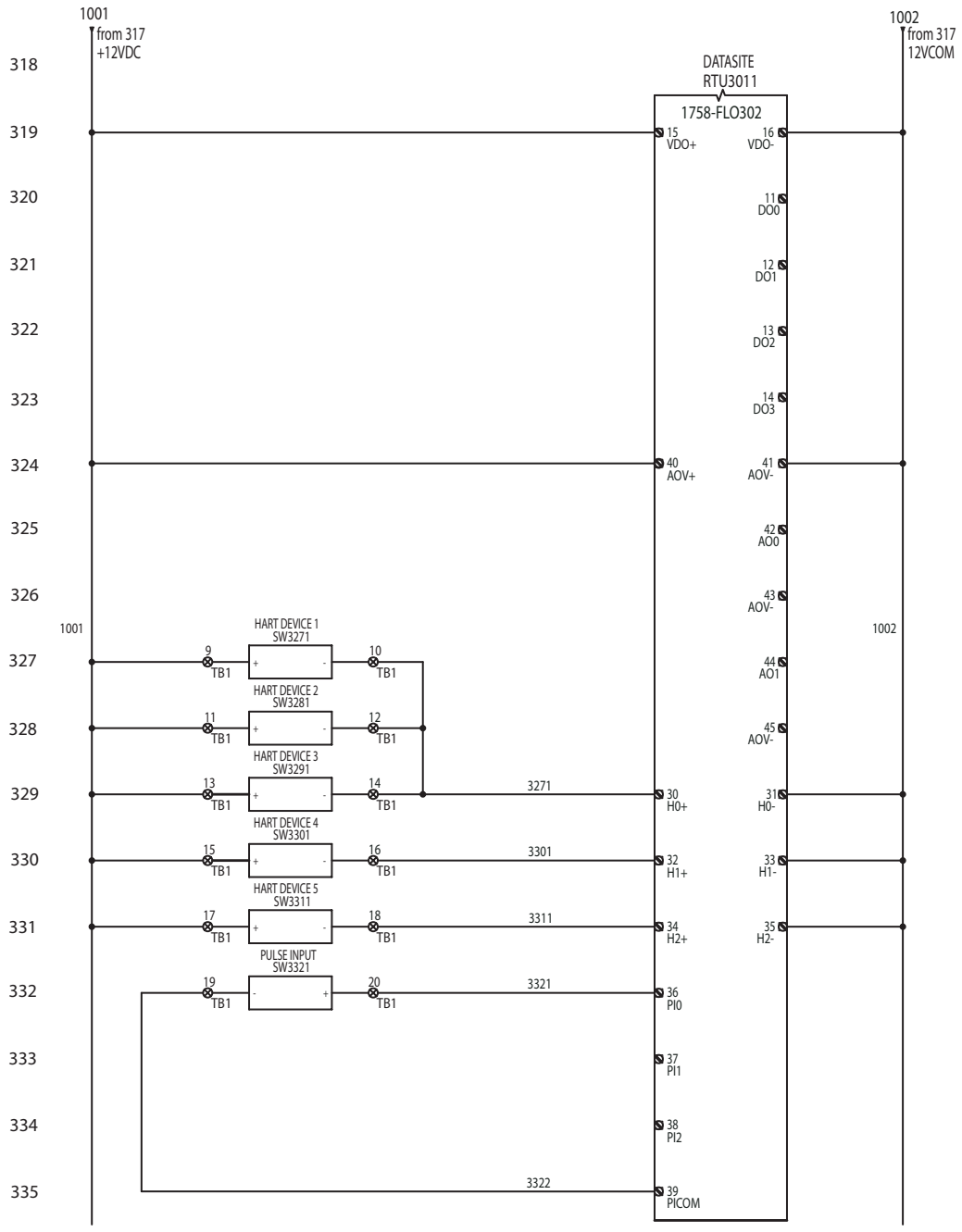
ITEM	QTY	DESCRIPTION	MFG	CATALOG
		CONTROL LOGIX DATASITE RTU PANEL		
1	1	NEMA1 ENCLOSURE 24"x20"x8"	HOFFMAN	CSD242008
2	1	PANEL FOR ENCLOSURE	HOFFMAN	CP2420
3	1	DATASITE ELECTRONIC FLOWMETER, 4–20ma I/O	AB	1758–FLO302
4	1	PROSOFT TECHNOLOGY FREQUENCY HOPPING ETHERNET – 2.4GHz	PROSOFT	RLX–FHE
5	1	RADIO ANTENNA		
6	1	SOLAR CHARGE CONTROLLER		
7	1	SOLAR PANEL		
8	1	12 VOLT BATTERY		
9	1	FUSE HOLDER 2 POLE, 30A, LED BLOWN FUSE INDICATOR	AB	1492–FB2C30–L
10	2	FUSE, 5 AMP, TIME DELAY, REJECTION TYPE	BUSSMAN	FNQ–R–5
11	–	35mm DIN RAIL	AB	199–DR1
12	–	PANDUIT WIRE DUCT, 1.5" x 3" WHITE	PANDUIT	F1.5X3WH6
13	–	PANDUIT WIRE DUCT COVER, 1.5" WHITE	PANDUIT	C1.5WH6
14	–	TERMINAL BLOCK	AB	1492–J4
15	–	END ANCHOR	AB	1492–EAJ35
16	1	12V TO 24V DC CONVERTER		
17	1	CIRCUIT BREAKER, 5 AMP	AB	1489–A1C050
18	1	SELECTOR SWITCH, 2 POSITIONED, MAINTAINED	AB	800H–HR2D1P
19	1	OFF–ON LEGEND PLATE	AB	800H–W133

Wiring Diagrams for the DataSite to ControlLogix Master Configuration

The AutoCAD electrical project includes wiring diagrams for each of the three DataSite configurations. The example shows power wiring for the DataSite to ControlLogix Master configuration. Add or remove components as needed.

Sample CAD Wiring Diagram




1001
from 317
+12VDC
1002
from 317
12VCOM
DATASITE
RTU3011
1758-FLO302
15 VDO+
16 VDO-
11 DO0
12 DO1
13 DO2
14 DO3
40 AOV+
41 AOV-
42 AO0
43 AOV-
44 AO1
45 AOV-
30 HO+
31 HO-
32 H1+
33 H1-
34 H2+
35 H2-
36 PI0
37 PI1
38 PI2
39 PICOM
HART DEVICE 1
SW3271
HART DEVICE 2
SW3281
HART DEVICE 3
SW3291
HART DEVICE 4
SW3301
HART DEVICE 5
SW3311
PULSE INPUT
SW3321
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3322
318
319
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321
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323
324
325
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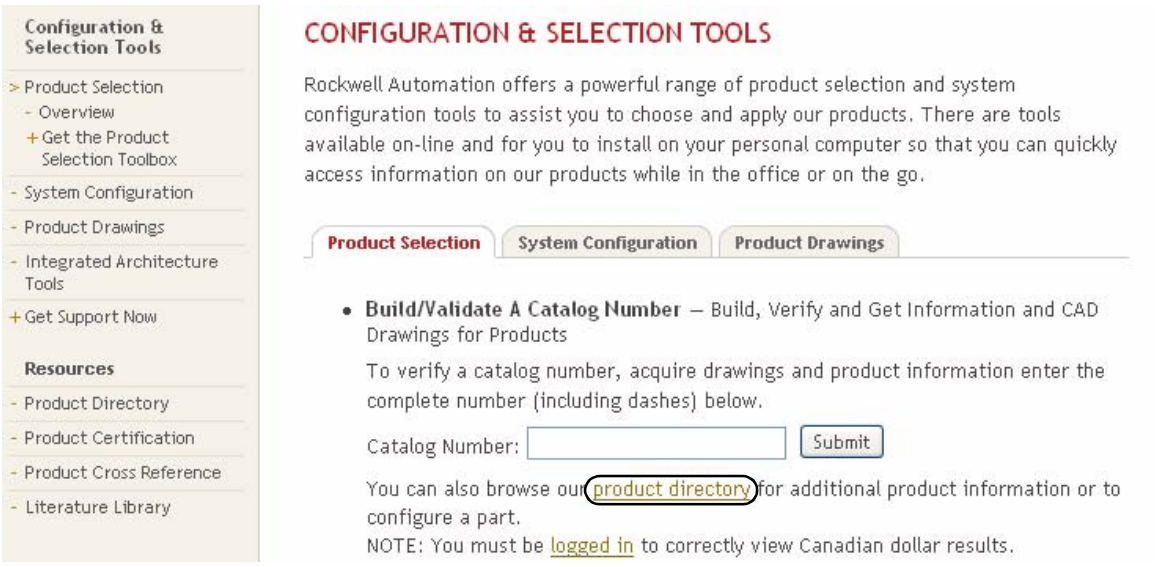
Download Other Allen-Bradley CAD Drawings

Follow these steps to download other Allen-Bradley product CAD drawings.

1. Open your browser and go to http://ab.com/e-tools.

   The Configuration and Selection tools web page opens.



TIP If you know the complete catalog number of your Allen-Bradley product, you can enter it here and click Submit. However, you need a complete catalog number string to get the configuration results.

2. If you don't know the complete catalog number, click product directory to browse the configured Rockwell Automation products.

3. Click Rockwell Automation and follow the prompts.

DataSite and Logix Integration

Introduction

In this chapter, you configure the DataSite unit, download the ControlLogix user program, configure the ProSoft (MVI56-MNET) Modbus TCP/IP communication module, and connect all system devices.

Before You Begin

- Complete your system hardware selection (Chapter 1).
- Complete your system layout and wiring (Chapter 2).
- Load all DataSite software on your computer as listed in the Preface on page 10. In this chapter, you will use the DS FloConfig and RSLogix 5000 software.
- Assign IP addresses to all devices on network. The table lists IP addresses used in this quick start.

Device	IP Address	Device	IP Address
1756-ENBT Ethernet module	192.168.10.90	ProSoft MV156-MNET module	192.168.10.94
Master radio	192.168.10.91	Personal computer	192.168.10.95
Remote radio	192.168.10.92	PanelView Plus 1000 terminal	192.168.10.96
DataSite unit	192.168.10.93		

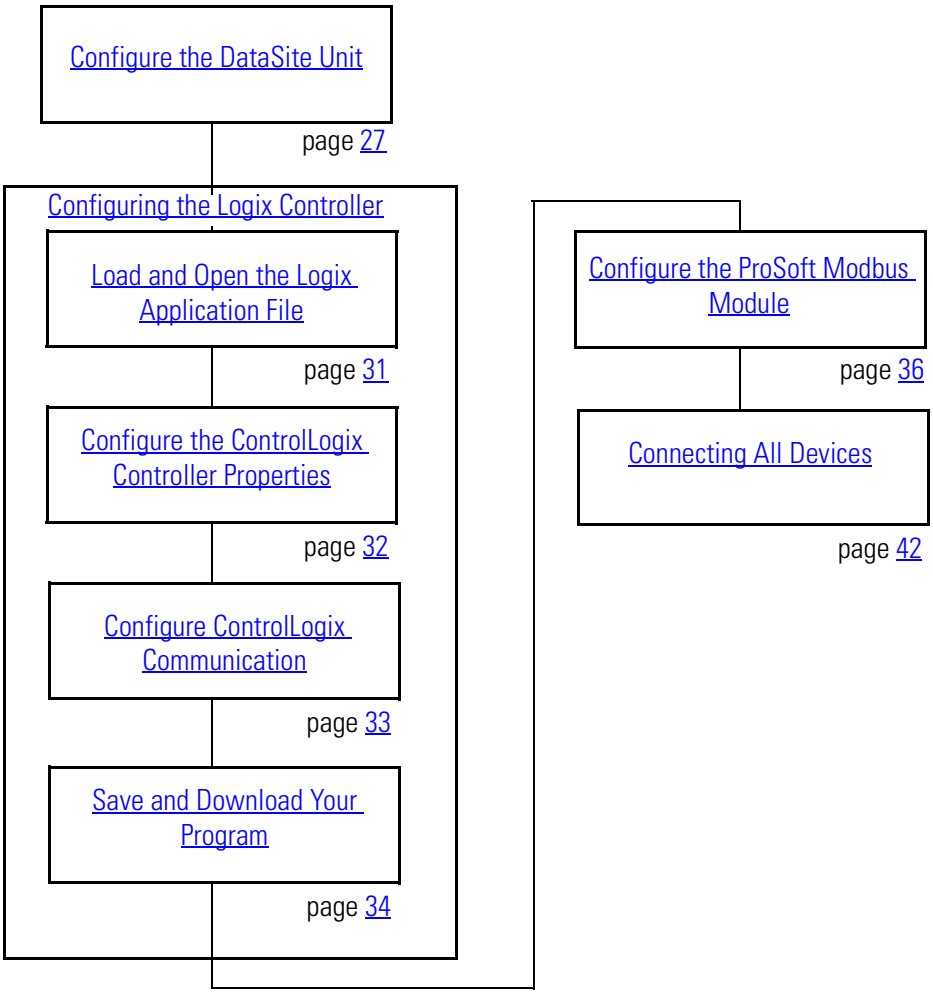
This chapter assigns IP addresses to the 1756-ENBT Ethernet module, the DataSite unit, and the Prosoft MV156-MNET module. For details on how to assign an IP address to the PanelView Plus terminal, refer to the PanelView Plus Terminals User Manual, publication 2711P-UM001. For the other devices, refer to the manufacturer's user manual.

What You Need

- Personal computer or laptop
- Hardware:
  - 1758-FLO*xxx* DataSite Unit
  - 1756-L63 ControlLogix controller
  - 1756-ENBT EtherNet/IP module

  - Modbus TCP/IP communication module (MV156-MNET) from ProSoft Technology
  - PanelView Plus 1000 terminal
  - Two Ethernet RF radios
  - 1747-CP3 null-modem serial cable
  - One Ethernet crossover cable
  - Five Ethernet straight-through cables
  - Ethernet switch
- Software:
  - DS FloConfig software
  - RSLogix 1000 software
  - DataSite Accelerator Toolkit CD, publication IASIMP-SP011

Follow These Steps



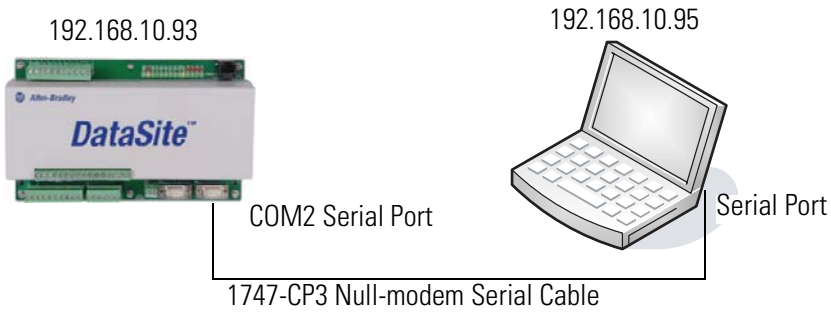
Configure the DataSite Unit

The communication parameters for the DataSite unit are configured using DS FloConfig software. The DataSite unit can communicate using either its serial or Ethernet port. This quick start uses the serial port to assign the DataSite unit an IP address of 192.168.10.93 and then changes to Ethernet communication.

TIP Make sure your computer or laptop is assigned an IP address where the first three octets are the same as the DataSite unit, 192.168.10.XX. In this quick start, the computer uses a static IP address of 192.168.10.95 with a subnet mask of 255.255.255.0.

Follow these steps to assign an IP address, 192.168.10.93, and configure Ethernet communication for the DataSite unit.

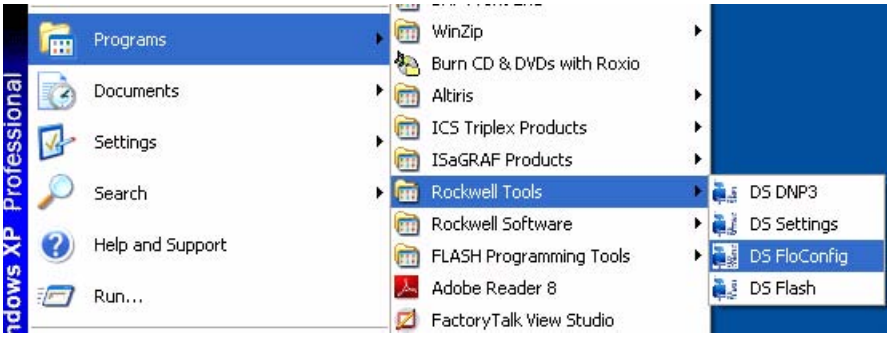
1. Connect a 1747-CP3 (null-modem) serial cable between your computer's serial port and the COM2 port on the DataSite unit.



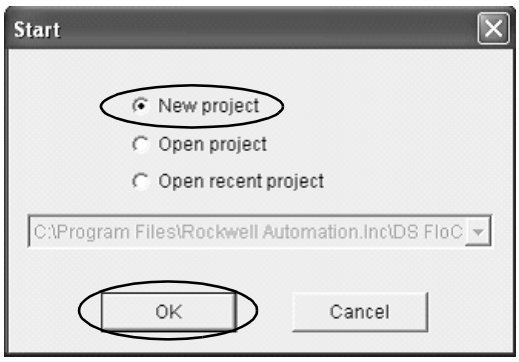
2. Apply 12V DC power to the DataSite unit.

3. Launch the DS FloConfig software.

   The path shown may be different on your computer depending on where the software is installed.



4. Select New Project and click OK.



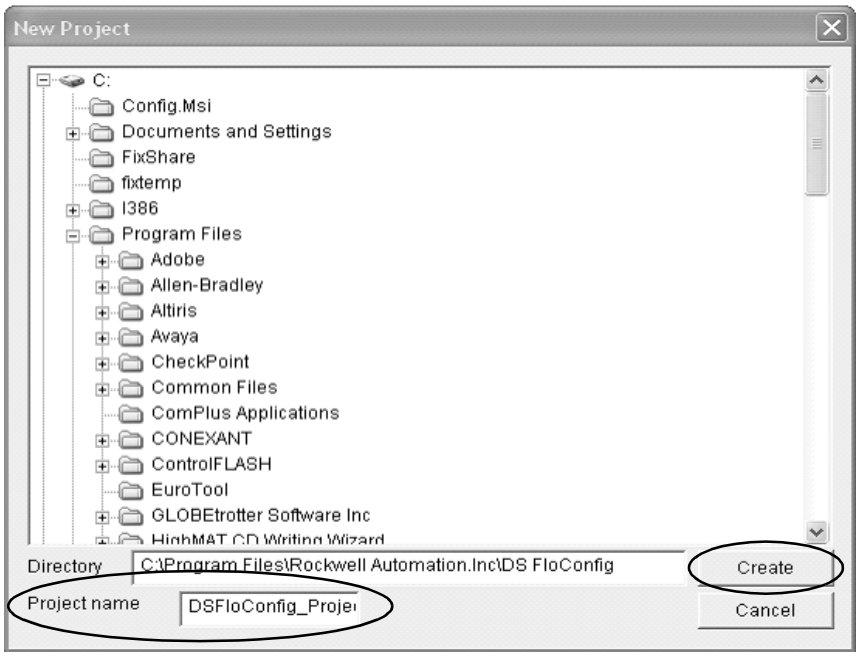
5. Create a new project.

a. Enter a project name.

b. Enter the directory where you want to store the project.

This examples saves the project in the default directory.

c. Click Create.



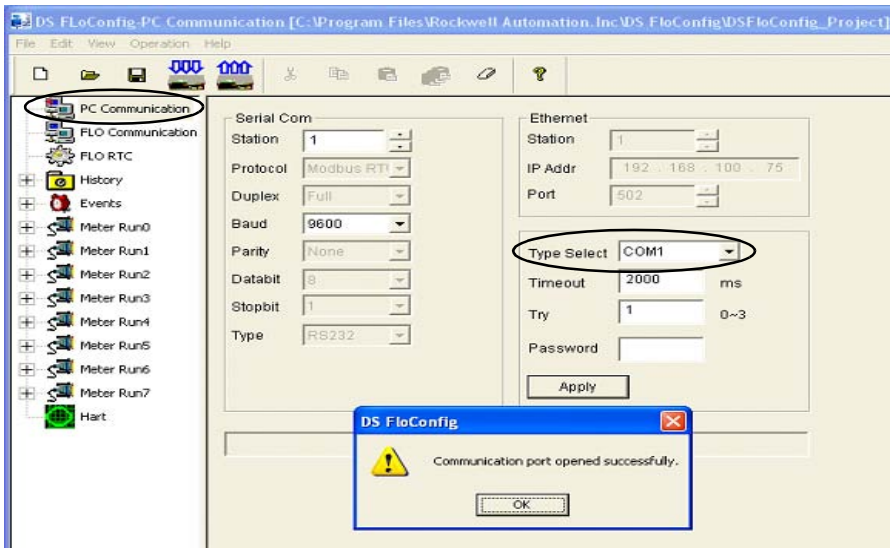
6. Click PC Communication.

a. Select COM1 from the Type Select pull-down list.

b. Click Apply.

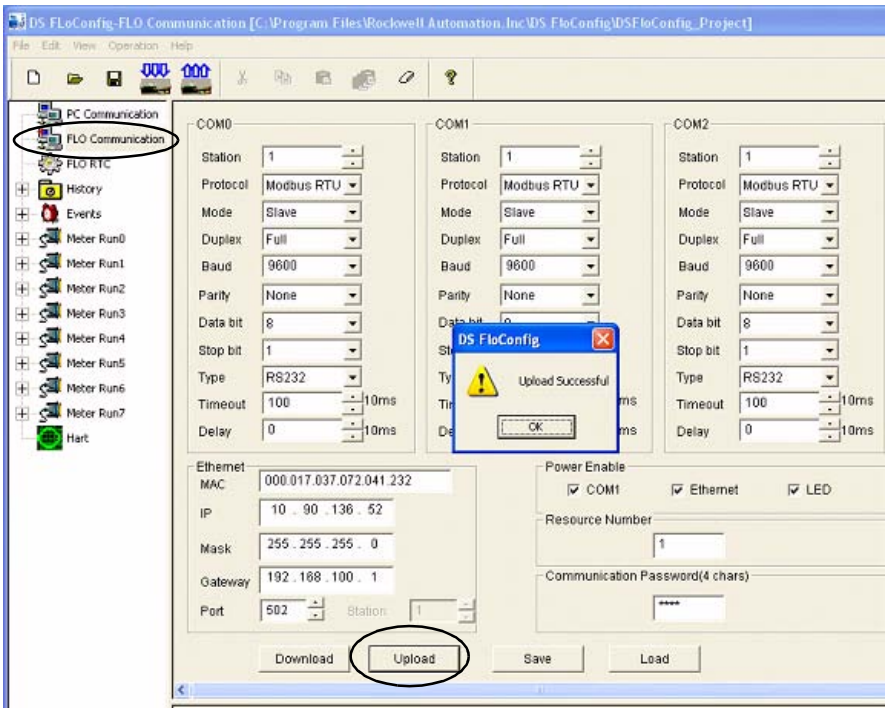
A message informs you that the Communication port opened successfully.

c. Click OK.



7. Click Flo Communication, then click Upload.
The screen refreshes with the existing IP address and serial port settings.

8. Click OK when you see Upload Successful.



9. Under Ethernet:

a. Type the IP address for the DataSite unit.
This example uses 192.168.10.93.

b. Click Download.

c. Click OK when you see the Download successful message.

10. Cycle power to the DataSite unit.
You must power cycle when changing the IP address.

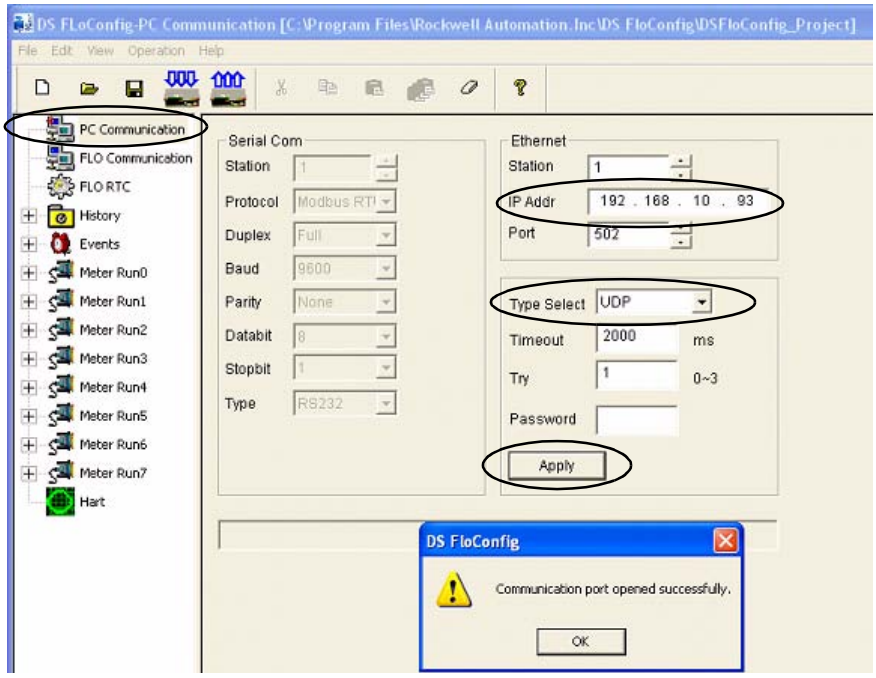
11. Click PC Communication.

a. Select UDP or TCP/Server from the Type Select pull-down list.

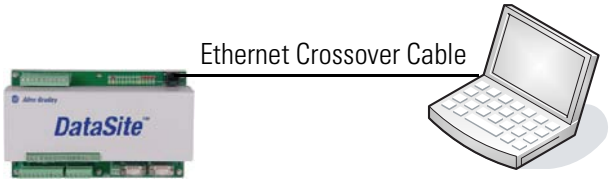
b. Type the IP address, 192.168.10.93 that you just downloaded to the DataSite unit.

c. Click Apply.

d. Click OK when you see Communication port opened successfully.



12. Connect your computer to the DataSite unit using an Ethernet crossover cable.

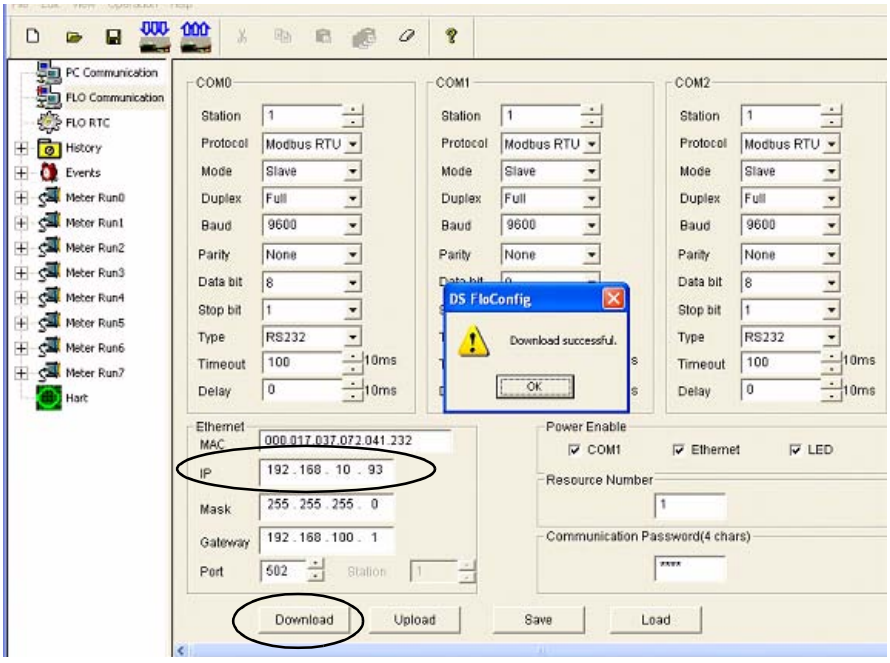


13. Click Flo Communication.

a. Verify the IP address is 192.168.10.93.

b. Click Download.

c. Click OK when you see the Download successful message.



The IP address of the DataSite unit was set successfully and now uses Ethernet communication.

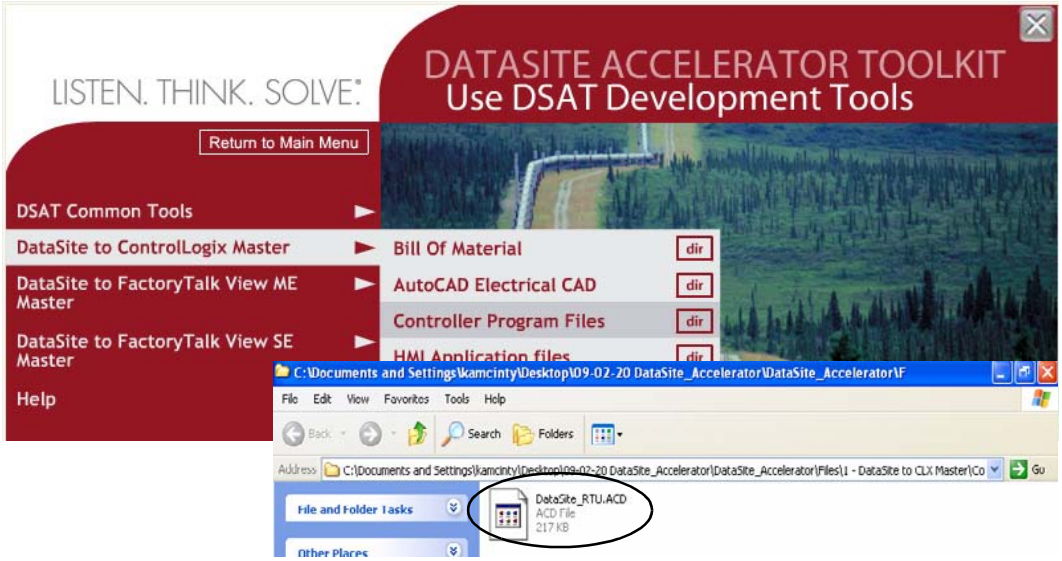
Configuring the Logix Controller

The sample Logix program on the DataSite Accelerator Toolkit CD provides the logic necessary to manipulate data coming from the Modbus TCP/IP communication module and makes it available to the ControlLogix L63 controller tags.

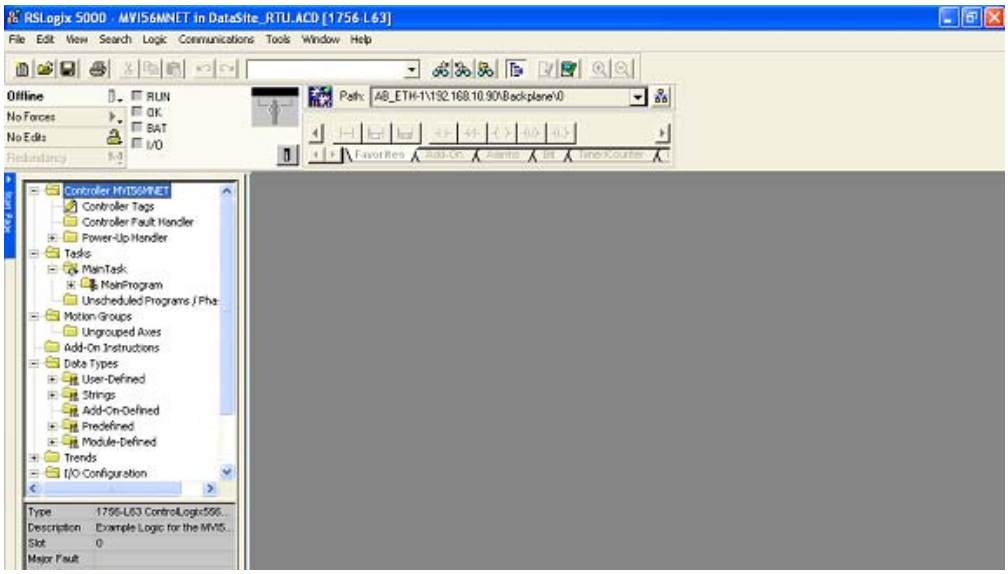
Load and Open the Logix Application File

Follow these steps to load and open the (.acd) Logix application file from the DataSite Accelerator Toolkit CD.

1. On the toolkit CD, choose DataSite to ControlLogix Master>Controller Program Files, then double-click the DataSite_RTU.ACD application file.

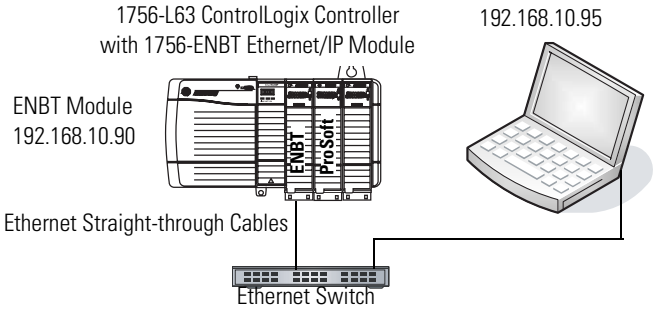


The RSLogix 5000 software launches and opens the.acd file.

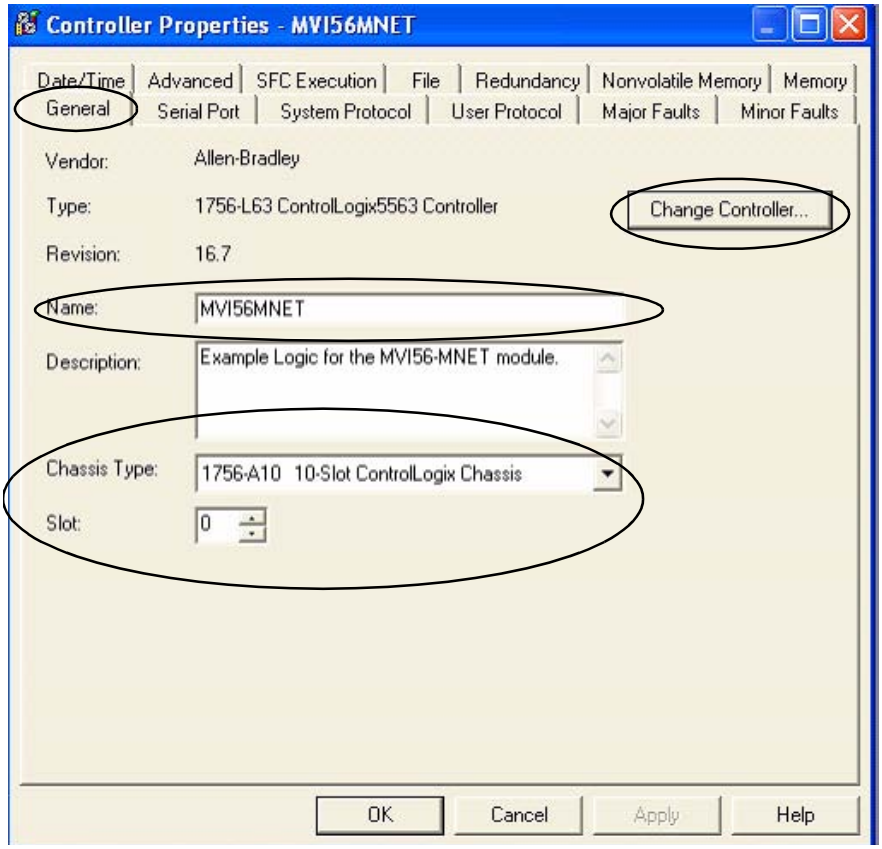


Configure the ControlLogix Controller Properties

Follow these steps to configure your ControlLogix L63 controller.



1. Apply power to your ControlLogix chassis.
2. Connect your computer and 1756-ENBT Ethernet module to the Ethernet switch using Ethernet straight-through cables.
3. Choose Controller Properties from the Edit menu to open the Controller Properties dialog box.
4. Click the General tab.
   a. Click the Change Controller button to select the controller that matches your hardware. This example uses 1756-L63 revision 16.
   b. Change the controller Name as desired.
   c. From the Chassis Type pull-down list, select the catalog number for your chassis.
   d. Set the slot number to 0 to indicate the 1756-L63 controller resides in slot 0.
   e. Click OK.



TIP Slot 0 is reserved for the 1756-L63 module. Slot 1 is reserved for the 1756-ENBT module. Slot 2 is reserved for the ProSoft Modbus TCP/IP module.

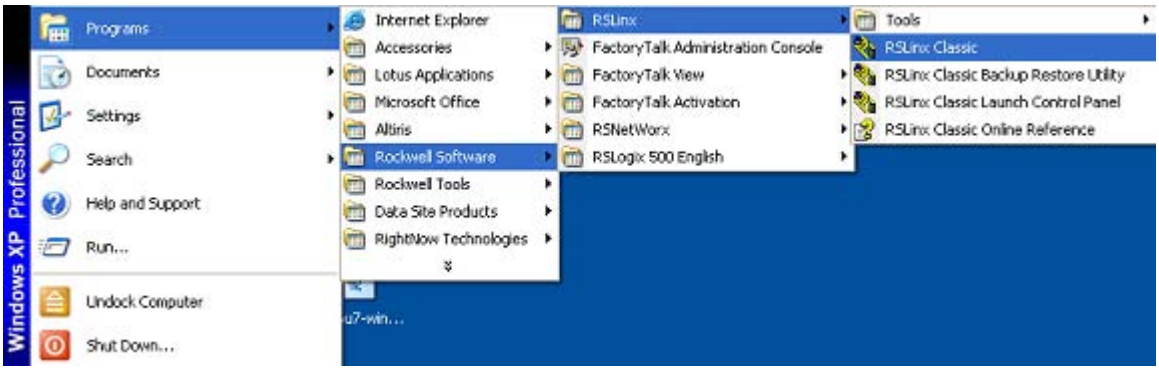
Configure ControlLogix Communication

This procedure assumes that communication to the Logix controller is using the Ethernet port. It also assumes that your 1756-ENBT Ethernet/IP module has already been configured with an IP address of 192.168.10.90.

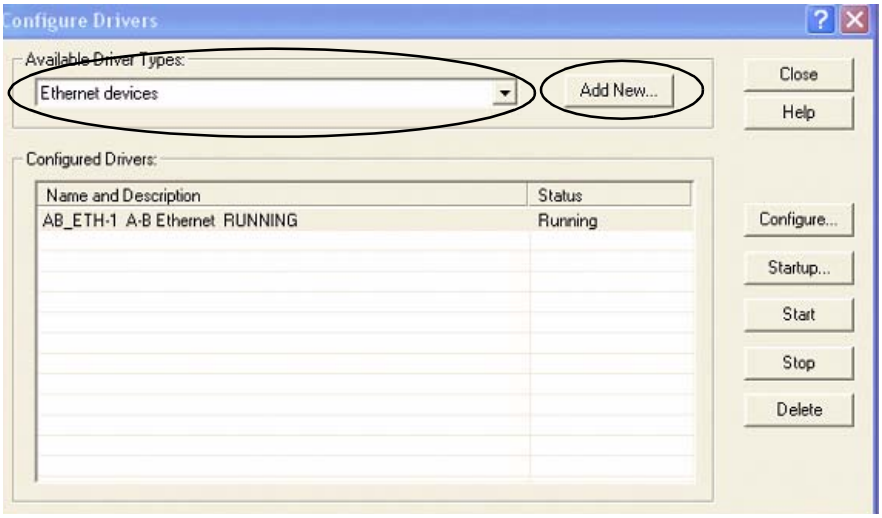
For additional information, refer to the ControlLogix Controllers User Manual, publication 1756-UM051.

Follow these steps to configure ControlLogix communication.

1. Open the RSLinx Classic software, then choose Configure Drivers... from the Communications menu.



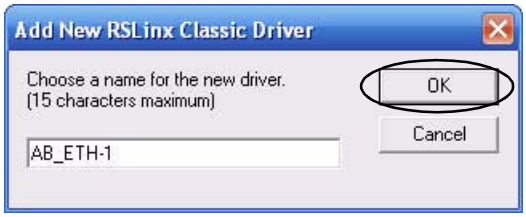
   The Configure Drivers Window opens.



2. Select Ethernet devices from the pull-down list.

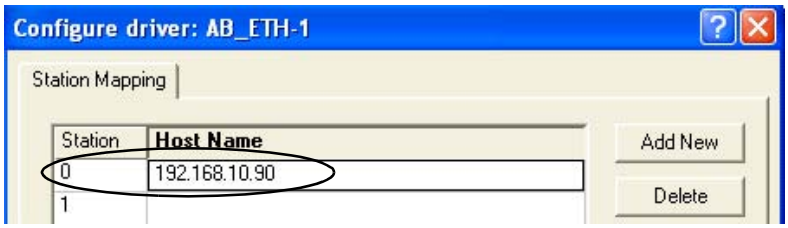
3. Click the Add New button.

4. Accept the default driver name, AB_ETH-1, or change the name and click OK.



5. Enter the IP address of your Ethernet ENBT module and click OK.

   This example uses 192.168.10.90.



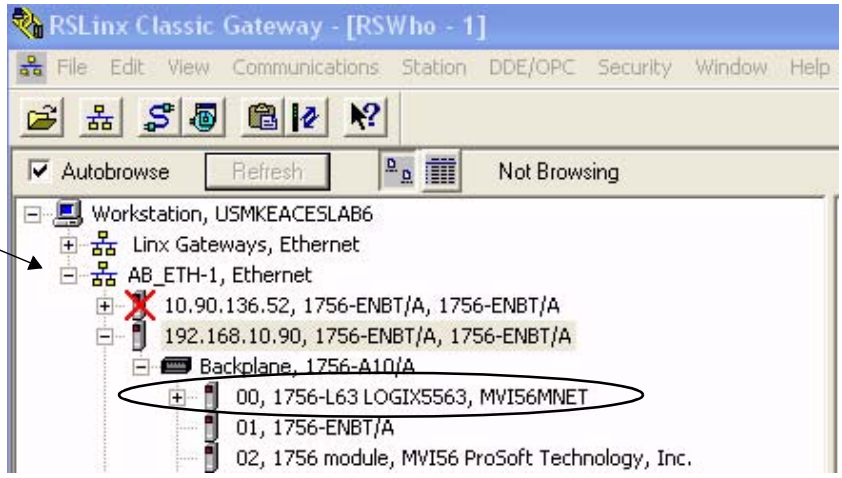
6. Click Close to close the Configure Drivers window.

7. Choose RSWho from the Communications menu.

   The RSWho window opens.

8. Expand AB_ETH_1, Ethernet until your 1756-L63 Logix controller is visible.

9. Verify that you can browse to your Logix controller in slot 0.



10. Minimize the RSLinx window and return to your RSLogix 5000 project window.

Save and Download Your Program

Follow these steps to save your program and download it to the ControlLogix controller.

1. Click Verify Controller on the RSLogix 5000 toolbar to verify the Logix program.

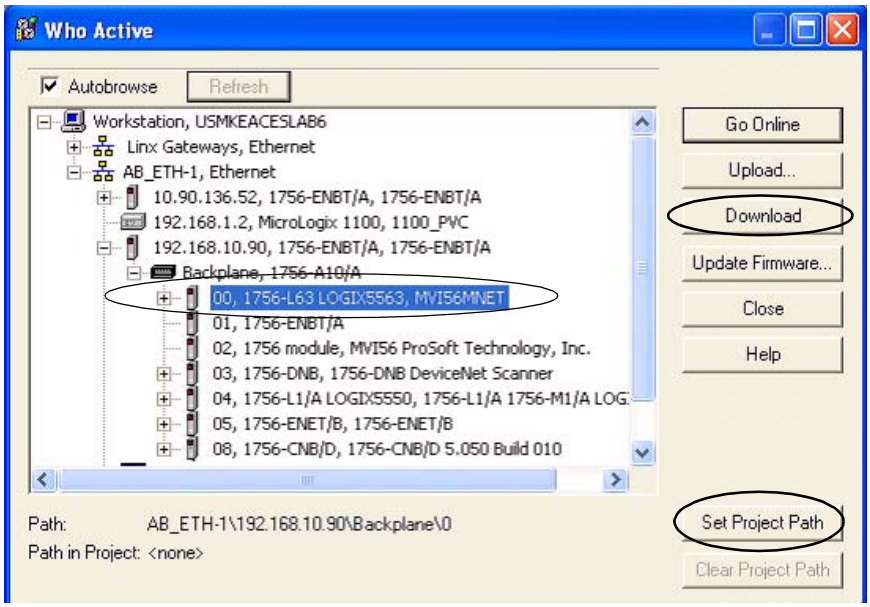
   

   If any errors or warnings occur, they display at the bottom of the window.

2. Choose Save from the File menu to save the program.

3. Click Who Active.

4. Browse to the 1756-L63 controller and click the Set Project Path button.

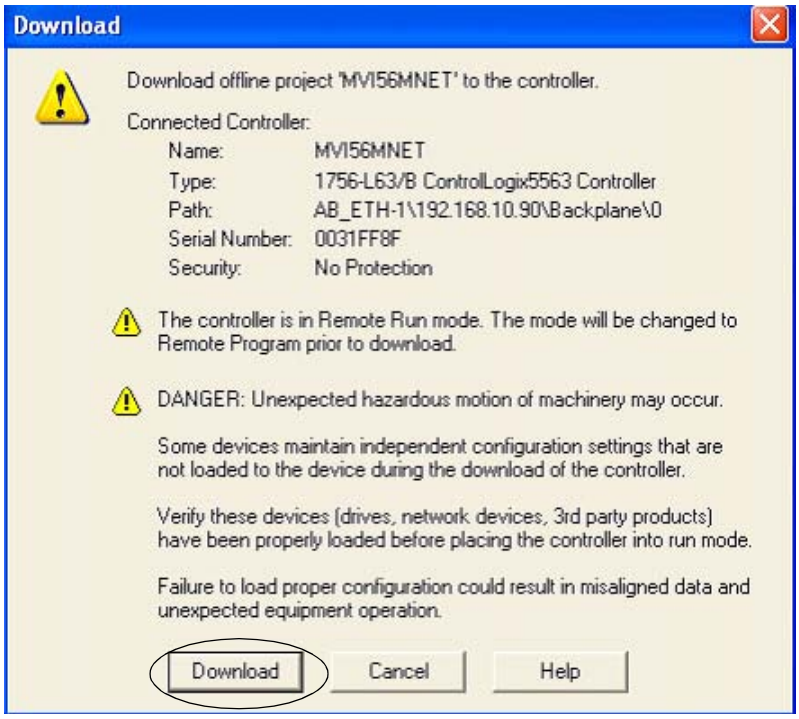


5. Verify that the key switch on the controller is in the REM (remote) position.

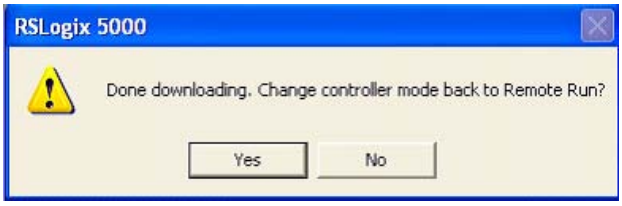
6. Click Download.

The Download window opens.

7. Click Download to send the program to the 1756-L63 controller.



8. Click No when the download is complete.



IMPORTANT All system devices must be configured and connected before placing the controller in Run mode. If the controller is already in Run mode, choose Offline from the Communications menu.

Configure the ProSoft Modbus Module

The ProSoft MV156-MNET Modbus TCP/IP communication module polls the Modbus registers of the DataSite unit and makes the data available to the 1756-L63 controller tags. The Prosoft module slides into slot 2 of the ControlLogix chassis and requires two configuration (.cfg) files to operate.

- WATTCP.CFG assigns an IP address to the ProSoft MVI56-MNET module.
- MNET.CFG defines the list of Modbus registers to read from or write to the DataSite unit.

You will download these configuration files from the DataSite Accelerator Toolkit CD.

The WATTCP.CFG file was modified to assign the ProSoft MVI56-MNET module an IP Address of 192.168.10.94. The MNET.CFG file was modified to poll 19 DataSite natural gas Modbus registers from each of the 8 meter runs which will display on a PanelView Plus 1000 terminal.

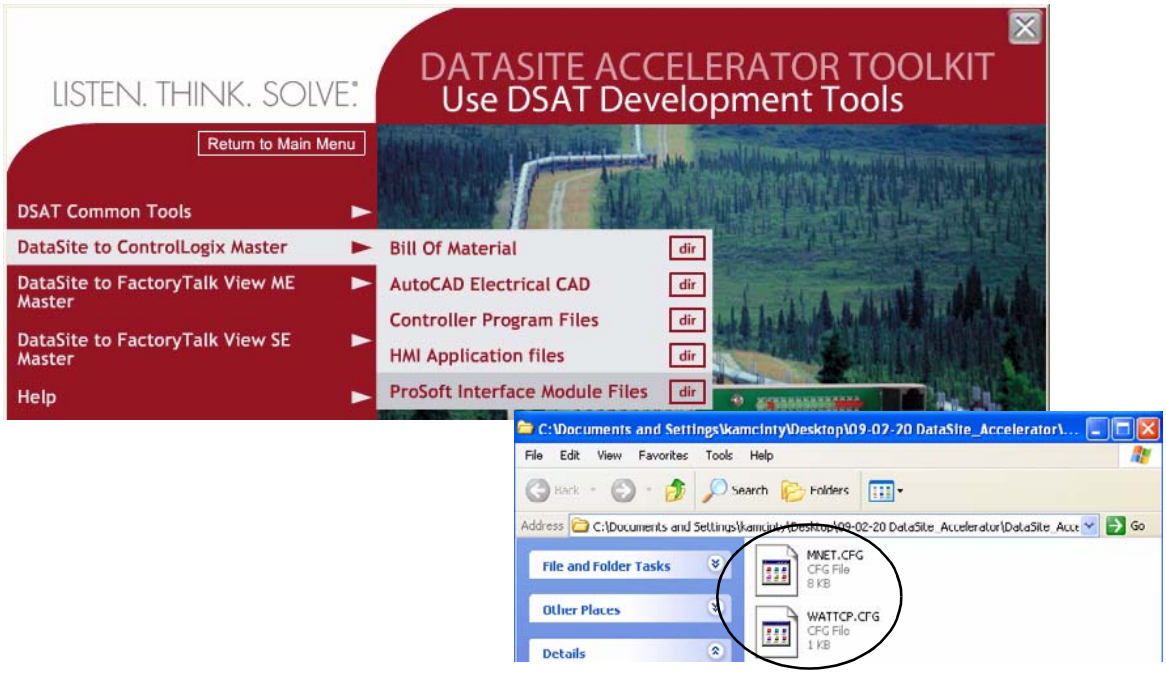
If necessary, you can use Notepad to open and modify the configuration files. For more information on these files and how they were created, refer to the MVI56-MNET User Manual in the DSAT Common Tools>Literature and Support Info>ProSoft directory of the Accelerator Toolkit CD. In addition to the configuration files, a (.acd) Logix program is required to manipulate the Modbus data written to the L63 controller tags. Refer to page 31 for details on how to download the Logix program.

IMPORTANT The.acd Logix program was downloaded on page 31 in the Configuring the Logix Controller section. You must download the Logix program to the ControlLogix L63 controller before you configure the Prosoft Modbus module.

TIP For technical support on the Prosoft MVI56-MNET module, email support@prosoft-technology.com or call the technical support number 1 + (661) 716-5100 that is available at http://www.prosoft-technology.com/

Follow these steps to download the WATTCP.CFG and MNET.CFG configuration files from the DataSite Accelerator Toolkit CD to the ProSoft Modbus module.

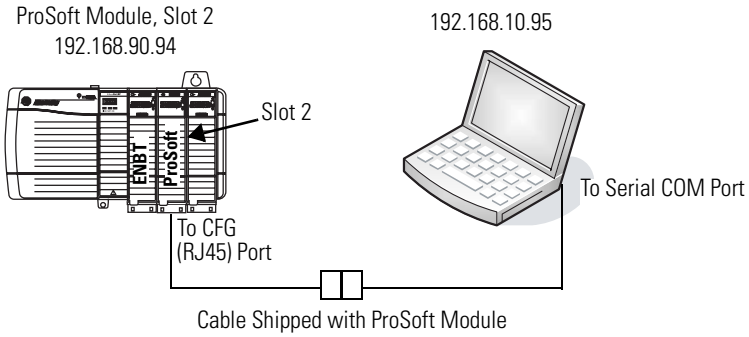
1. On the toolkit CD, choose DataSite to ControlLogix Master>ProSoft Interface Module Files, then copy the files MNET.CFG and WATTCP.CFG to your desktop.



2. Install the ProSoft Modbus module into slot 2 of the Logic chassis. Slot 2 is used in this quick start. If you change the slot number, then you must modify the .acd Logix program.

3. Apply power to the chassis.

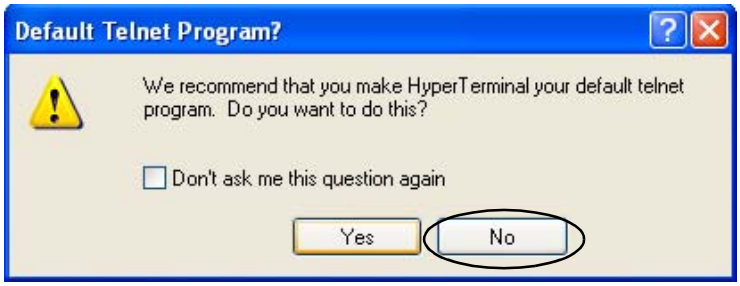
4. Connect the serial cable that ships with the ProSoft module between the serial port on your computer and the (RJ45) CFG port on the ProSoft module.



TIP Disconnect the serial cable that you previously used to connect your computer to the DataSite unit.

5. Choose Start>Programs>Accessories>Communications>HyperTerminal to open the hyper terminal on your desktop.

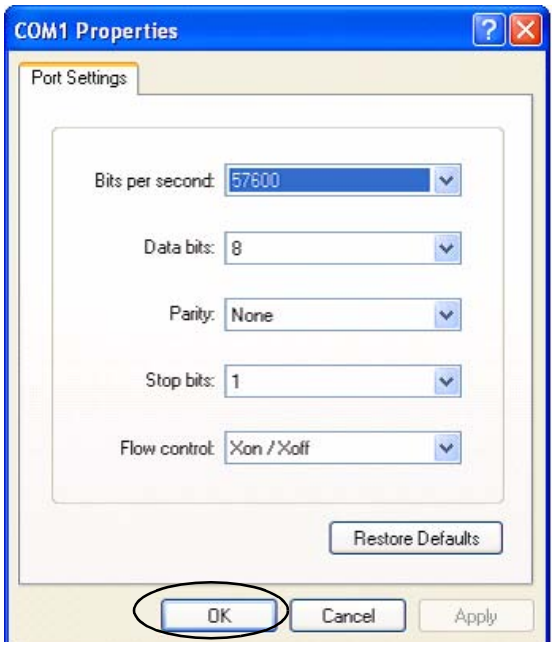
6. Click No if you see this dialog box.



7. Enter a name for the new connection and click OK.

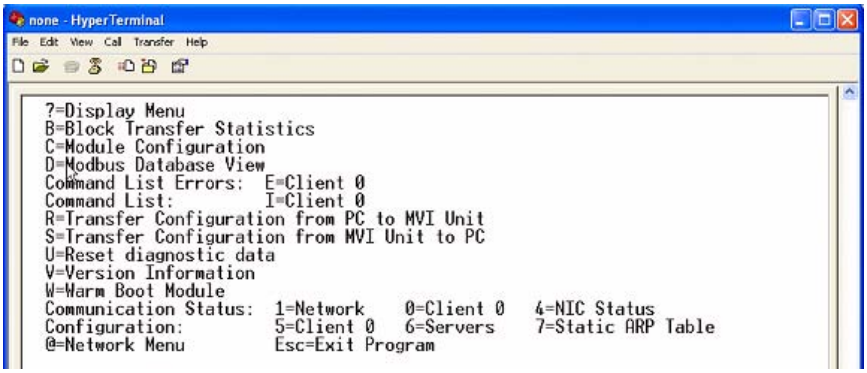
8. Select the COM port used by your computer and click OK.
This example uses COM1.

9. Set the COM1 port settings as shown and click OK.



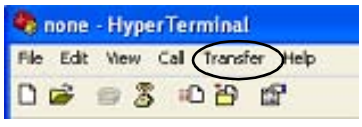
10. Press **Shift+?** to display the MVI56-MNET menu.

11. Press **R**, then press **Y** to transfer the MNET.CFG file.



TIP After pressing **Y**, you have limited time to browse for the file before a timeout occurs.

12. From the Transfer menu, choose Send File.



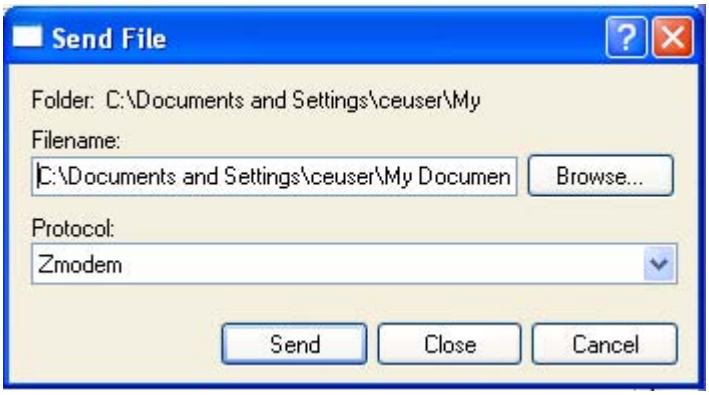
13. From the Send File dialog box:

a. Click Browse to locate MNET.CFG, then click Open.

b. Select Zmodem from the Protocol list.

c. Press Send.

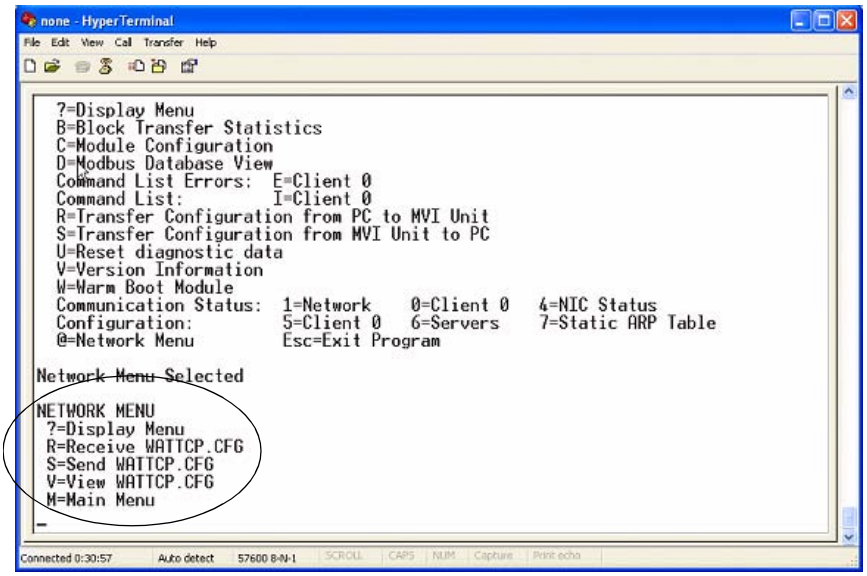
A progress bar shows the status of the file transfer.



14. Press **Shift+?** to return to the main menu.

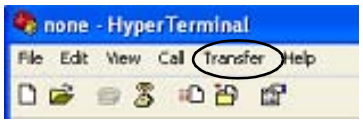
15. Press **Shift+@**, then **Shift+?** to display the Network menu.

16. Press **R**, then **Y** to transfer WATTCP.CFG.



TIP After pressing **Y**, you have limited time to browse for the file before a timeout occurs.

17. From the Transfer menu, choose Send File.



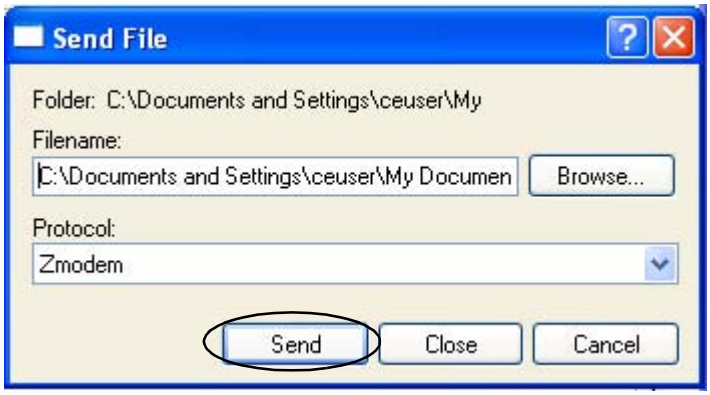
18. From the Send File dialog box:

a. Click Browse to locate WATTCP.CFG, then click Open.

b. Select Zmodem from the Protocol list.

c. Press Send.

A progress bar shows the status of the transfer.



19. Press **Shift+?** to display the Network menu; then press **M** followed by **Shift+?** to return the main menu.

The ProSoft Modbus module is now configured.

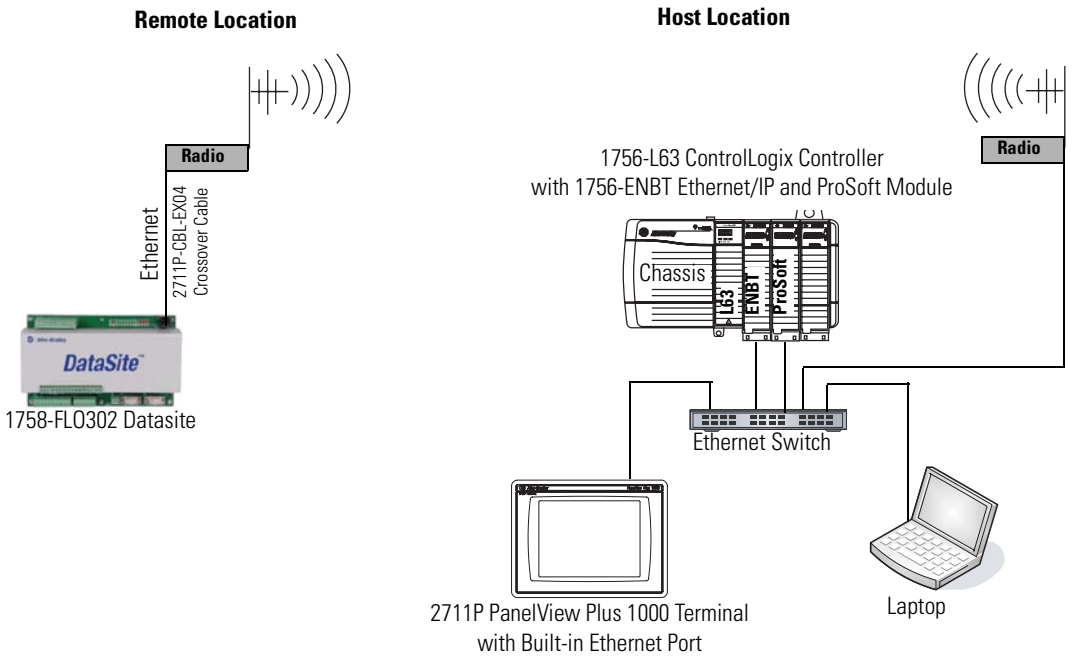
20. Close the HyperTerminal dialog box.

21. Cycle power to the ProSoft module by pulling it from the chassis and re-inserting it.

This registers the new IP address.

Connecting All Devices

At this point all devices should be connected as shown in the illustration. Modify any previous connections, if necessary, to match the illustration.



All devices connect to Ethernet switch using Ethernet straight-through cables.

You must use an Ethernet crossover cable to connect the DataSite unit to the radio. The cable between the Ethernet switch and the ProSoft MVI56-MNET Modbus module must connect to the RJ45 Ethernet Port; not the CFG port.

The configuration of the Ethernet radio modems is not covered in this quick start. Refer to your radio user manual for instructions on how to configure and assign IP addresses to both radios. After wiring is complete, apply power to all devices.

TIP Radios are optional. If your application does not require radios simply replace the radios with an Ethernet straight-through cable connecting the DataSite to the Ethernet switch.

DataSite Workbench and Screen Builder Integration

Introduction

In this chapter, you download the DataSite Workbench sample user program and DataSite Screen Builder sample web pages to the DataSite unit.

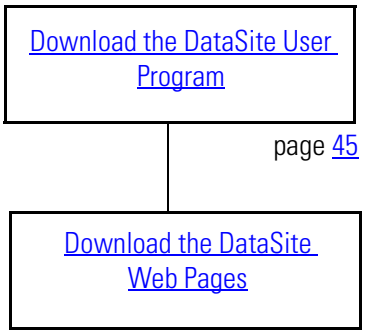
Before You Begin

- Complete your system hardware selection (Chapter 1).
- Complete your system layout and wiring (Chapter 2).
- Complete the DataSite and Logix Integration (Chapter 3).
- Verify that all devices are connected properly and are powered up.

What You Need

- Personal computer
- All system devices properly connected and powered up
- Hardware: DataSite unit
- Software:
  - DataSite Workbench 5.2
  - DataSite Screen Builder 1.3
  - DataSite Accelerator Toolkit CD, publication IASIMP-SP011

Follow These Steps



Download the DataSite User Program

Follow these steps to compile and download the sample DataSite user program.

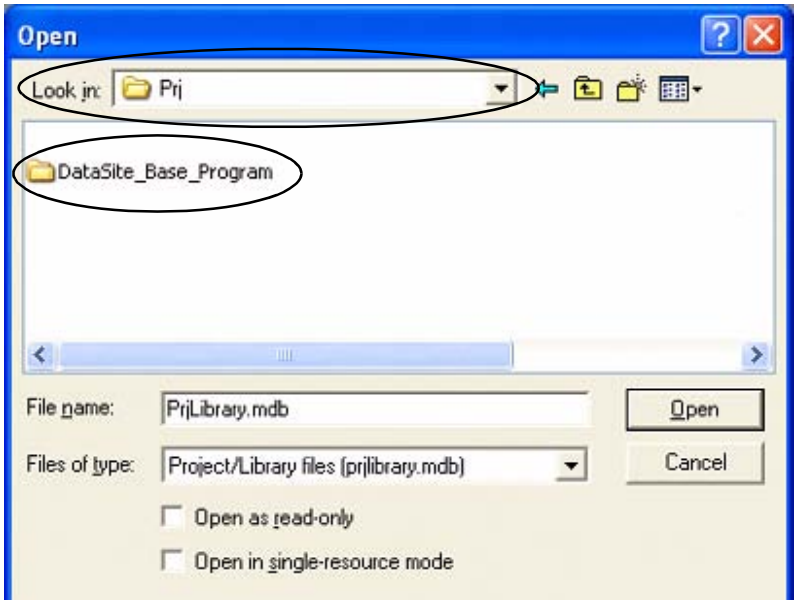
1. Launch DataSite Workbench 5.2 software.

2. From the Project/Library menu, choose Open.

3. Select the Prj folder from the Look in: pull-down list.

4. Double-click the folder DataSite_Base_Program.

   If you don't see this dialog box, refer to the tip.

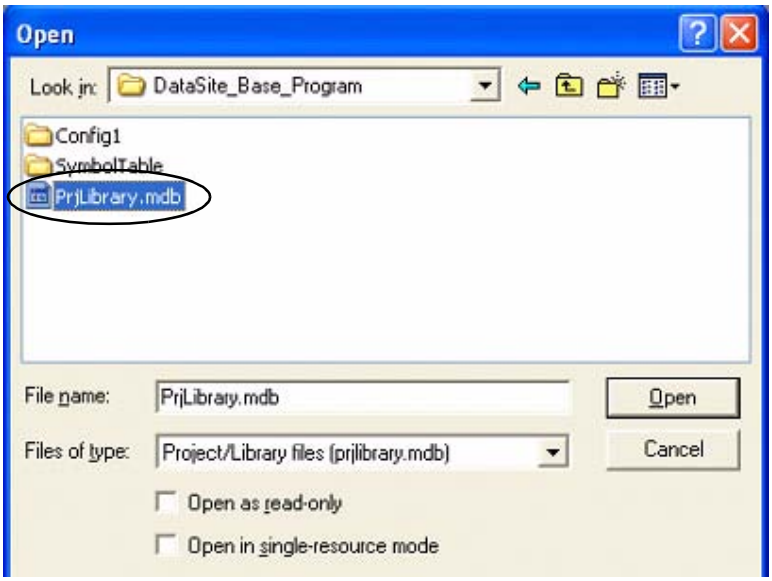


TIP

If you don't see the DataSite_Base_Program folder in step 4, follow these steps.

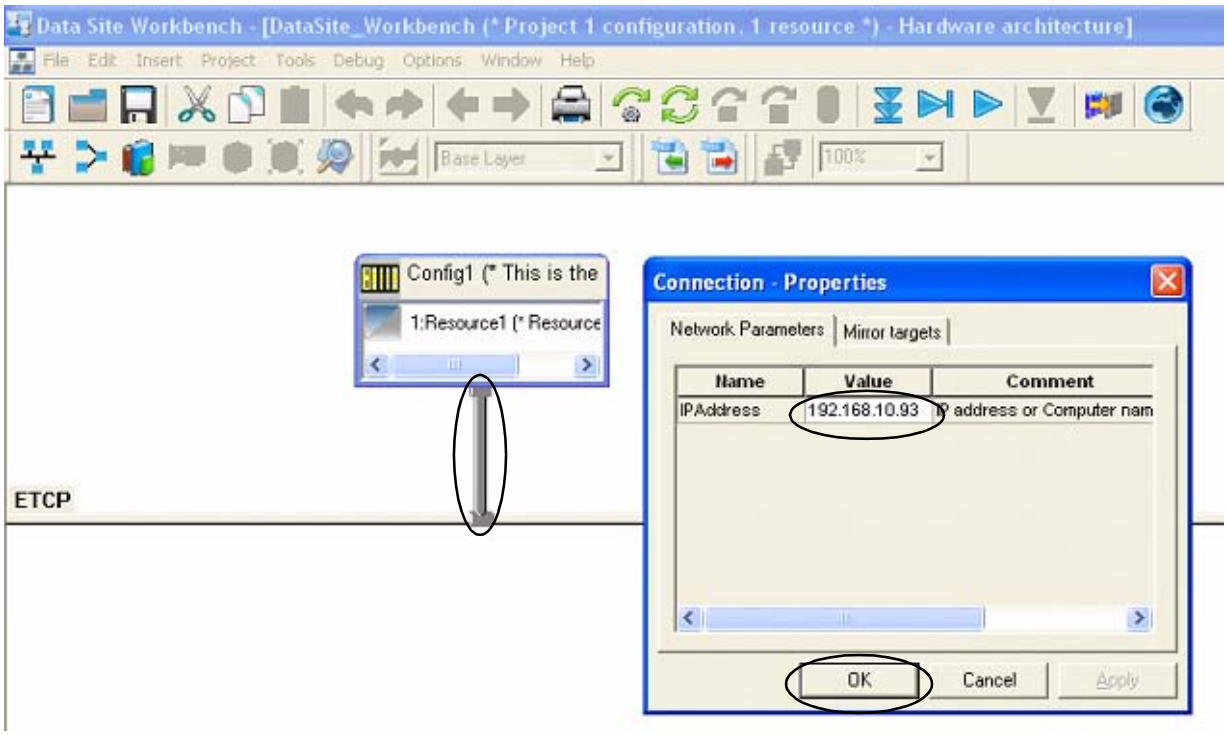
- From the DataSite Accelerator Toolkit CD, browse to DSAT Common Tools>DataSite User Programs.
- Copy and paste the DataSite_Base_Program folder to the DataSite Workbench default project directory: C:\Documents and Settings\All Users\Documents\DataSite\Projects\Workbench 5.2\prj **or** C:\Documents and Settings\All Users\Shared Documents\DataSite\Projects\Workbench 5.2\prj
- Now return to step 2 to open the project.

5. Double-click PrjLibary.mdb to open the user program.



6. Click the Hardware Architecture button.

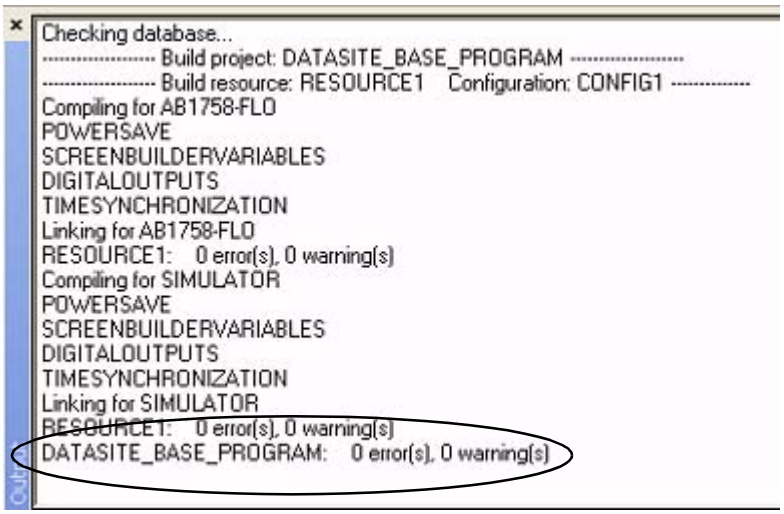
7. Double-click the Vertical Network Bar, then enter the IP address of the DataSite unit and click OK.



8. Click the Link Architecture button.

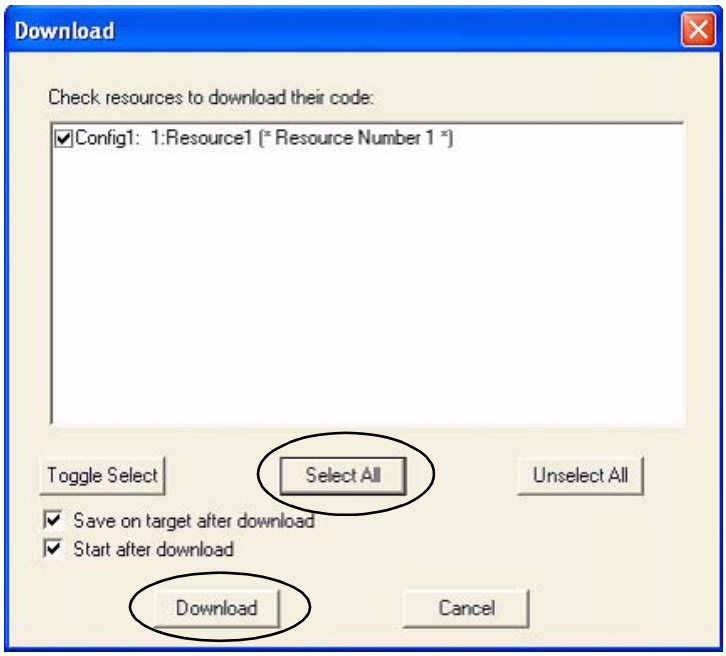
9. Click Rebuild Project/Library.

10. Verify there are no errors.

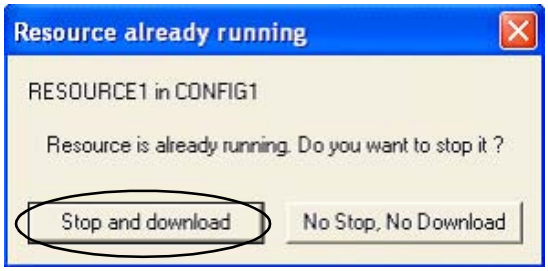


11. Click the Download button to download the program to the DataSite unit.

12. Click Select All, then click Download.



TIP If the DataSite unit is running a program, you will see a message similar to the one below. Click Stop and Download to complete the Download process.



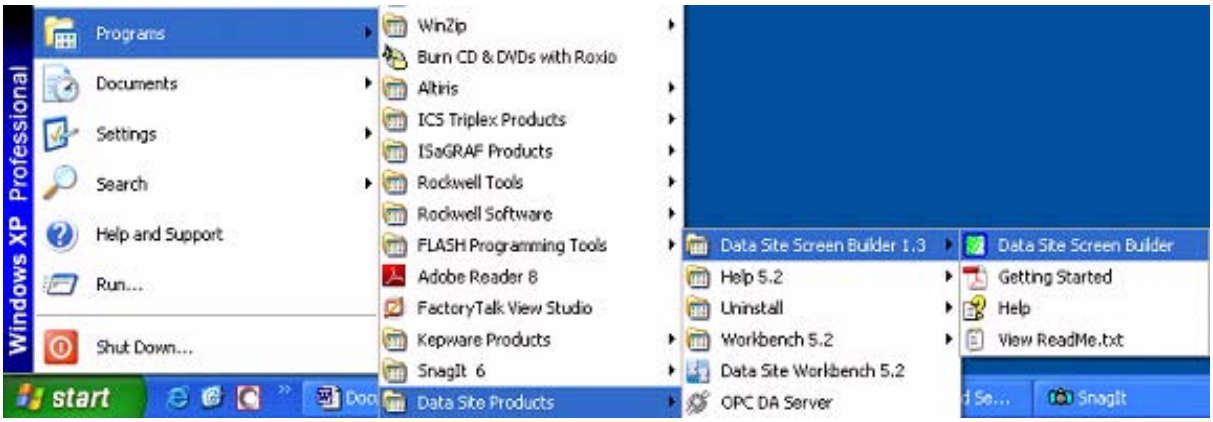
The DataSite Workbench user program has been downloaded and is running on the DataSite unit.

Download the DataSite Web Pages

You will now compile and download the sample DataSite web pages to the DataSite unit.

Follow these steps to download the HiBeam web pages.

1. Launch the DataSite Screen Builder 1.3 software.

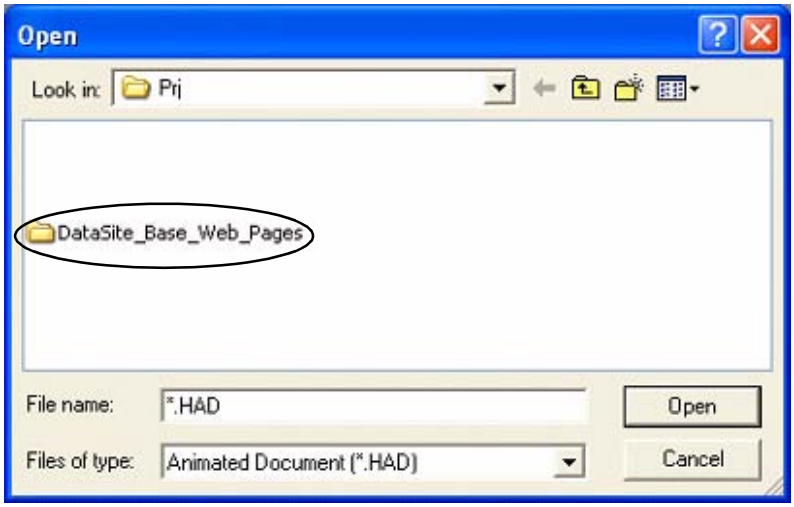


2. From the File menu, choose Open.

3. Select the Prj folder from the Look in: pull-down list.

4. Double-click the folder DataSite_Base_Web_Pages.

   If you don't see this dialog box, refer to the tip.

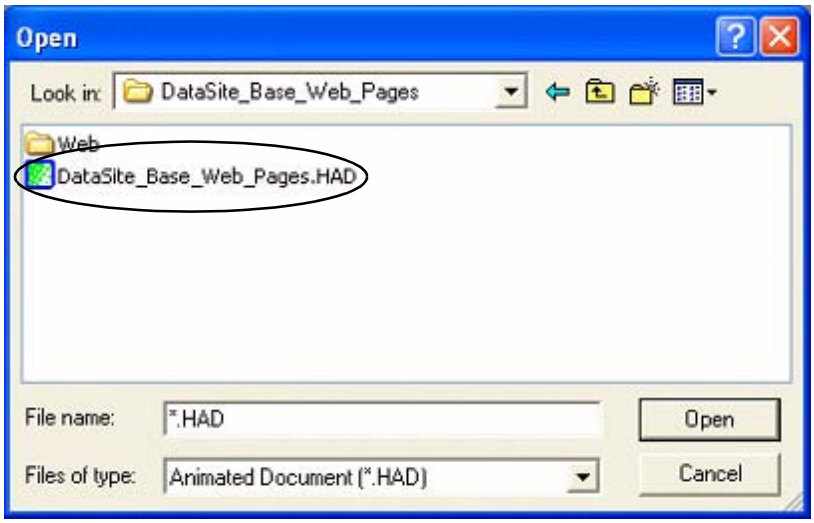


TIP

If you don't see the DataSite_Base_Web_Pages folder in step 4, follow these steps.

- From the DataSite Accelerator Toolkit CD, browse to DSAT Common Tools>DataSite Web Pages.
- Copy and paste the DataSite_Base_Web_Pages folder to the DataSite ScreenBuilder default project directory: C:\Documents and Settings\All Users\Documents\DataSite\Projects\ScreenBuilder 1.3\prj **or** C:\Documents and Settings\All Users\Shared Documents\DataSite\Projects\ScreenBuilder 1.3\prj
- Now return to step 2 to open the project.

5. Double-click DataSite_Base_Web_Pages.HAD to open the web page program.



6. From the toolbar, choose Project>Settings.

7. On the Project tab, click the Path browse button.

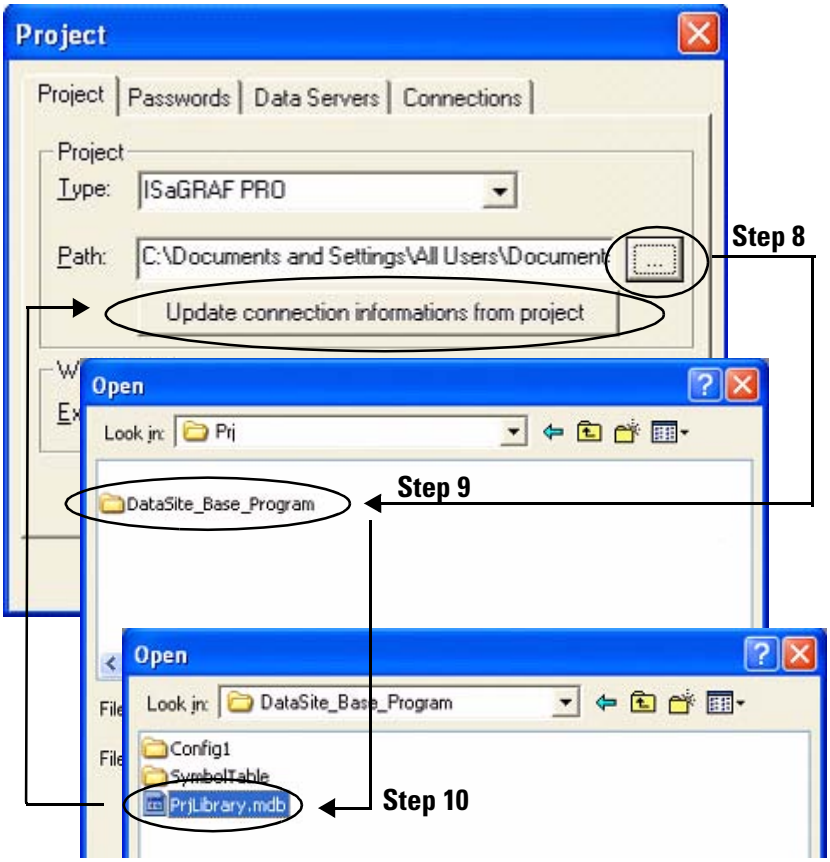
8. Browse to the DataSite Workbench default project directory.

Default DataSite Workbench project directory:
C:\Documents and Settings\All Users\Documents\DataSite\Projects\Workbench 5.2\Prj **or**
C:\Documents and Settings\All Users\Shared Documents\DataSite\Projects\Workbench 5.2\Prj

9. Double-click the DataSite_Base_Program folder.

10. Double-click PrjLibrary.mdb, then click Update connection informations from project button.

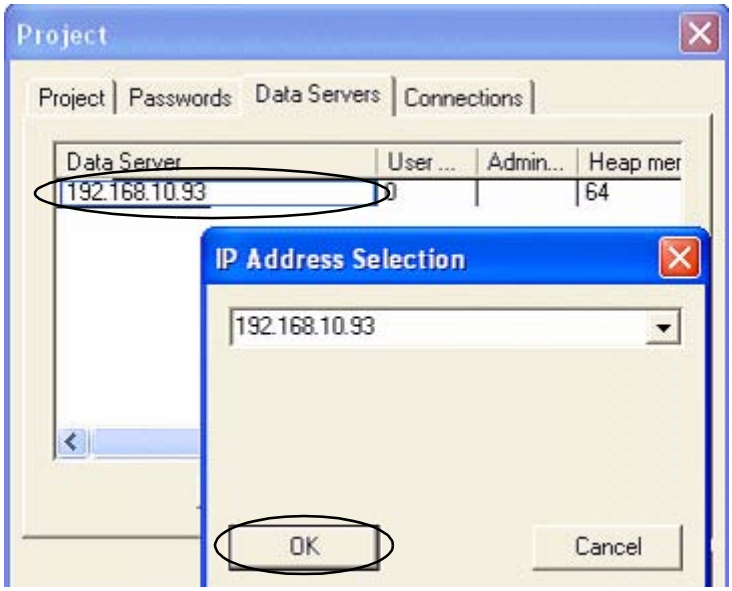
This allows the DataSite web pages to access variables created in the sample DataSite Workbench user program.



11. Click the Data Servers tab.

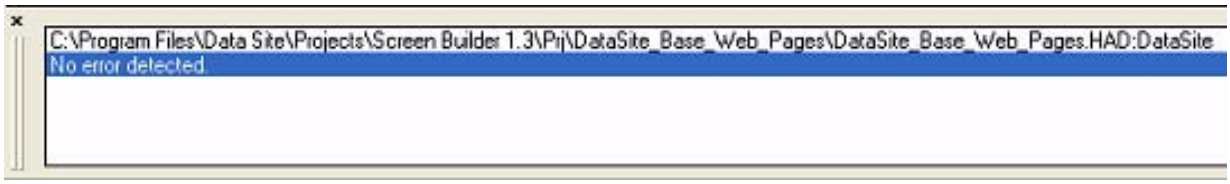
a. Double-click the row to select the IP address of the DataSite unit.

b. Click OK.



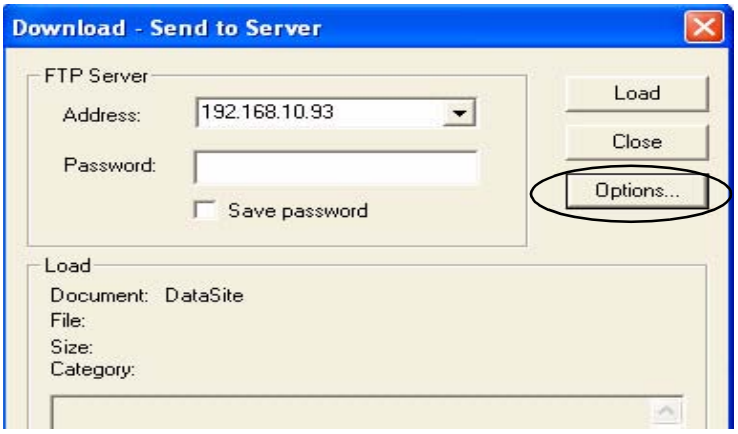
12. Click the Compile button.

13. Verify there are no errors.

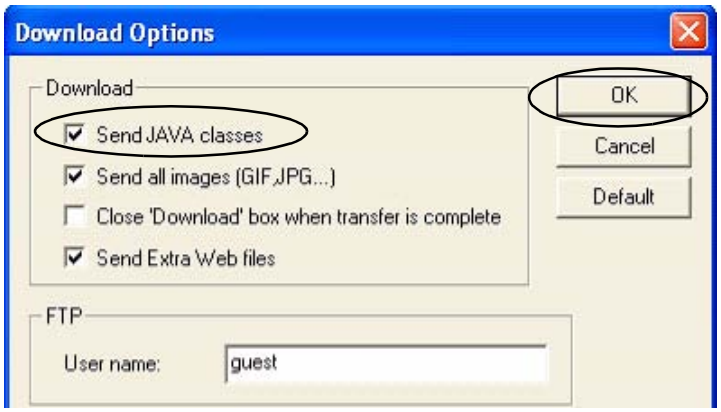


14. Click the Download button.

15. Click Options.



16. Check Send Java Classes and click OK.



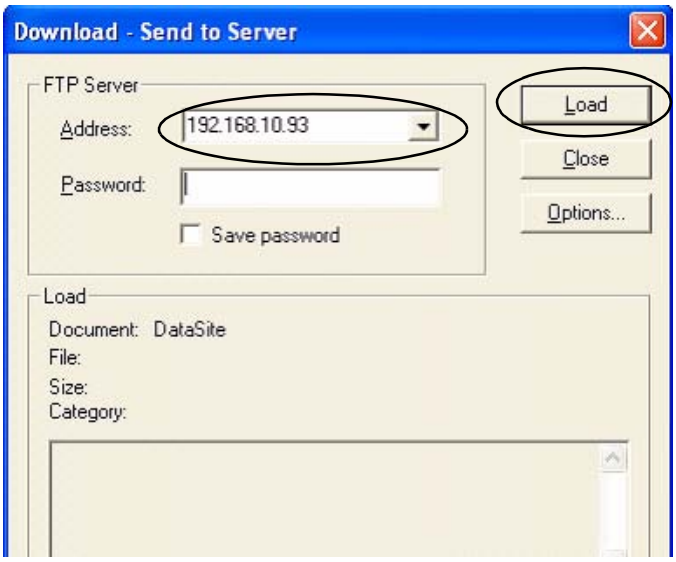
TIP Checking the Send JAVA classes box is only required the first time you download a project. Subsequent downloads do not require you to check this box.

17. Load the web pages.

a. Select the IP address of the DataSite unit.

b. Click the Load button. Wait two to three minutes to complete the download process.

c. Click Close when you see the message Connection OK.



The DataSite web pages have been successfully downloaded to the DataSite unit. Refer to Chapter 6 for system validation and an overview of the DataSite web pages.

FactoryTalk View Integration

Introduction

In this chapter, you download the FactoryTalk View ME project to a PanelView Plus 1000 terminal connected to a ControlLogix 1756-L63 controller.

Before You Begin

- Complete your system hardware selection (Chapter 1).
- Complete your system layout and wiring (Chapter 2).
- Complete the DataSite and Logix Integration (Chapter 3).
- Complete the DataSite Workbench and Screen Builder integration (Chapter 4).
- Verify that all devices are connected properly and are powered up as shown in Connecting All Devices on page 42.

What You Need

- Personal computer
- PanelView Plus 1000 terminal with Version 5.0 firmware
- Software:
  - FactoryTalk View ME software
  - DataSite Accelerator Toolkit CD

Follow These Steps

Load and Restore FactoryTalk View ME Application
page 54

Configure Local Communication
page 56

Configure Target Communication
page 59

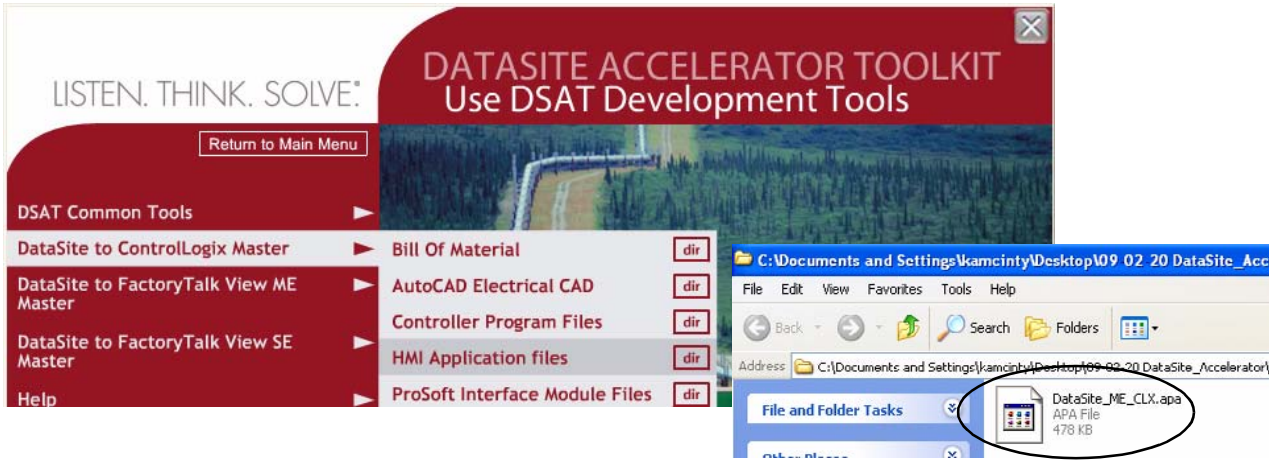
Download Project to PanelView Plus Terminal
page 61

Run the Project on PanelView Plus Terminal
page 64

Load and Restore FactoryTalk View ME Application

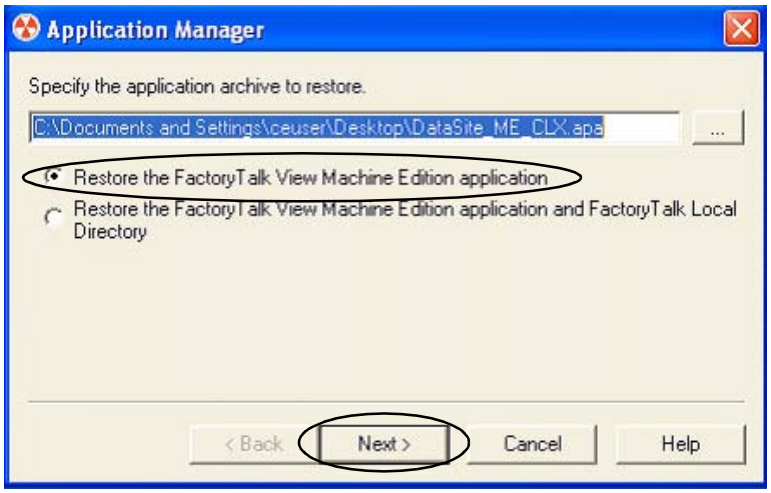
Follow these steps to load and restore the FactoryTalk View Machine Edition (ME) application from the DataSite Accelerator Toolkit CD using the Application Manager.

1. On the toolkit CD, choose DataSite to ControlLogix Master>HMI Application Files, then double-click the DataSite_ME_CLX.apa application file.



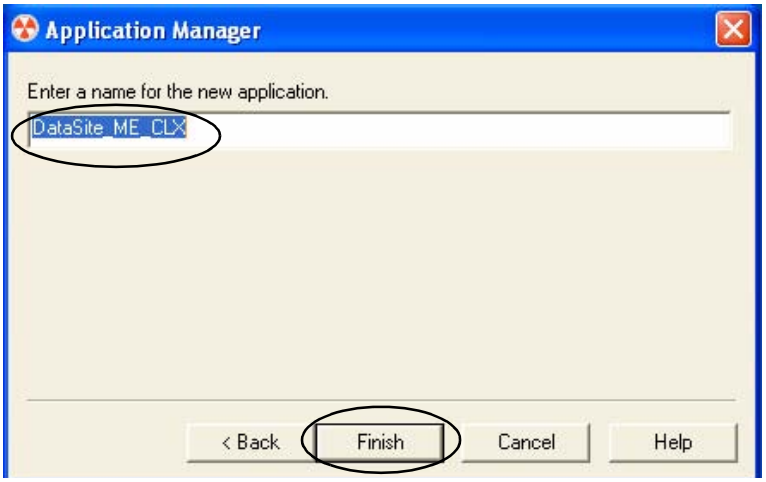
The Application Manager window opens.

2. Select Restore the FactoryTalk View Machine Edition application and click Next.



3. Type DataSite_ME_CLX as the application name and click Finish.

   The Application Manager closes after it restores the application.



Configure Local Communication

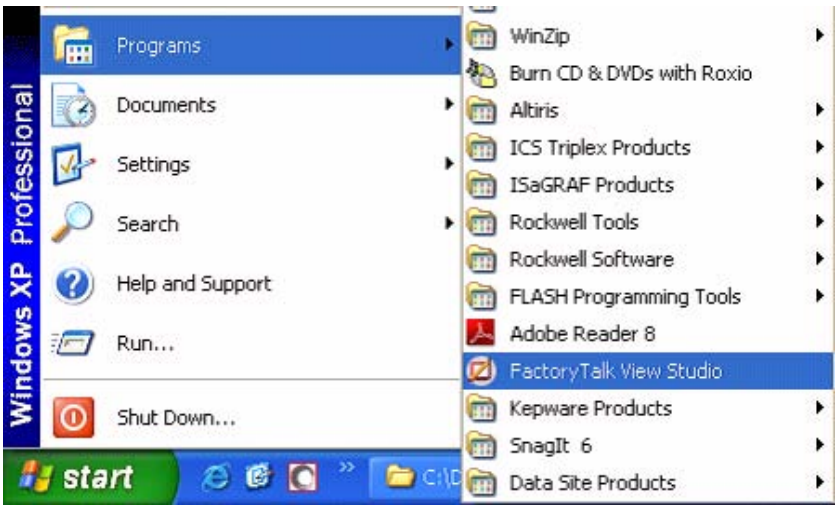
The Design (Local) tab in Communications Setup reflects the view of the topology from the RSLinx Enterprise server on the development computer. In this example, the development computer is communicating to a ControlLogix L63 controller via Ethernet communication.

Follow these steps to configure local communication.

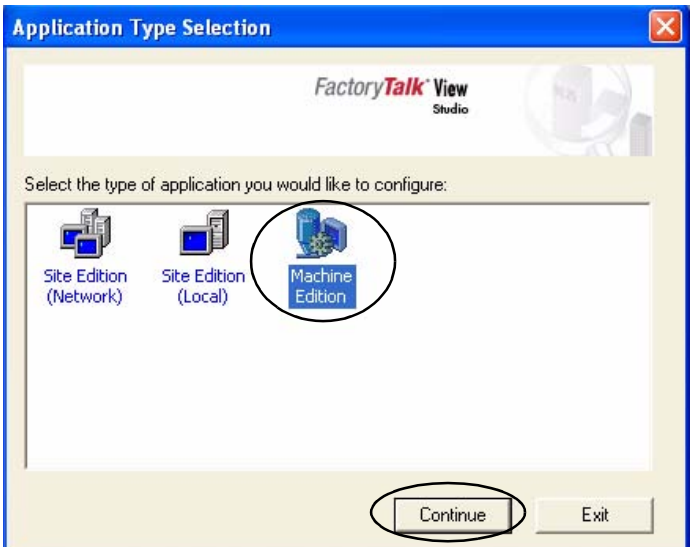
1. Apply power to your ControlLogix L63 controller.

2. Verify all cable connections as shown in the wiring diagram on page 42.

3. Launch FactoryTalk View Studio software.

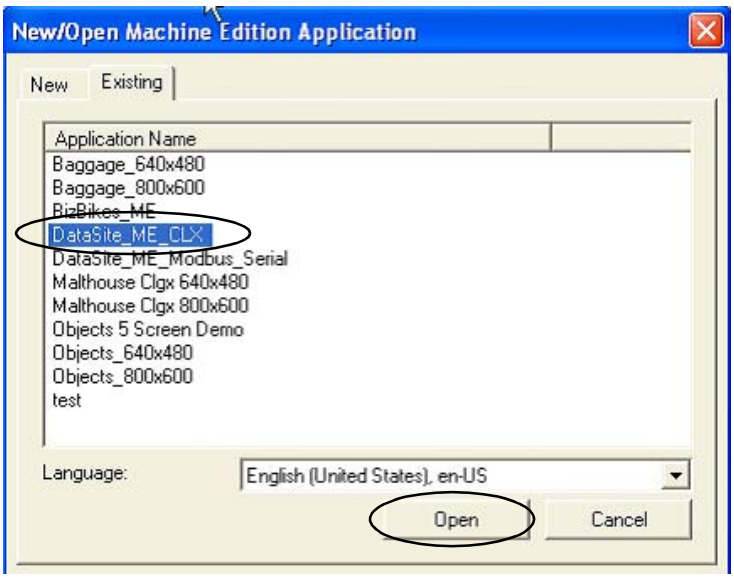


If you see this dialog box, select Machine Edition and click Continue.



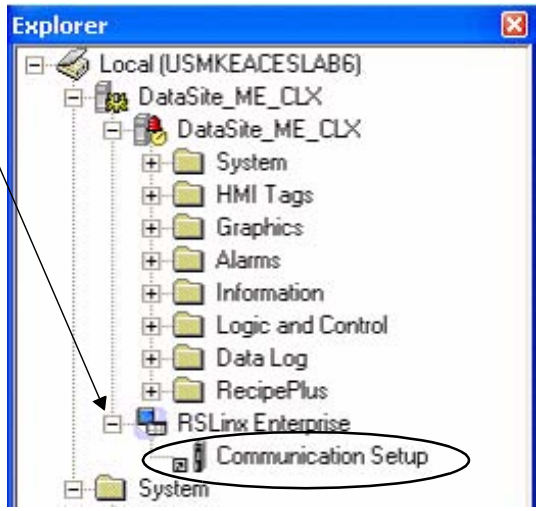
4. Select DataSite_ME_CLX from the Existing tab and click Open.

The Machine Edition application opens.

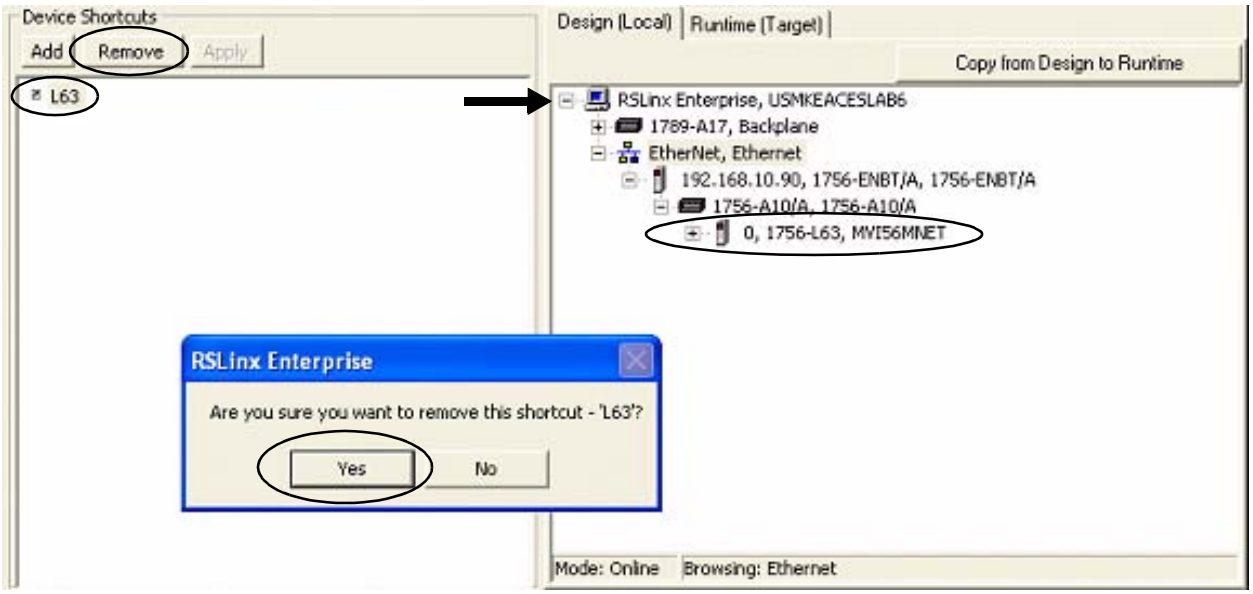


5. Expand RSLinx Enterprise in the Explorer window.

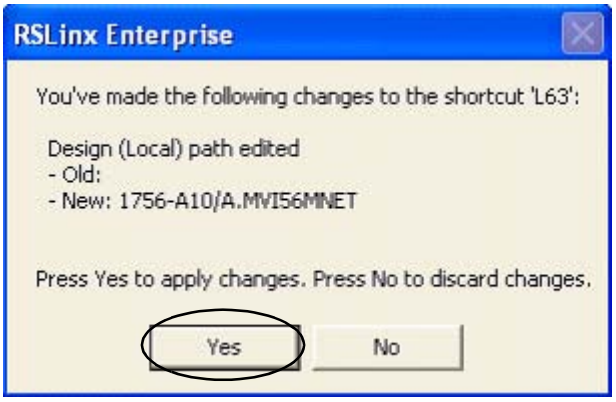
6. Double-click Communication Setup.



The Communication Setup window opens.



7. Select L63 under Device Shortcuts.
8. Click Remove then click Yes to verify the removal of the shortcut.
9. Expand the RSLinx Enterprise tree to access your 1756-L63 controller in slot 0 (0, 1756-L63).
10. Click Add under Device Shortcuts.
11. Enter L63 as the shortcut name and press Enter.
12. Select your Logix controller 0, 1756-L63.
13. Click Apply under Device Shortcuts.
14. Click Yes to apply changes.

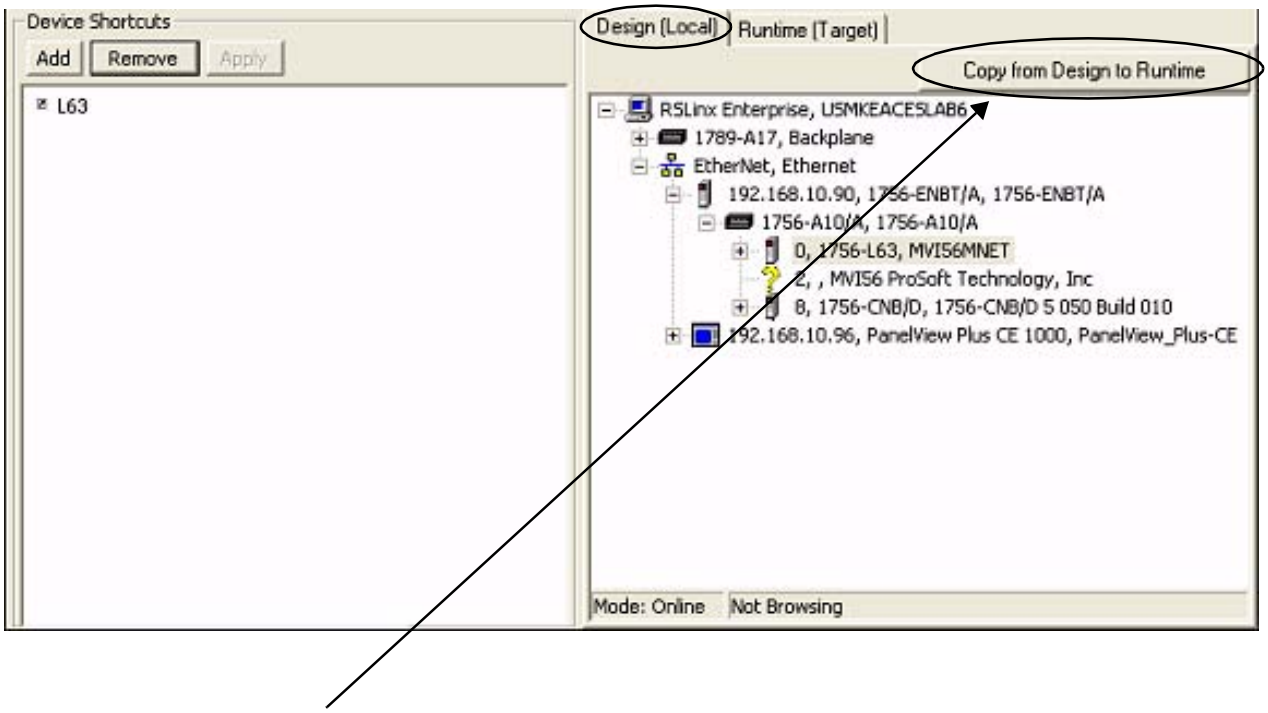


Configure Target Communication

The Runtime (Target) tab displays the offline configuration from the perspective of the device that is running the application and comprises the topology that is loaded in the PanelView Plus terminal. In this example, the PanelView Plus terminal communicates to the same ControlLogix L63 controller via Ethernet communication.

Follow these steps to configure target communication.

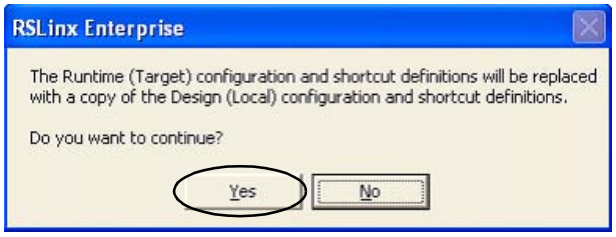
1. Select the Design (Local) tab in the Communication Setup window.



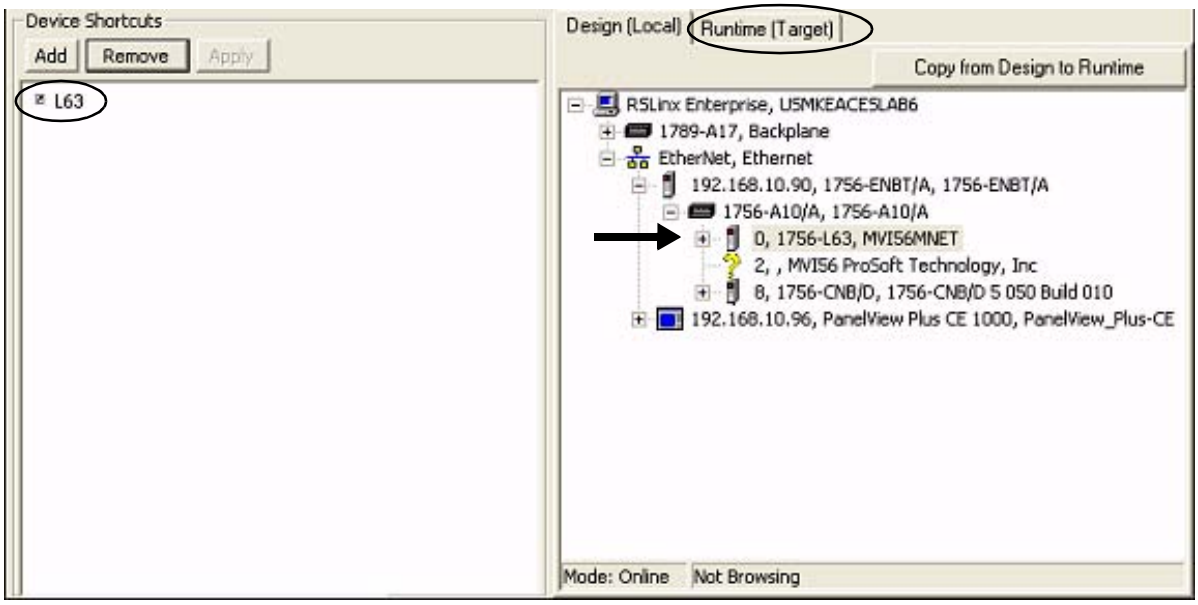
2. Click Copy from Design to Runtime.

   A dialog box prompts you to confirm the operation.

3. Click Yes.



4. Select the Runtime (Target) tab and expand the RSLinx Enterprise tree.



5. Click the L63 shortcut to verify that your controller and shortcut name are both highlighted.

In this example, 1756-L63 is the controller in slot 0 and L63 is the shortcut name.

6. Click OK at the bottom right corner of the window.

Download Project to PanelView Plus Terminal

Follow these steps to create a FactoryTalk View ME runtime file and download it to the PanelView Plus terminal.

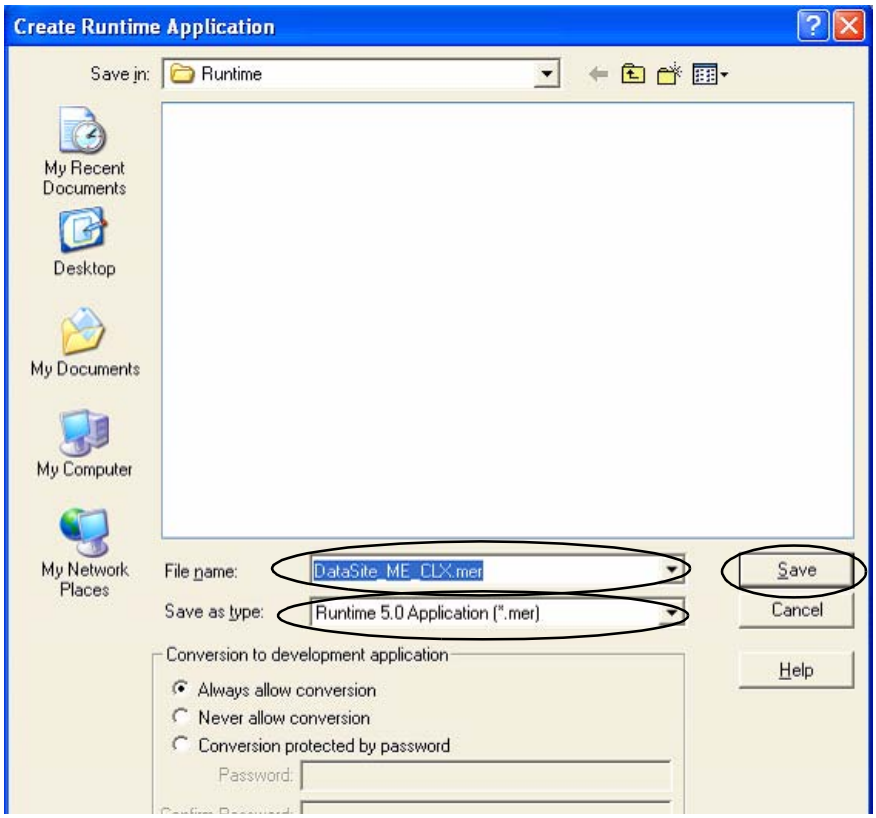
1. Choose Create Runtime Application from the Application menu.

   The Create Runtime Application dialog box opens.

2. Select Runtime 5.0 Application (*.mer) from the Save as type list.

3. Type DataSite_ME_CLX.mer in the File name field.

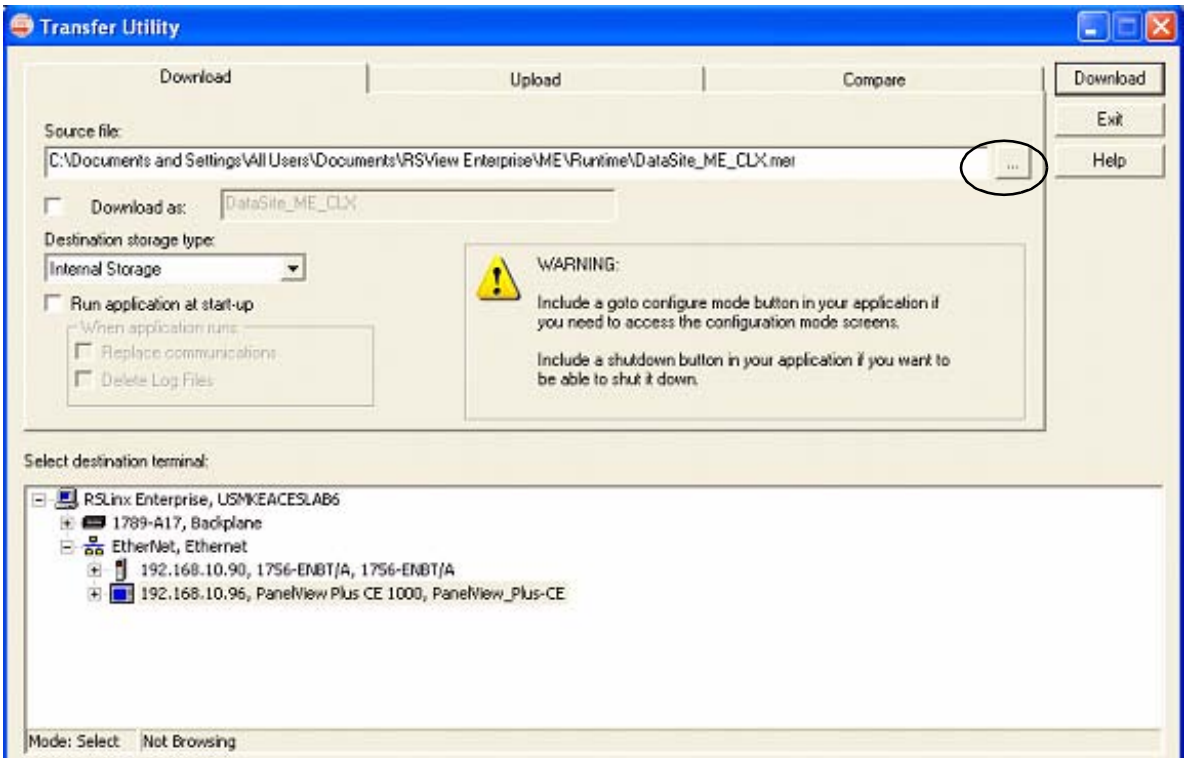
4. Click Save and wait for the progress bar to complete.



5. Click the File Transfer Utility button on the toolbar.

The Transfer Utility opens.

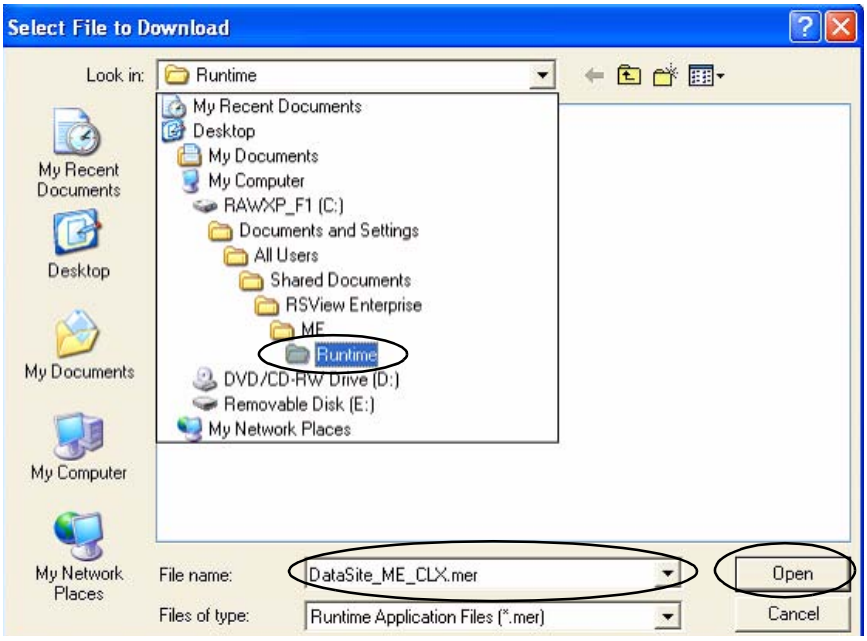
6. Click the Browse ... button to locate the runtime file.



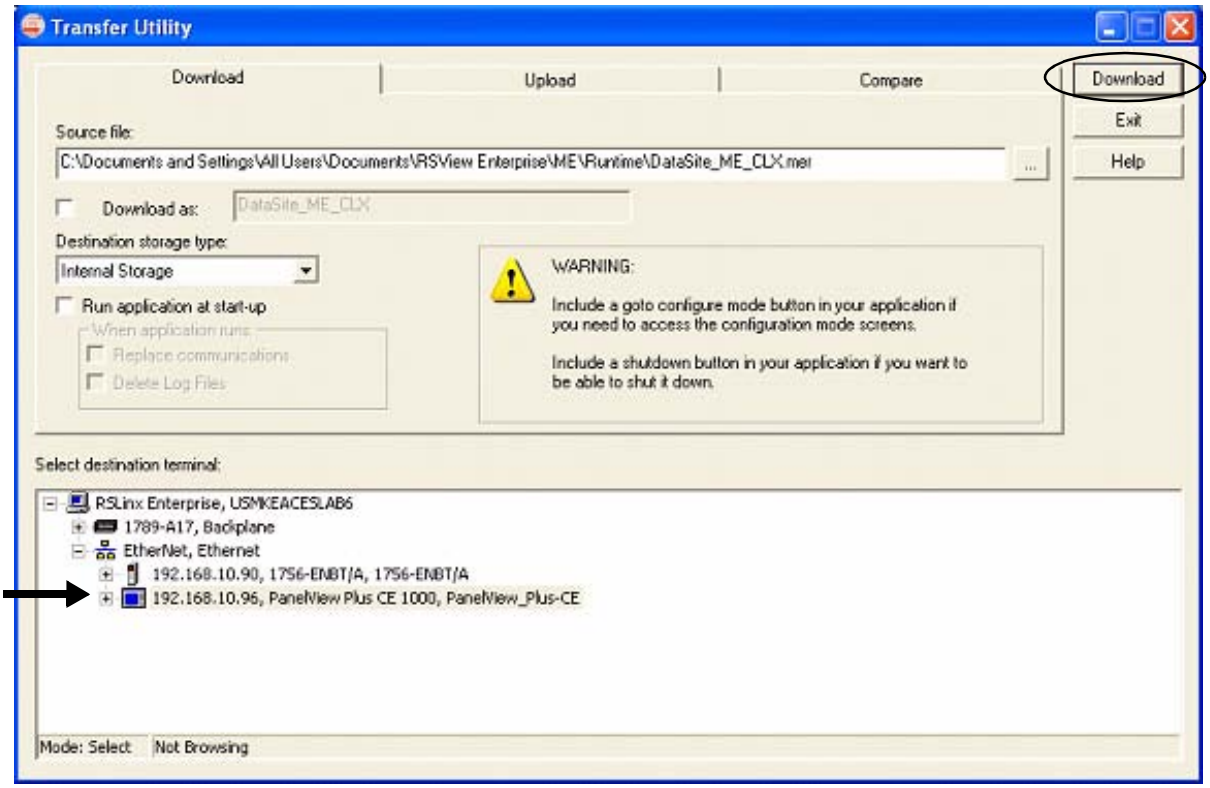
7. Select DataSite_ME_CLX.mer from the Runtime folder.

Default Runtime folder path:
C:\Documents and Settings\All Users\Documents\RSView Enterprise\ME\Runtime

8. Click Open.

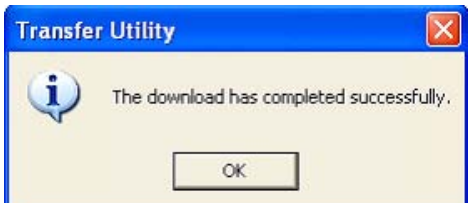


9. Browse and select your PanelView Plus terminal, then click Download.



TIP If the PanelView Plus terminal has an existing .mer file with the same name, click Yes to overwrite the file.

10. Click OK when the download completes successfully.



11. Click Exit to close the File Transfer Utility.

12. Choose Exit from the File menu to close the FactoryTalk View Studio software.

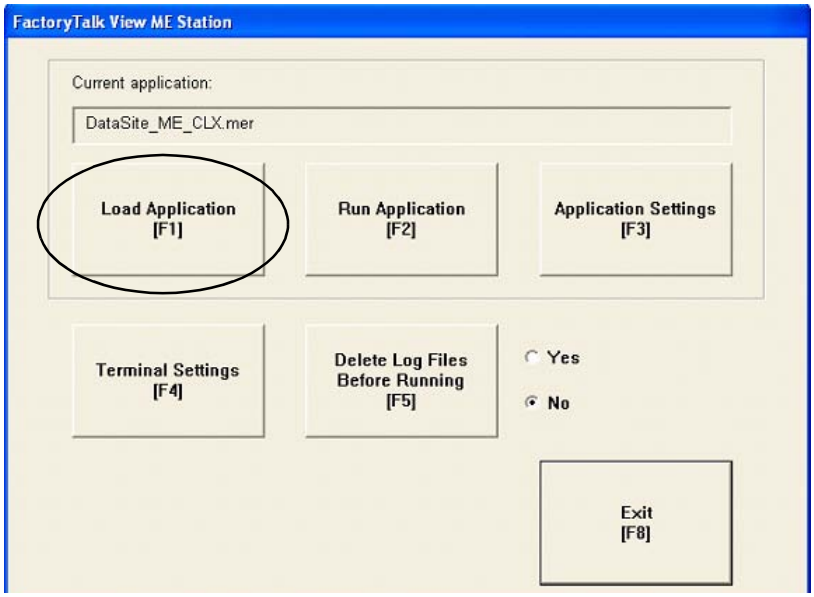
Run the Project on PanelView Plus Terminal

The (.mer) runtime file is now stored in the PanelView Plus terminal so you are ready to run the project on the terminal.

Follow these steps to run your project on the PanelView Plus terminal.

1. Verify that the PanelView Plus is connected as shown on page 42 and that it is receiving power.

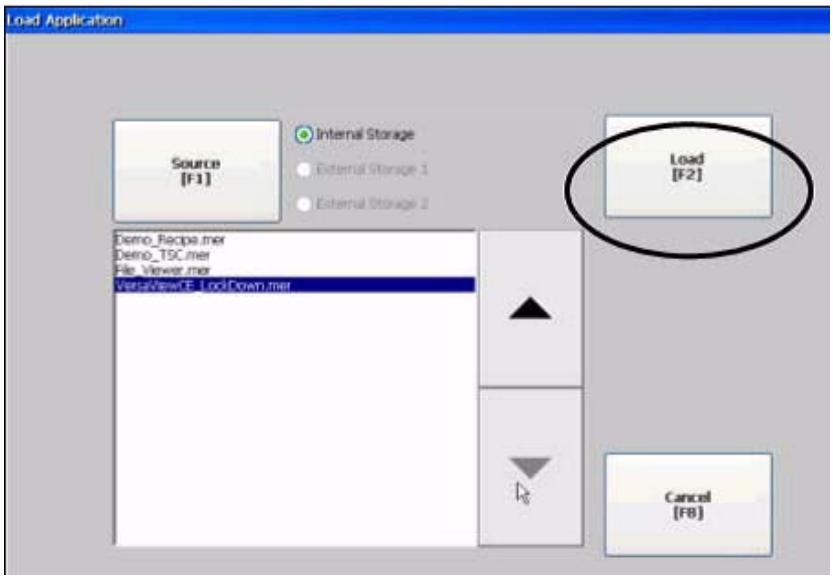
2. Press Load Application [F1] in the FactoryTalk View ME Station dialog box.



   The Load Application dialog box opens.

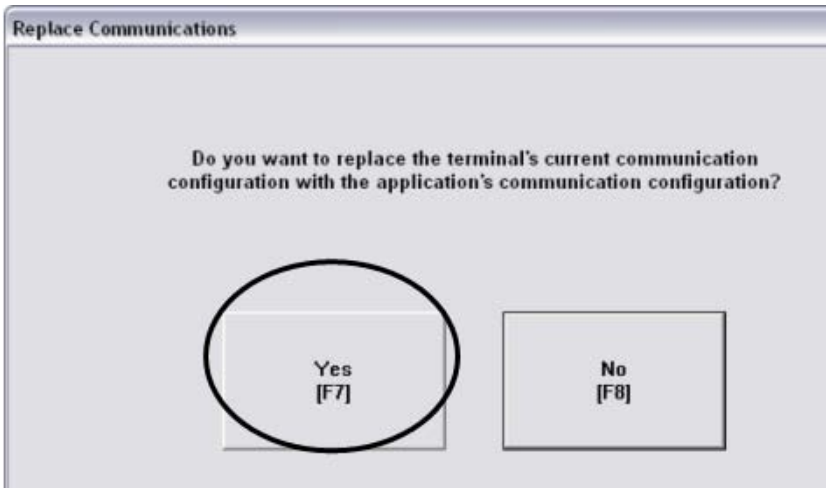
3. Use the up/down arrows to scroll through the list of applications and select DataSite_ME_CLX.mer.

4. Press Load [F2].



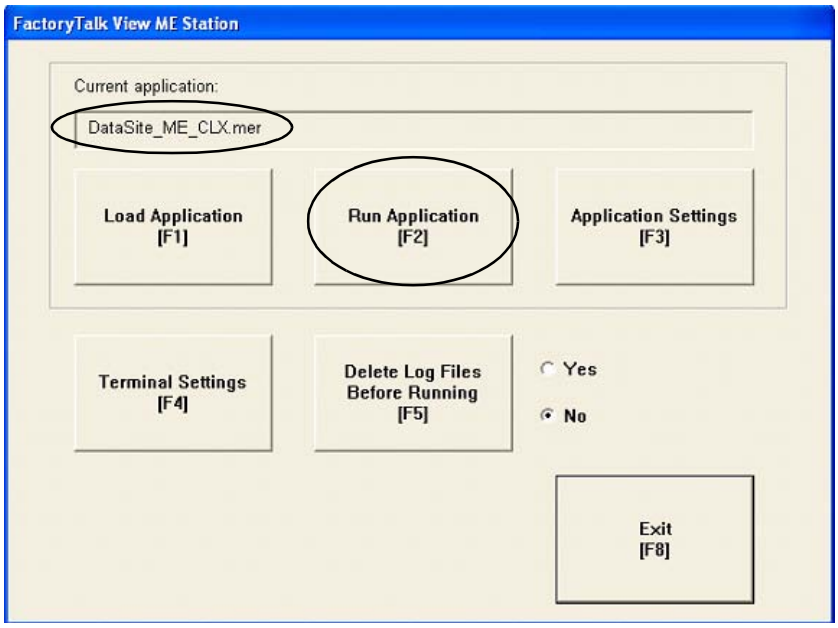
5. Press Yes [F7].

If you press No, the communication settings from the previously run project will be used.



6. Wait for the application to the load and verify that DataSite_ME_CLX.mer appears under Current application.

7. Press Run Application [F2].



The application builds and displays a DataSite screen on the PanelView Plus terminal.

Refer to Chapter 6 for system validation.

System Validation

Introduction

In this chapter, you validate the DataSite system by verifying that all AGA flow data can be seen on the PanelView Plus 1000 terminal and on the DataSite web pages.

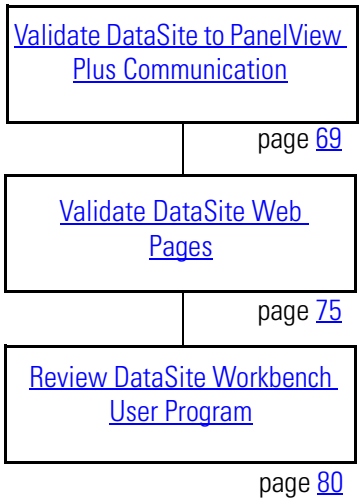
Before You Begin

- Complete your system hardware selection (Chapter 1).
- Complete your system layout and wiring (Chapter 2).
- Complete the DataSite and Logix Integration (Chapter 3).
- Complete the DataSite Workbench and Screen Builder integration (Chapter 4).
- Complete the FactoryTalk View integration (Chapter 5).
- Verify that all devices are connected properly and are powered up as shown in Connecting All Devices on page 42.

What You Need

- Personal computer
- All product hardware from the previous chapters
- Software:
  - DS Flo Config
  - DataSite Workbench
  - RSLogix 5000
  - Java Runtime Environment, Version 6 Update 7
  - DataSite Accelerator Toolkit CD, publication IASIMP-SP011

Follow These Steps



Validate DataSite to PanelView Plus Communication

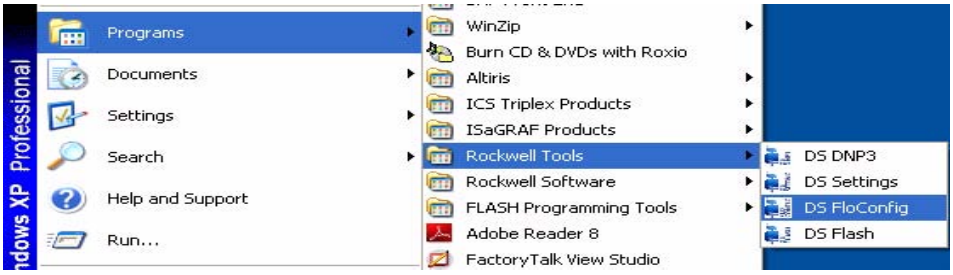
You are now ready to validate communication between the DataSite unit and the PanelView Plus terminal. Using the DS FloConfig software, you will simulate three process variables and validate that the calculated flow values display on the PanelView Plus terminal.

TIP To use actual process variables, wire temperature, pressure, and differential pressure transmitters to the DataSite analog inputs.

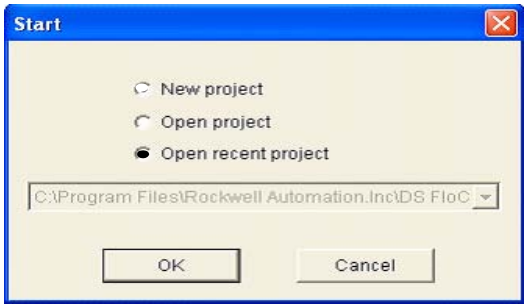
Follow these steps to perform the system validation.

1. Launch the DS FloConfig software.

   The path shown may be different on your computer depending on where the software is installed.



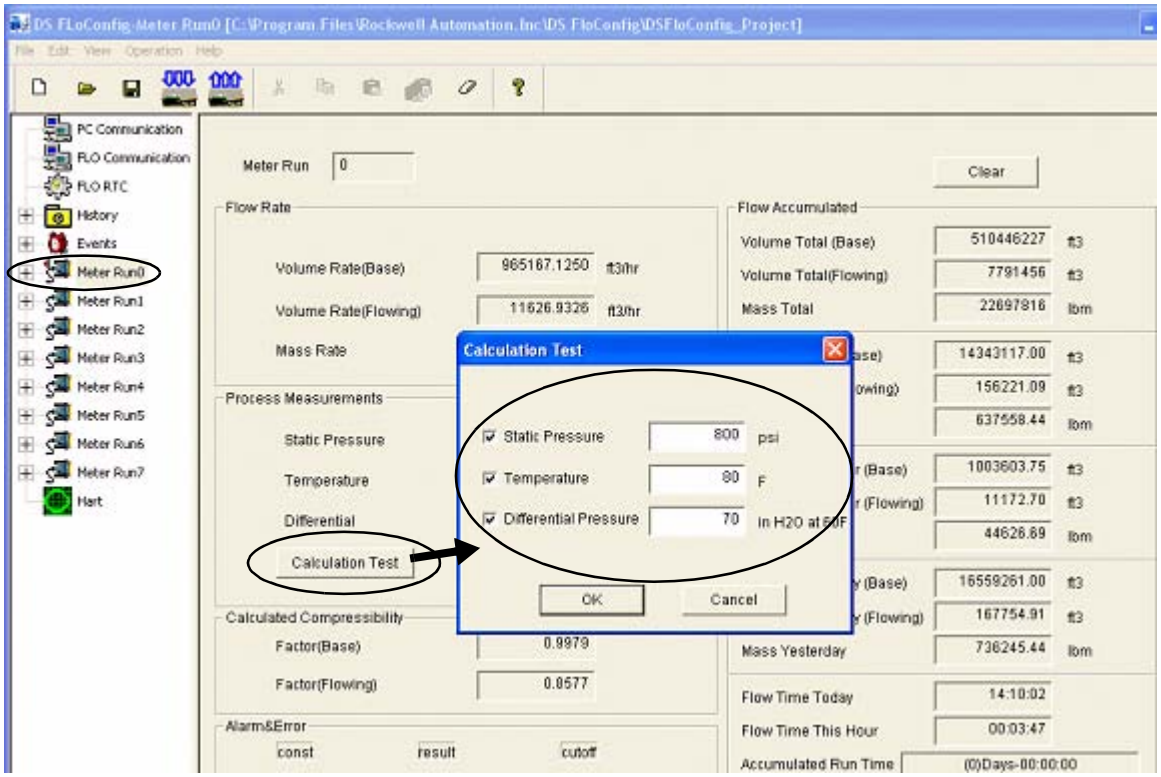
2. Select Open Recent Project and click OK.



   This DS FloConfig file was created in Chapter 1.

3. Select MeterRun0 on the left side of the dialog box.

4. Click Calculation Test and check all three boxes.
   a. Type 800 for Static Pressure.
   b. Type 80 for Temperature.
   c. Type 70 for Differential Pressure.
   d. Click OK.

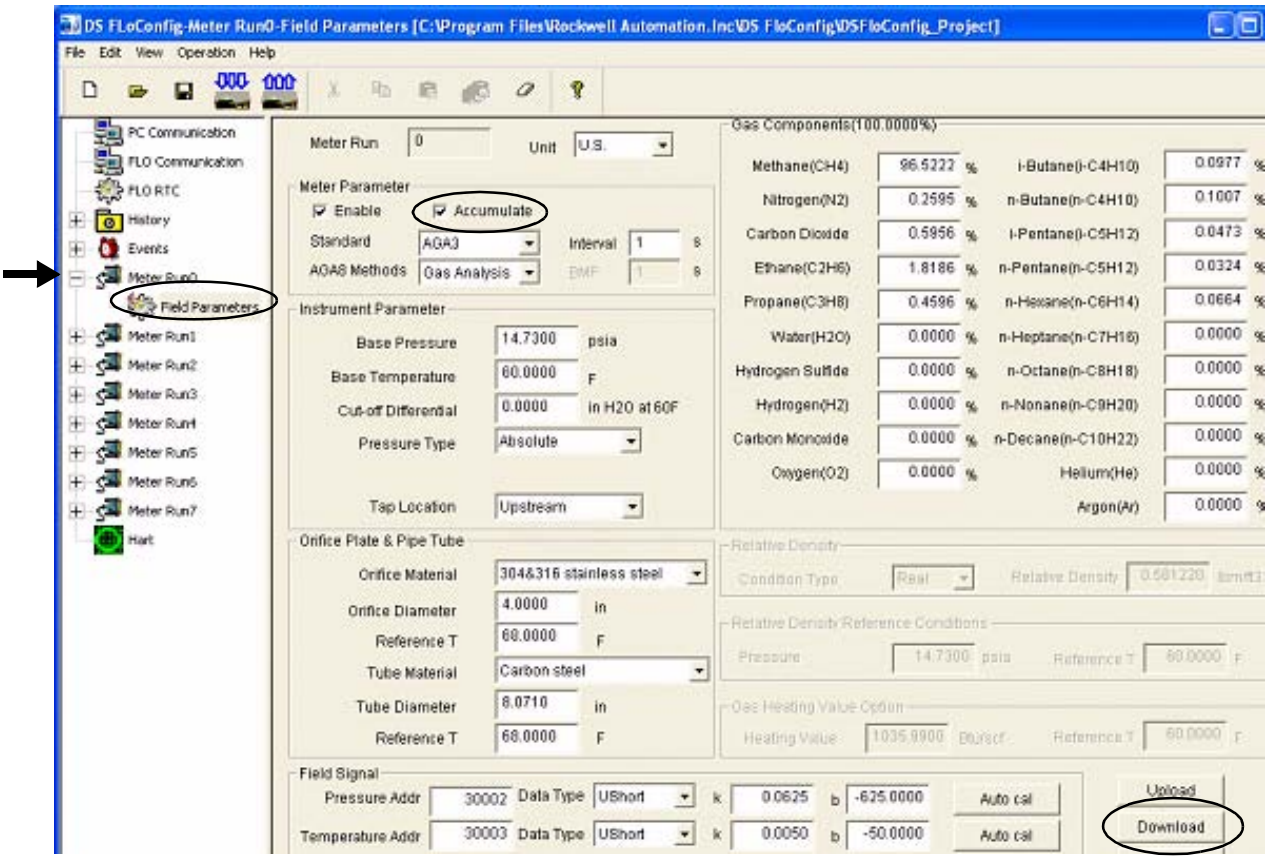


TIP You can optionally repeat steps 3 and 4 for Meter Run1 through Meter Run7.

5. Click OK when you see the message Download Successful.

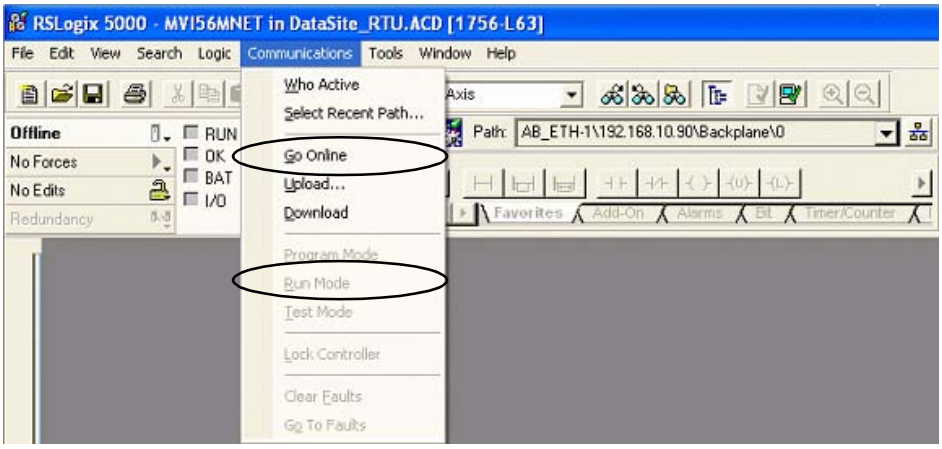
6. Expand Meter Run0, select Field Parameters, then click Upload.

7. Check Accumulate and click Download.



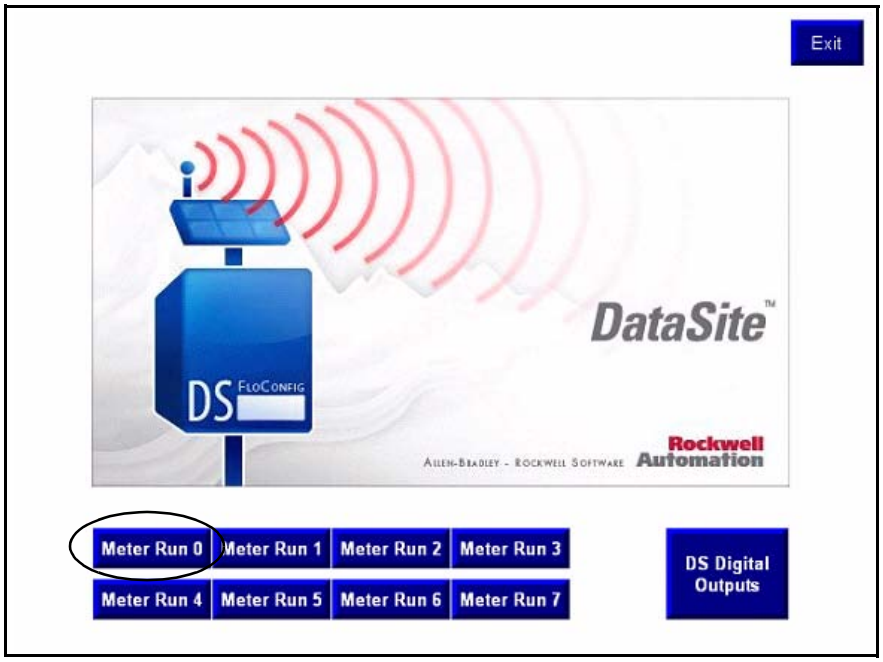
8. Return to the RSLogix 5000 software.

9. Choose Online from the Communication menu and place your L63 ControlLogix controller in Run mode.

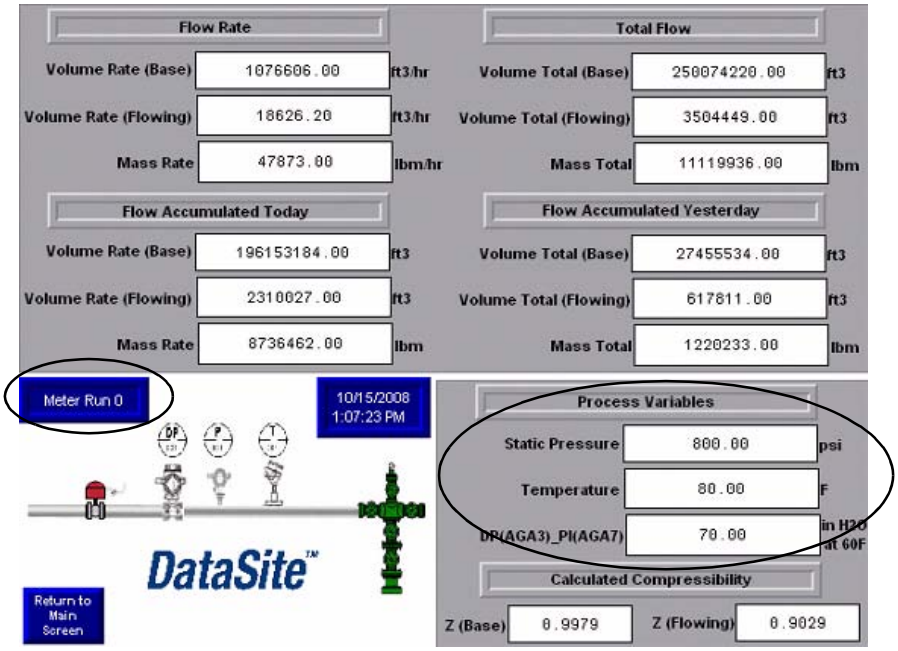


10. Verify the FactoryTalk View ME project is running on the PanelView Plus 1000 terminal. If necessary, refer to page 61 for instructions on how to download and run the project.

11. Press Meter Run 0 on the PanelView Plus terminal.

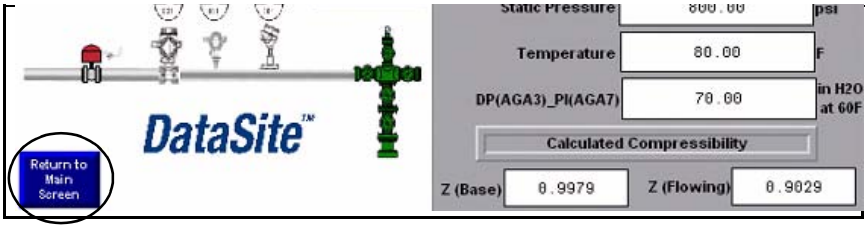


12. Verify the Meter Run 0 process variables are the same as DS FloConfig on the next page.



DS FloConfig Process Variables

13. Press Return to Main Screen on the PanelView Plus terminal.



TIP You can optionally repeat steps 9 through 12 to validate the process variables for Meter Run 1 through Meter Run 7.

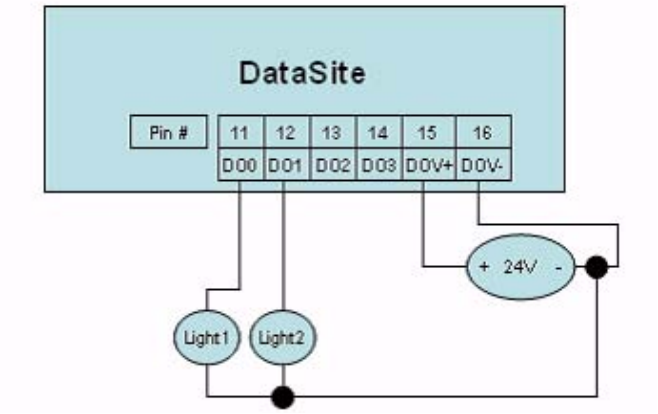
14. Press DS Digital Outputs on the main PanelView screen to validate control of the DataSite digital outputs.

15. Press a digital output.

The push button on the left turns ON digital output 0.

The push button on the right turns ON digital output 1.

TIP To verify this functionality, you must wire a testing device such as a stack light into digital output 0 and another device into digital output 1. You must also supply the required voltage to terminals DOV+ and DOV-.



The configuration and validation of the Data Site unit to ControlLogix Master is now complete.

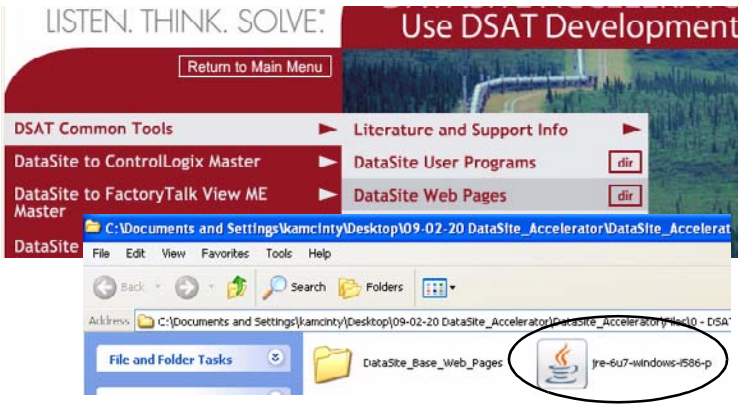
Validate DataSite Web Pages

You will now validate the web pages of the DataSite unit using the simulated values from the Validate DataSite to PanelView Plus Communication section on page 69. To view the web pages, you must have the latest Java runtime environment loaded on your computer. The DataSite Accelerator Toolkit CD contains a copy of the required Java runtime environment.

Follow these steps to perform validation of the web pages.

TIP You can skip step 1 if Version 6 Update 7 of the Java Runtime Environment is installed on your computer.

1. From the toolkit CD, choose DSAT Common Tools>DataSite Web Pages, then double-click the executable, jre-6u7-windows-i586-p.exe, to load the Java Runtime Environment, Version 6 Update 7.



2. Launch Internet Explorer.

3. In the Address bar, type http://192.168.10.93/datasite.html

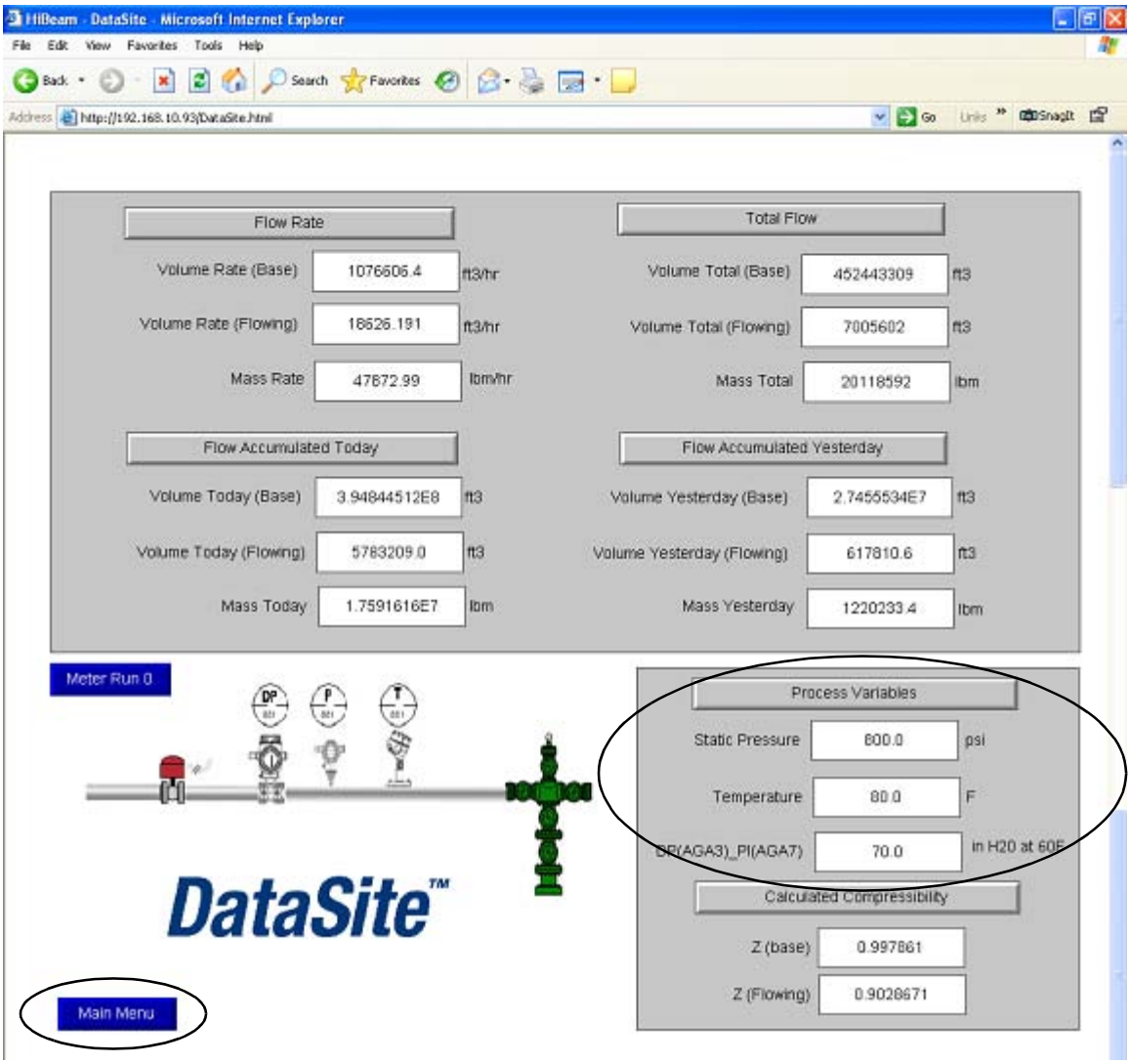
IMPORTANT You must enter the correct IP address of the DataSite unit. This quick start uses 192.168.10.93

Java takes about one minute to load this screen.

Similar to the PanelView Plus terminal, the web pages will display the same flow data as in DS FloConfig.

4. Click Meter Run 0.

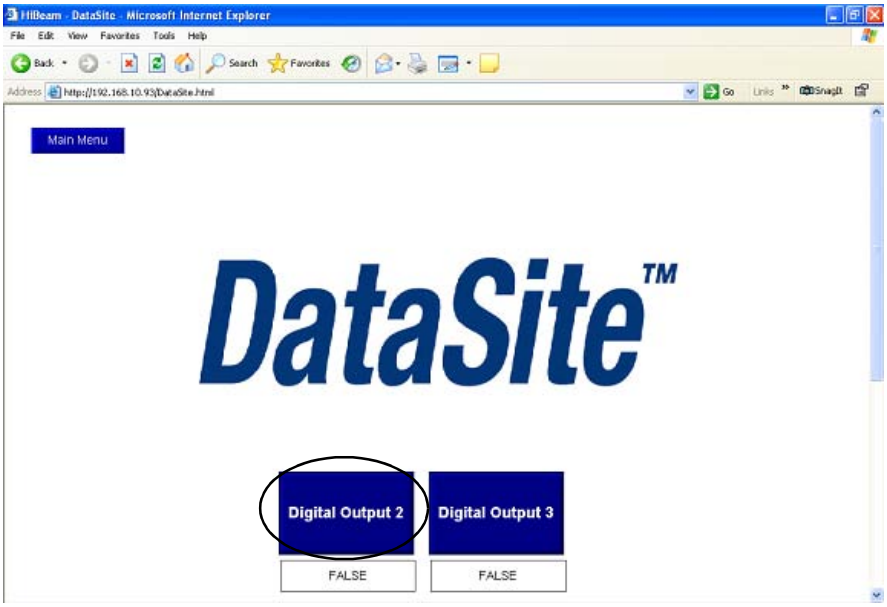
5. Verify the process variables are the same as in DS FloConfig.



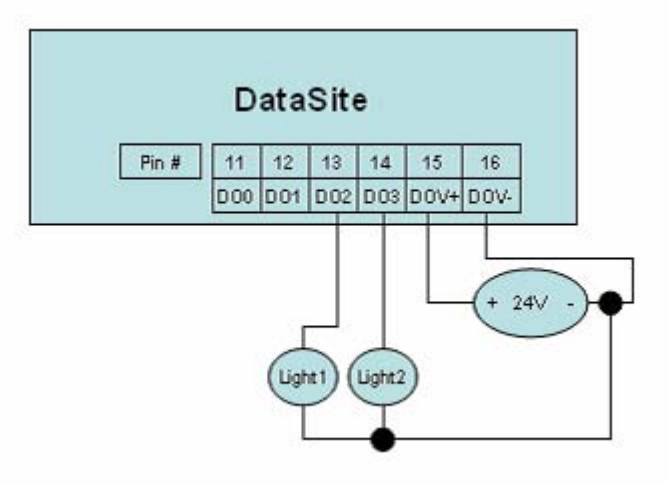
6. Click Main Menu to return to the main application screen.

7. Click Digital Outputs.

8. Click Digital Output 2.



TIP To verify this functionality, you must wire a testing device such as a stack light into digital output 2 and another device into digital output 3. You must also supply the required voltage terminals DOV+ and DOV-.



9. Repeat the previous step to verify Digital Output 3.

You just completed web page validation. Modify the existing sample programs to meet your application needs. This example only displays data for one meter run. Duplicate the example, to add additional meter runs.

Review DataSite Workbench User Program

The sample DataSite Workbench project consists of four programs.

- Power Save - Saves power by turning power on/off to the LEDs, serial port, and RS485 port.
- Screen Builder Variables - Reads Meter Run 0 flow data variables and assigns a DataSite Workbench variable that can be used by the DataSite web pages.
- Digital Outputs - Controls DataSite digital outputs 2 and 3.
- Time Synchronization - Synchronizes the DataSite clock to the ControlLogix L63 controller clock.

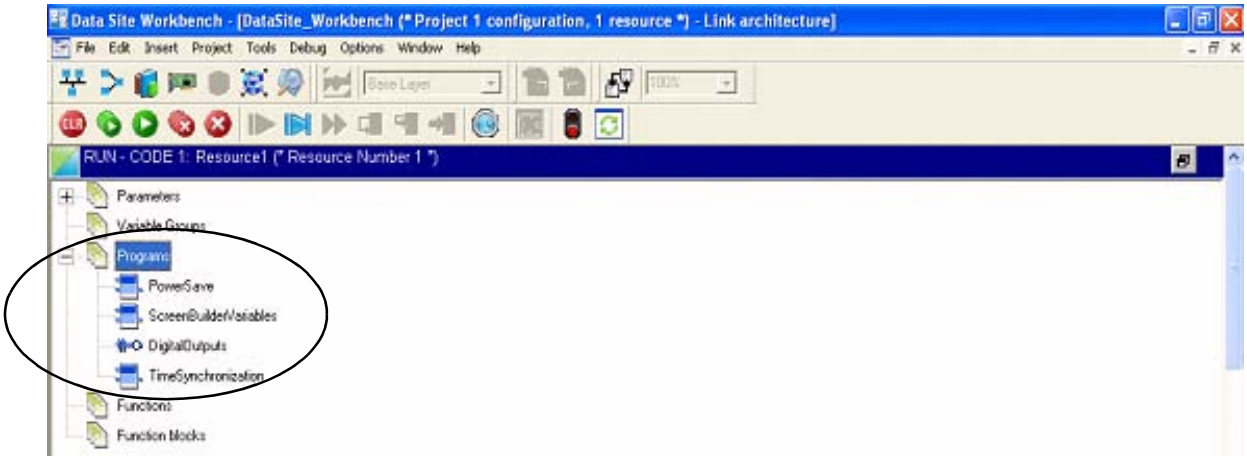
Follow these steps to view the DataSite Workbench program in Run mode.

1. Compile the DataSite Workbench user program by clicking Rebuild Project/Library.

2. Click Debug Target.

   This lets you view a running program and make changes to the variables.

3. In Debug mode, double-click the program you want to view.

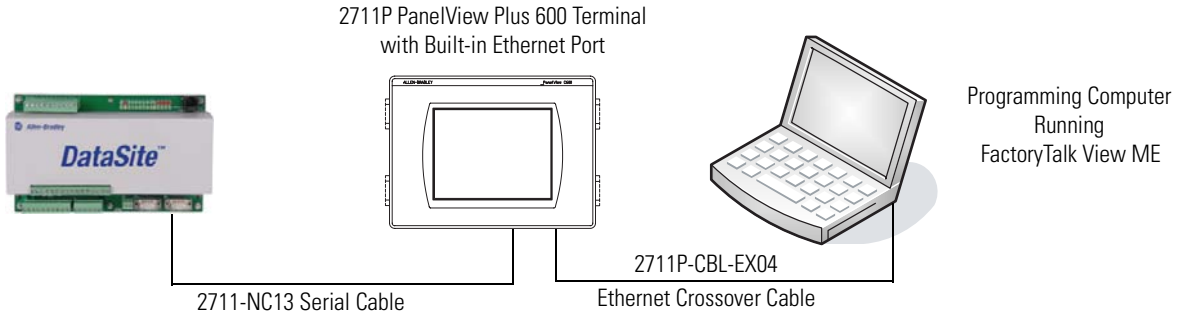


4. Refer to the program comments for details on functionality.

To view other programs, close the program editor window and double-click a different program from the link architecture view.

DataSite to FactoryTalk View ME Master

This appendix describes how to configure a PanelView Plus 600 terminal to communicate with the DataSite using Modbus serial communication. This setup requires KEPServerEnterprise V4.0 to configure drivers between the DataSite unit and the PanelView Plus terminal running FactoryTalk View ME.



Use this setup for smaller applications that don't require a ControlLogix controller to poll multiple DataSite units. Refer to Appendix B for instructions on how to configure a Factory Talk View SE master to communicate with the DataSite via Modbus TCP/IP communication that don't require a controller but do require data logging parameters to an excel file.

Before You Begin

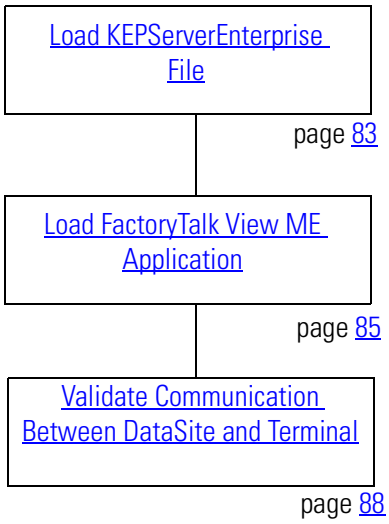
- Download KEPServer Enterprise V4.0.
- Wire the DataSite unit to the PanelView Plus 600 terminal using the 2711-NC13 serial cable.
- Apply Power to the DataSite unit and PanelView Plus 600 terminal.

What You Need

- Personal computer
- Hardware:
  - DataSite unit
  - PanelView Plus 600 terminal

  - 2711C-NC13 serial cable
  - 2711P-CBL-EX04 Ethernet crossover cable
- Software:
  - KEPServerEnterprise V4.0
  - FactoryTalk View Studio ME
  - DataSite Accelerator Toolkit CD, publication IASIMP-SP011

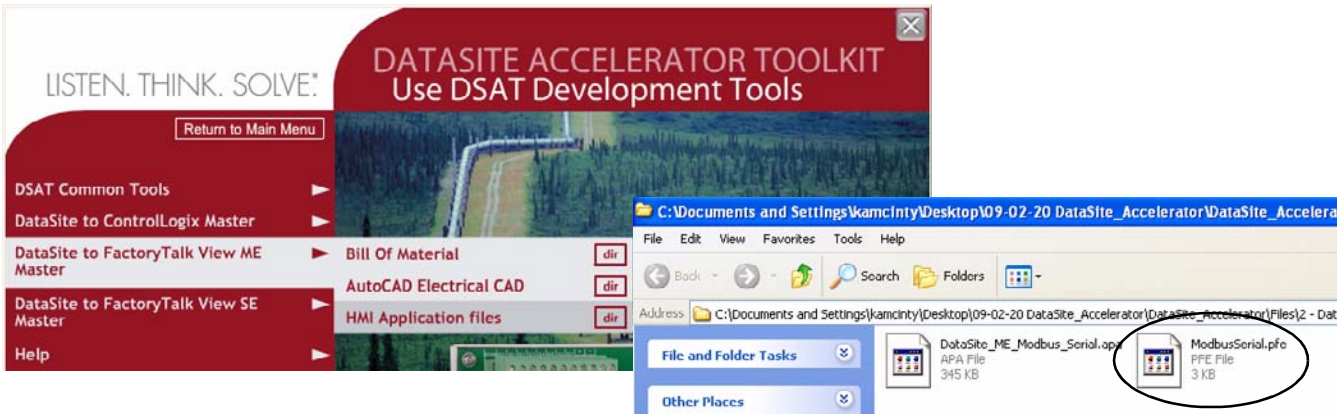
Follow These Steps



Load KEPServerEnterprise File

Follow these steps to load a KEPServer Enterprise .pfe file that contains Modbus addresses of the parameters to be polled and displayed on the PanelView Plus 600 HMI terminal.

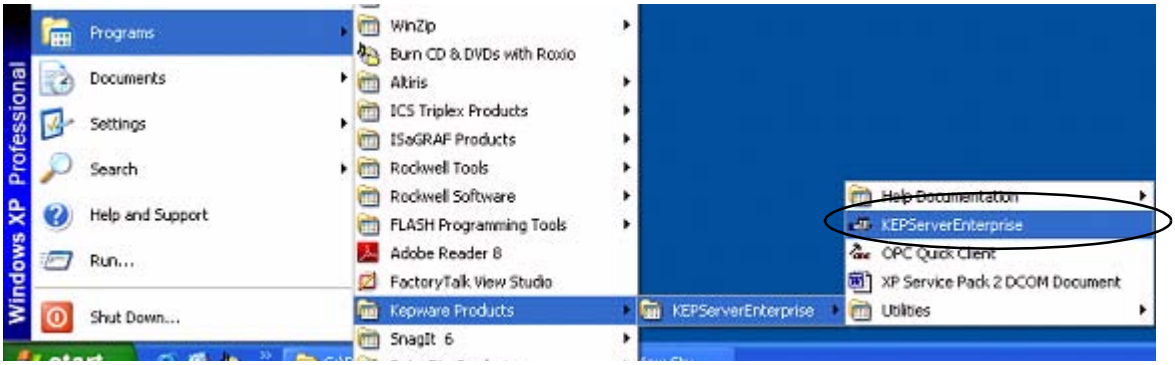
1. From the DataSite Accelerator Toolkit CD, choose DataSite to FactoryTalk View ME Master>HMI Application files.



2. Copy ModbusSerial.pfe from the CD to the default project folder for KEPServerEnterprise.

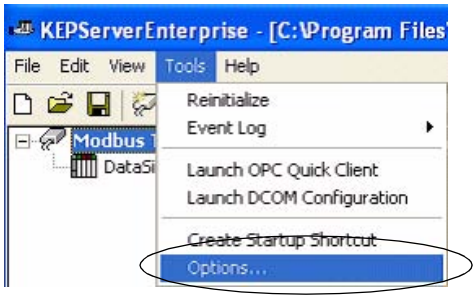
C:\Program Files\KEPServerEnterprise\Projects

3. Launch KEPServerEnterprise V4.0.



4. Choose Open from the File menu, then locate and open the ModbusSerial.pfe file.

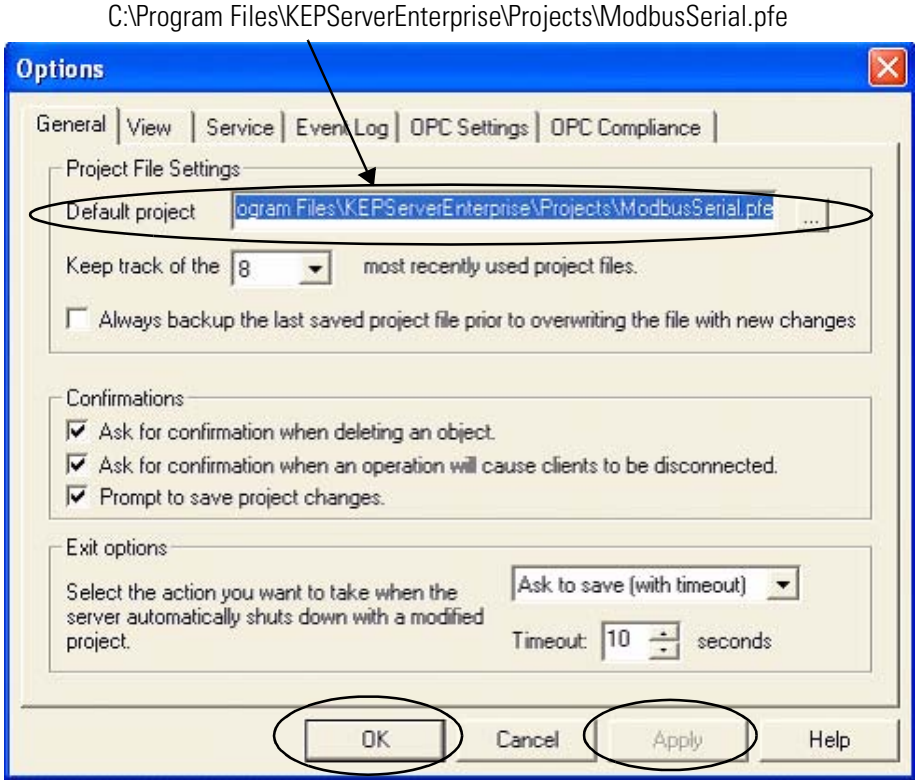
5. From the Tools menu, Choose Options.



6. Click the Browse ... button to locate the default project ModbusSerial.pfe.

7. Click Apply.

8. Click OK.

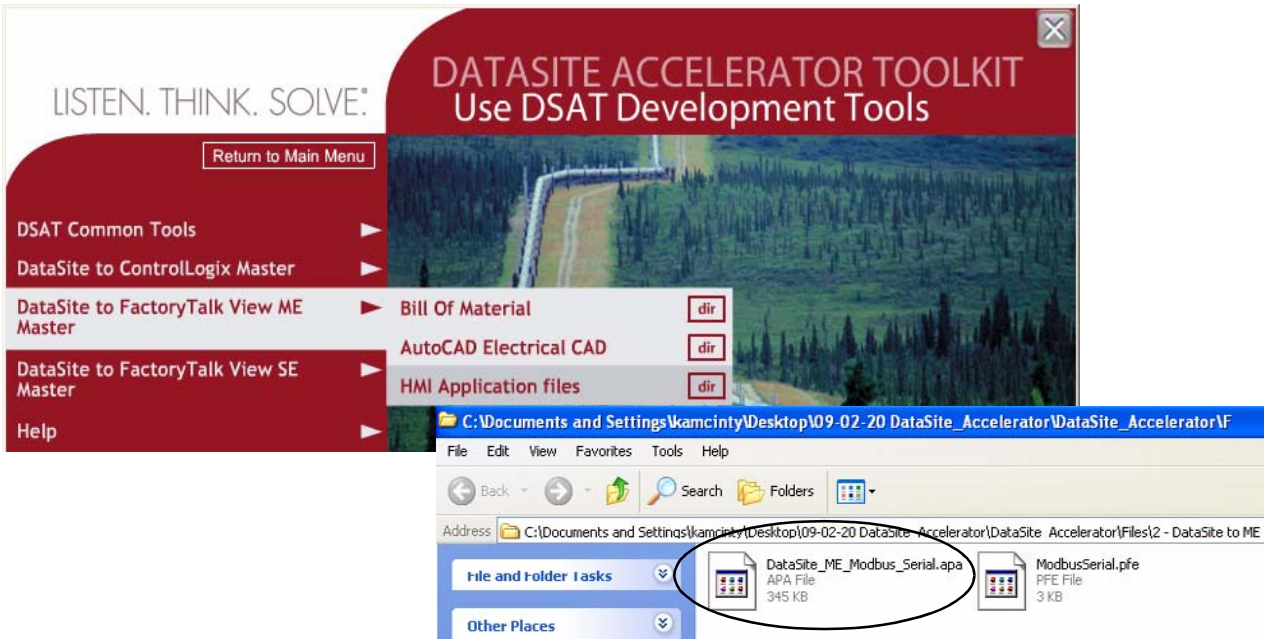


Load FactoryTalk View ME Application

The FactoryTalk View ME application contains screens to display flow data on a PanelView Plus 600 terminal for one meter run.

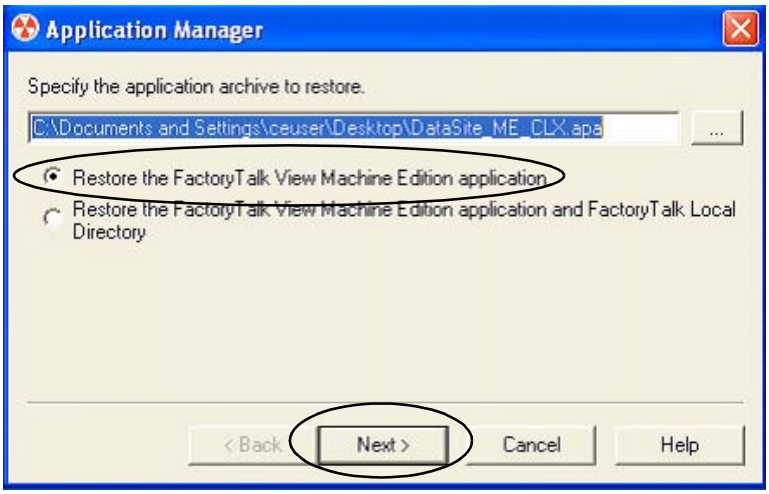
Follow these steps to load the FactoryTalk View ME application from the DataSite Accelerator Toolkit CD.

1. On the toolkit CD, choose DataSite to FactoryTalk View ME Master>HMI Application Files, then double-click DataSite_ME_Modbus_Serial.apa.



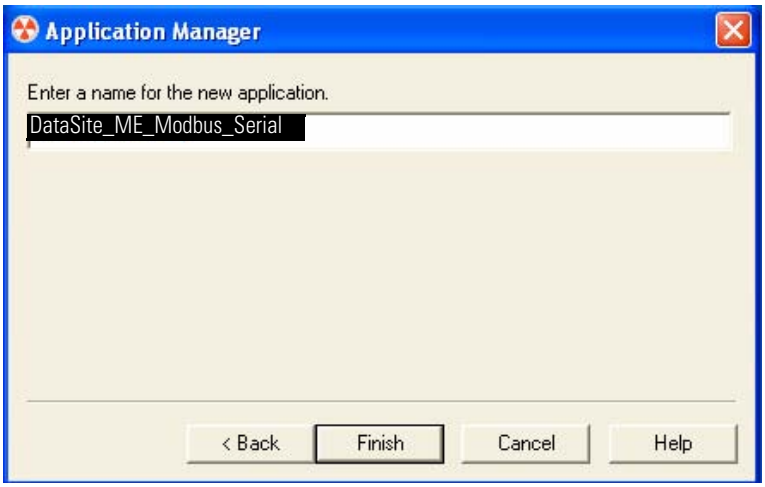
The Application Manager window opens.

2. Select Restore the FactoryTalk View Machine Edition application and click Next.

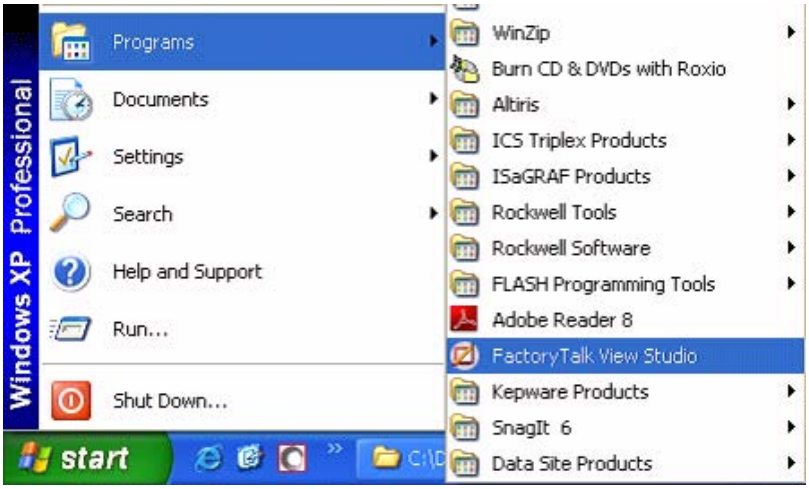


3. Type DataSite_ME_Modbus_Serial as the application name, then click Finish.

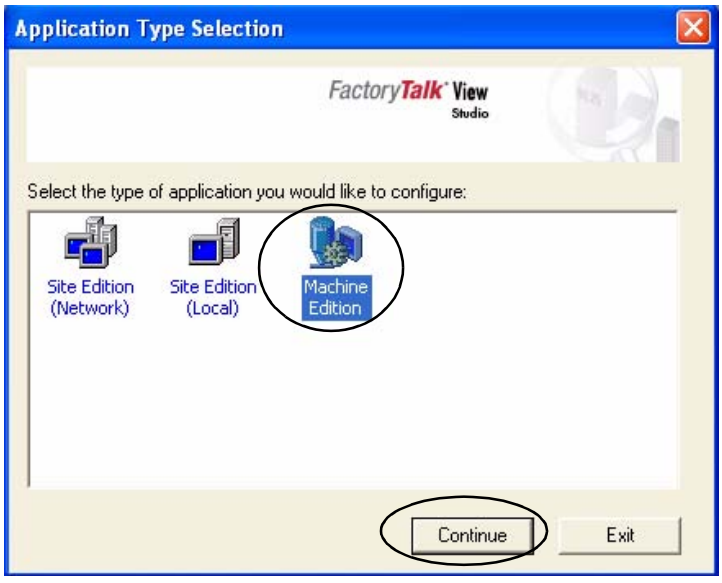
The Application Manager closes after it restores the application.



4. Launch FactoryTalk View Studio software.

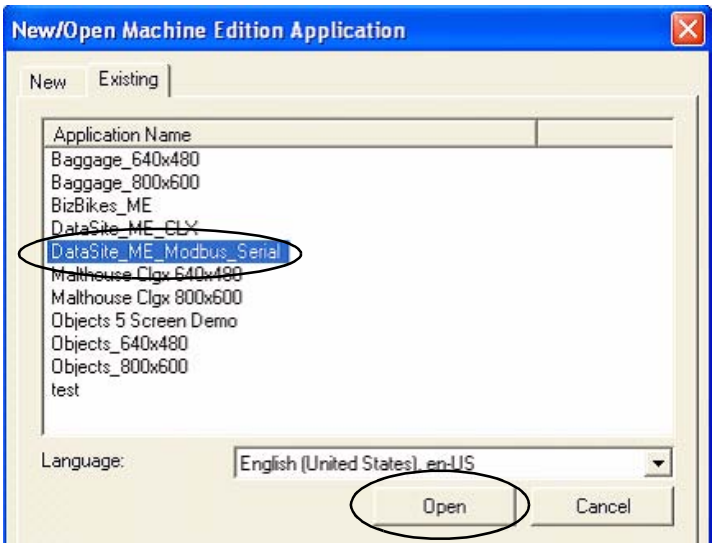


5. If this dialog box opens, select Machine Edition and click Continue.



6. Select DataSite_ME_Modbus_Serial from the Existing tab and click Open.

   The FactoryTalk View ME application opens.



7. Create the .mer file and download to the PanelView Plus 600 terminal.

TIP Refer to Download Project to PanelView Plus Terminal on page 61 for details on how to create a runtime application and download the .mer application file to the PanelView Plus 600 terminal.

Validate Communication Between DataSite and Terminal

You are now ready to run the .mer application on the PanelView Plus 600 terminal, and validate communication with the DataSite unit. The KEPServer (.pfe) file polls 19 parameters for one meter run and displays the data on the PanelView Plus 600 terminal.

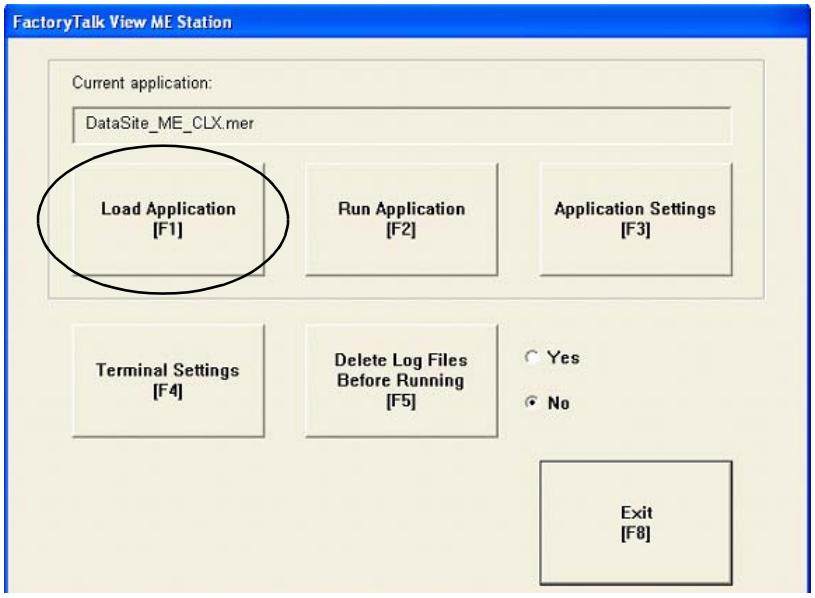
TIP The validation assumes that AGA calculations were initiated using instrumentation devices or simulated in DS FloConfig. Refer to Chapter 6 for more information on how to simulate the AGA process variables.

Follow these steps to validate Modbus Serial communication between the DataSite unit and PanelView Plus 600 terminal.

1. Make sure the COM1 or COM2 port of the DataSite is connected to the serial port of the PanelView Plus terminal by using a 2711-NC13 straight-through cable.

TIP If using radios, connect one serial radio to the DataSite and the other radio to the PanelView Plus 600 terminal.

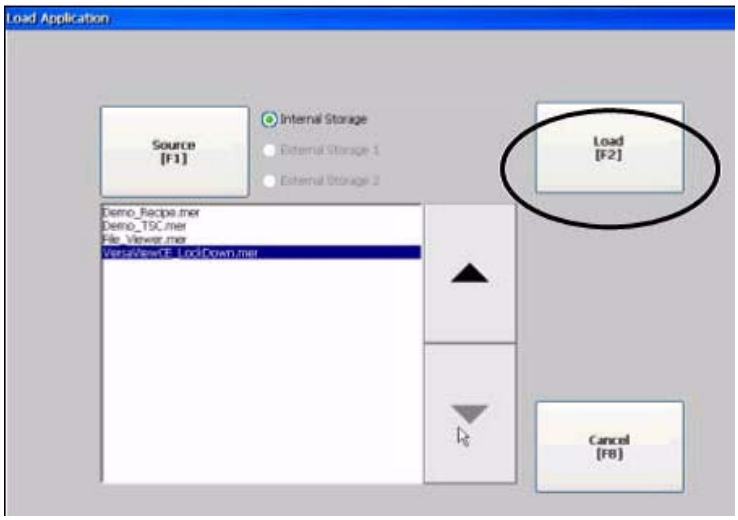
2. From the PanelView Plus terminal, press Load Application [F1] in the FactoryTalk View ME Station dialog box.



The Load Application dialog box opens.

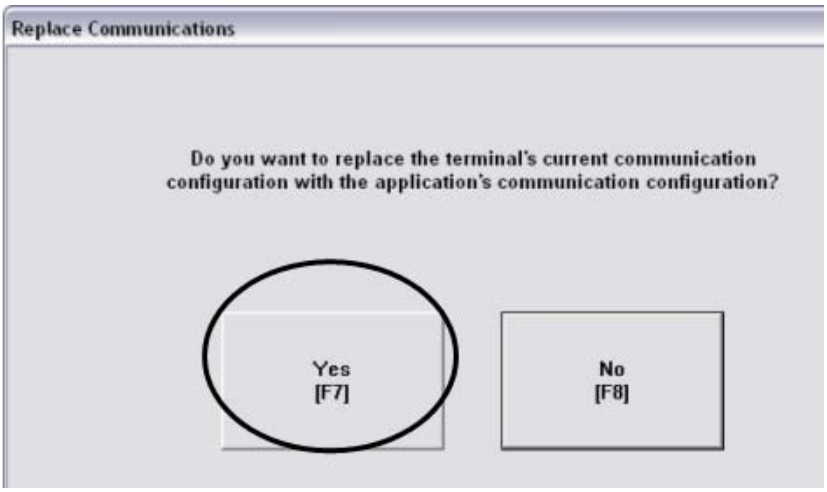
3. Use the up/down arrows to scroll through the list of applications and select DataSite_ME_Modbus_Serial.

4. Press Load [F2].



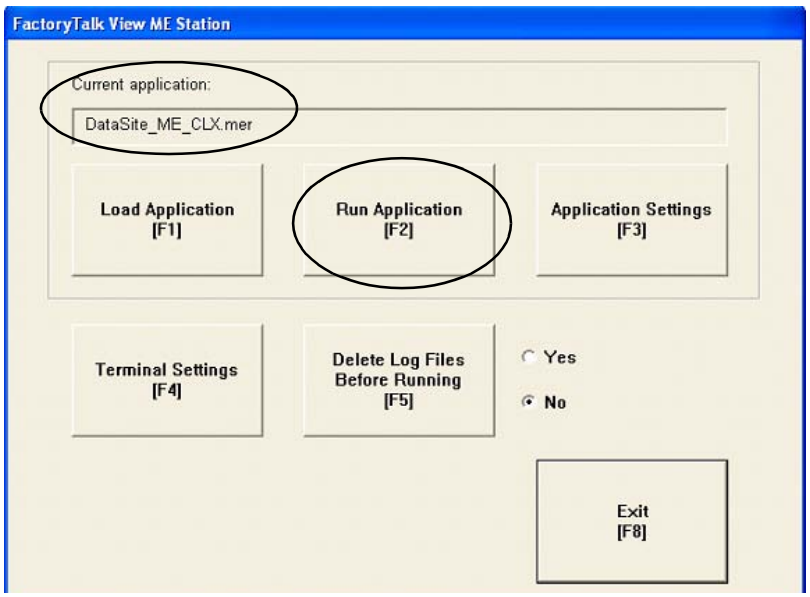
5. Press Yes [F7].

   If you press No, the communication settings from the previously run project will be used.



6. Wait for the application to the load and verify that DataSite_ME_Modbus_Serial.mer appears under Current application.

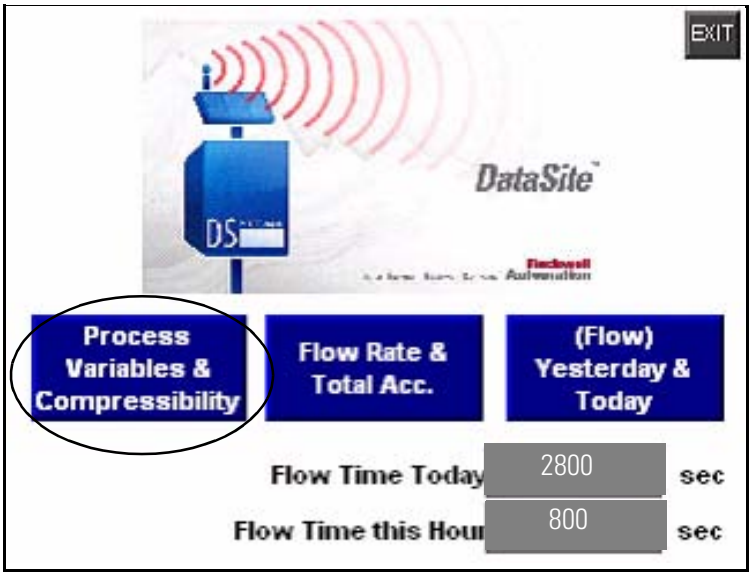
7. Press Run Application [F2].



The application builds and displays a DataSite screen on the PanelView Plus terminal.

8. Press Process Variables & Compressibility.

   Verify the process variables match the numbers simulated using DS FloConfig:
   - Static Pressure = 800
   - Temperature = 80
   - Differential Pressure = 70



IMPORTANT If the PanelView Plus terminal displays asterisks instead of data, then you need to select a different COM port for the Serial DF1 driver. Skip to page 91 for instructions on how to change the COM port.

9. Return to the main screen and press the other two blue buttons to view accumulated flow data.

The flow data displayed is for Meter Run 0 (MR0). You can easily add other meter runs by adding the corresponding Modbus registers in the KEPServerEnterprise (.pfe) file. You must then duplicate the ME screens and change the tag names to match their corresponding tag name.

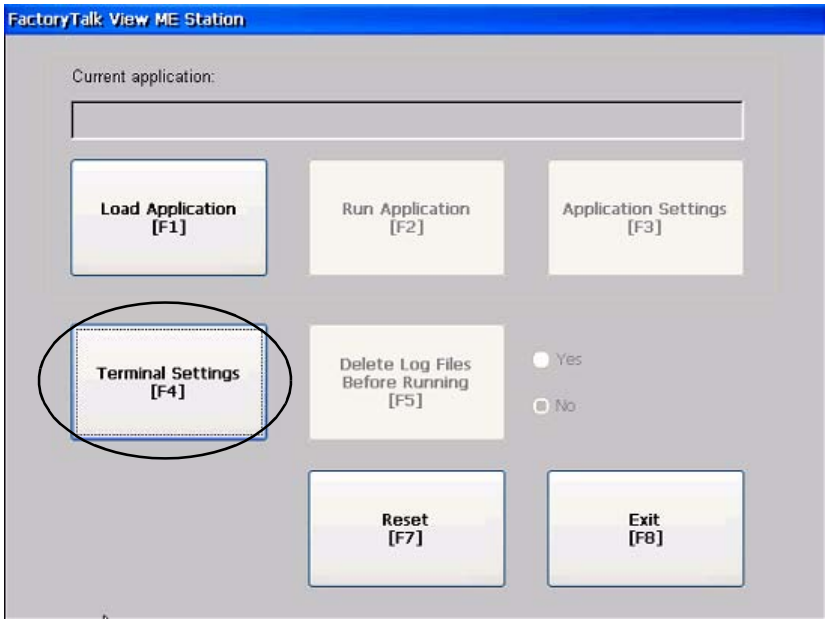
Configuration and validation of the DataSite to ME Master configuration is now complete.

Select a Different COM Port for the Serial DF1 Driver

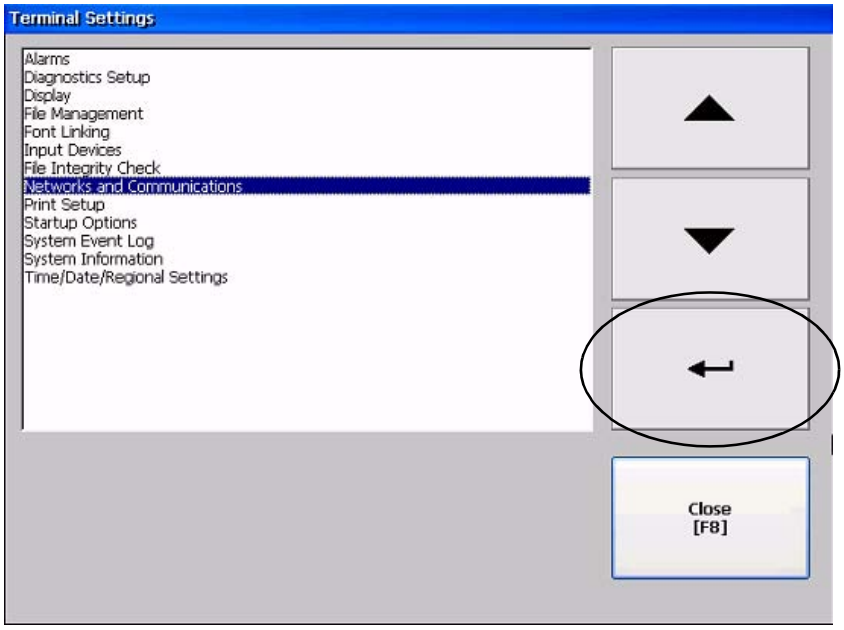
If the variable data appears as asterisks on the PanelView Plus terminal, you need to change the COM port used by the serial DF1 driver. If data appears correctly on the terminal, you can skip this section.

Follow these steps to select a different COM port for the serial DF1 driver.

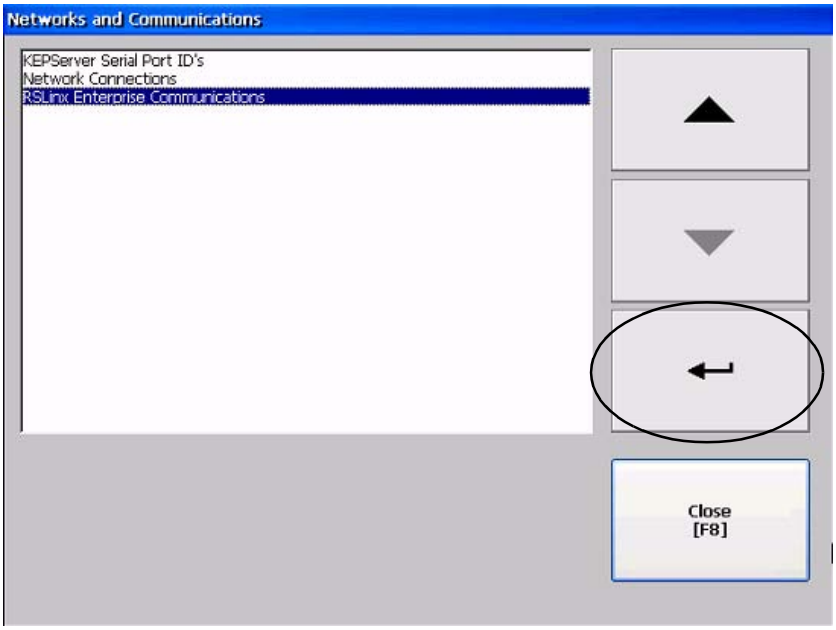
1. Press Terminal Settings [F4] in the FactoryTalk View ME Station dialog box.



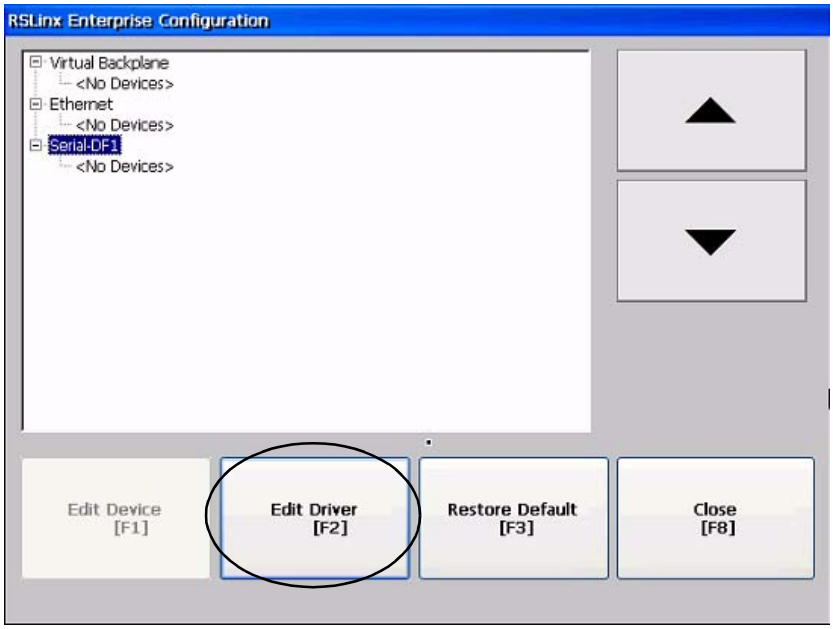
2. Select Networks and Communications, then press the Enter button.



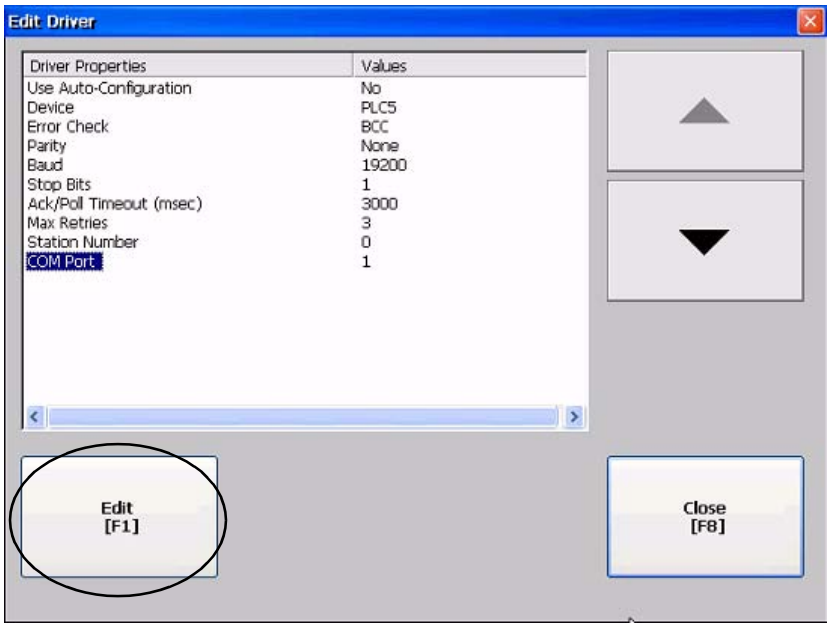
3. Select RSLinx Enterprise Communications by pressing the cursor key, then press the Enter button.



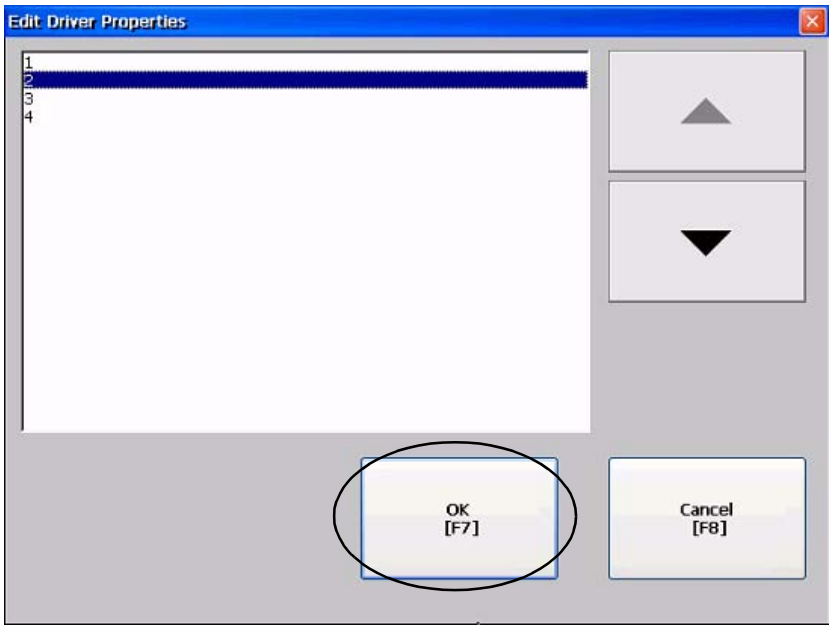
4. Select Serial-DF1, then press Edit Driver [F2].



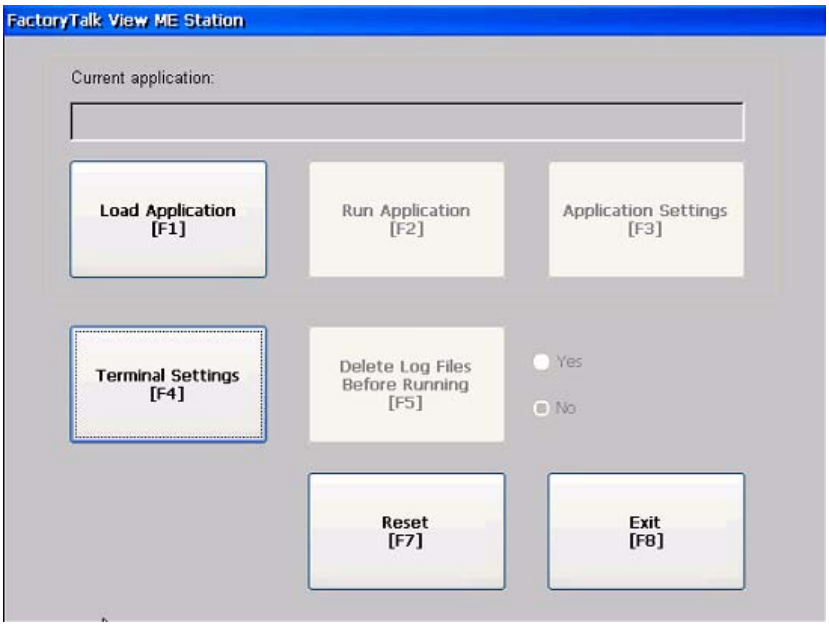
5. Select COM Port, then press Edit [F1].



6. Select 2, then press OK [F7].



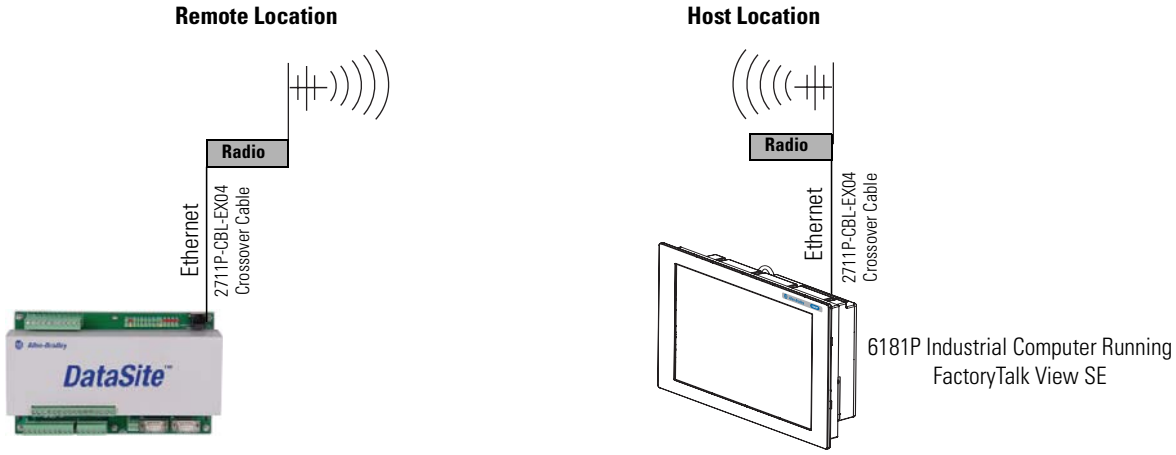
7. Press the Cancel [F8] button until you return to the main menu.



8. Repeat steps 2 through 8 starting on page 88 to validate the application.

DataSite to FactoryTalk View SE Master

This appendix shows how to configure an industrial computer running FactoryTalk View SE software to communicate with a DataSite unit using Modbus TCP/IP communication. This setup requires KEPServerEnterprise software V4.0 to configure the communication driver.



This configuration is good for small applications that require data logging capabilities but don't require a ControlLogix controller to poll multiple DataSite units. Refer to Appendix A for details on how to configure a PanelView Plus terminal running Factory Talk View ME software to communicate with the DataSite using Modbus serial communication.

TIP Radios are optional. If your application does not require radios, simply replace the radios with an Ethernet crossover cable connecting the DataSite to the industrial computer.

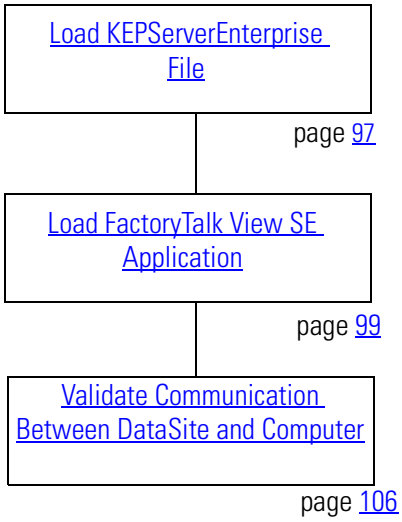
Before You Begin

- Download KEPServer Enterprise software V4.0.
- Connect the DataSite unit to an industrial computer running FactoryTalk View Site Edition (SE) software.
- Radios are optional.

What You Need

- Hardware:
  - DataSite unit
  - 6181P industrial computer or personal computer
  - Two radios, optional
  - Two 2711P-CBL-EX04 Ethernet crossover cables
- Software:
  - KEPServerEnterprise V4.0
  - FactoryTalk View SE
  - DataSite Accelerator Toolkit CD, publication IASIMP-SP011

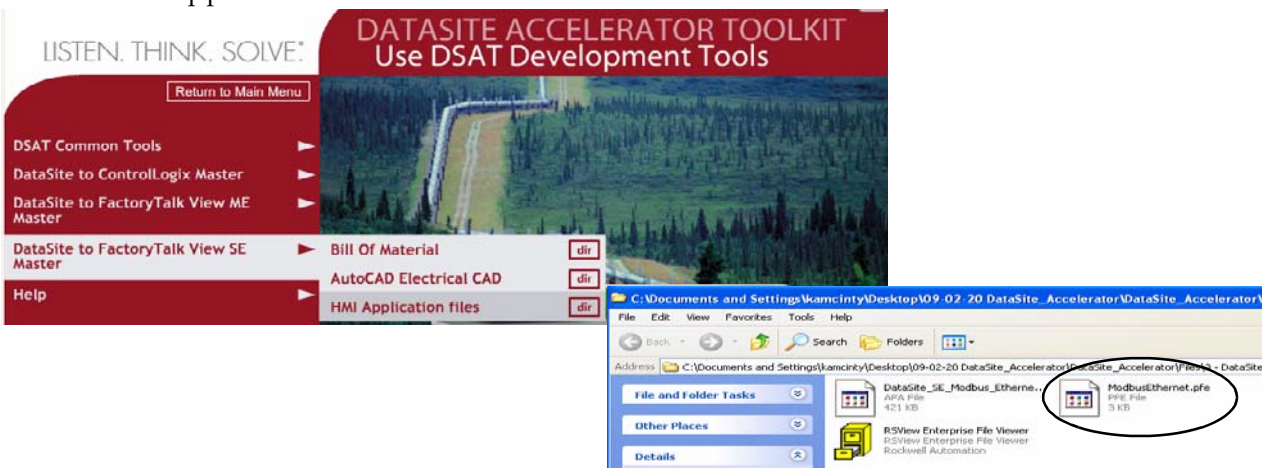
Follow These Steps



Load KEPServerEnterprise File

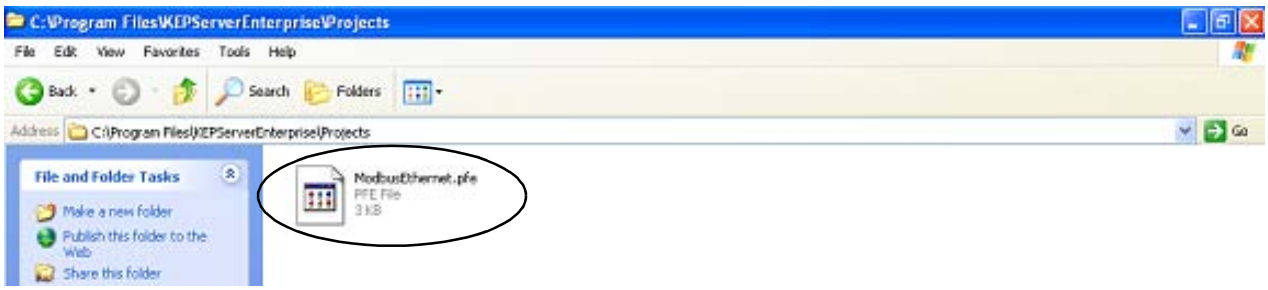
Follow these steps to load a KEPServer Enterprise .pfe file that contains Modbus addresses of the parameters to be polled and displayed on the industrial computer.

1. From the DataSite Accelerator Toolkit CD, choose DataSite to FactoryTalk View SE Master>HMI Application Files.

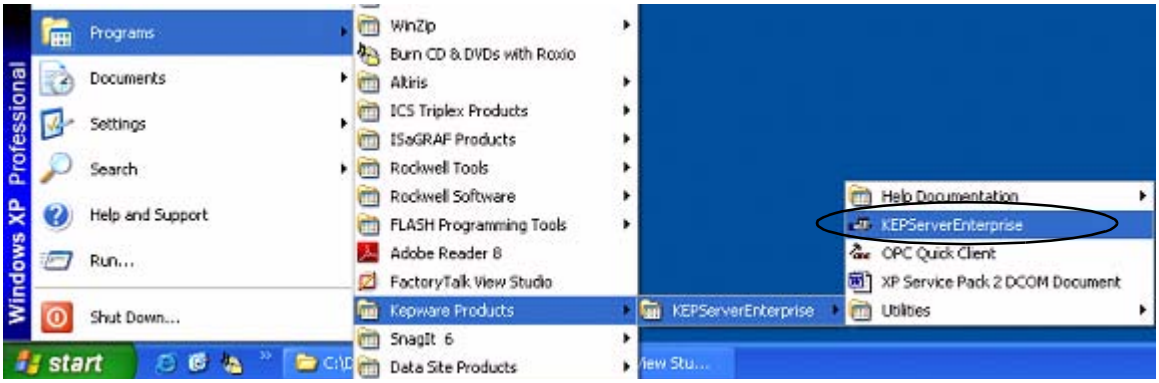


2. Copy ModbusEthernet.pfe from the CD to the default project folder for KEPServerEnterprise.

C:\Program Files\KEPServerEnterprise\Projects

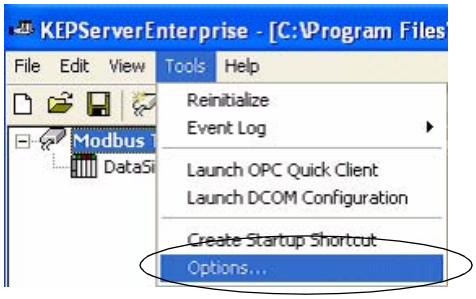


3. Launch KEPServerEnterprise software V4.0.



4. Choose Open from the File menu, then locate and open the ModbusEthernet.pfe file.

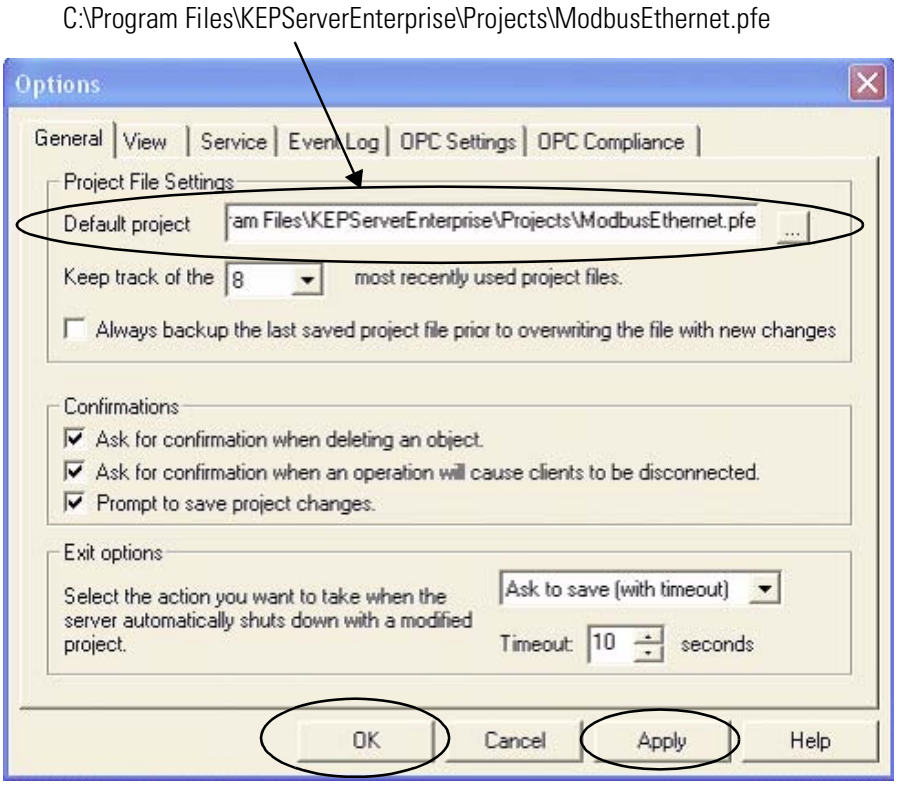
5. Choose Options from the Tools menu.



6. Click the Browse button ... to locate the default project ModbusEthernet.pfe.

7. Click Apply.

8. Click OK.

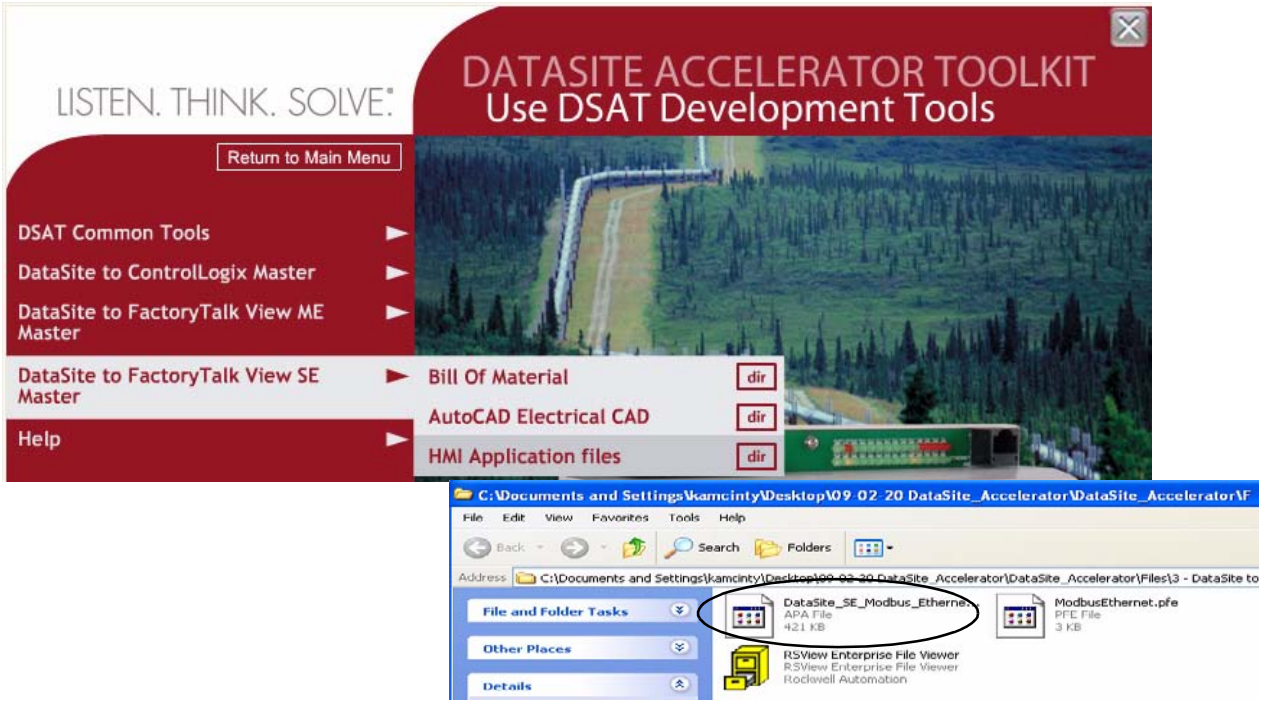


Load FactoryTalk View SE Application

The FactoryTalk View SE application contains a screen that controls when to start and stop data logging to an Excel file. It also contains a screen with gas flow data for Meter Run 0.

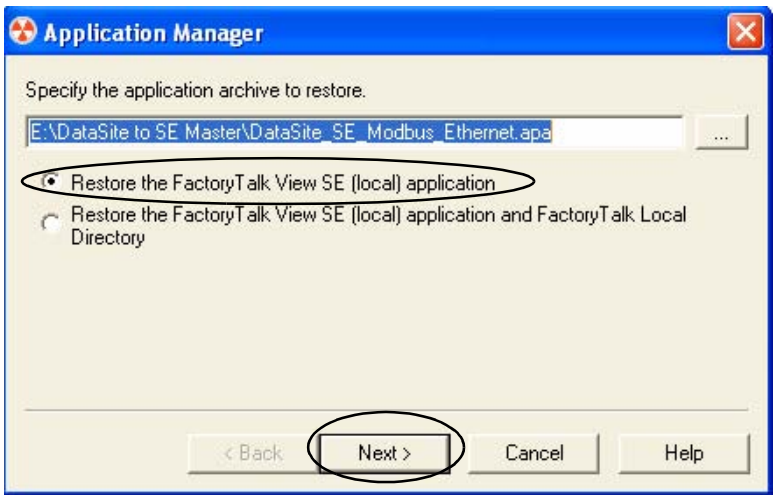
Follow these steps to load the FactoryTalk View SE application from the DataSite Accelerator Toolkit CD.

1. On the toolkit CD, choose DataSite to FactoryTalk View SE Master>HMI Application files, then double-click the DataSite_SE_Modbus_Ethernet.apa application file.



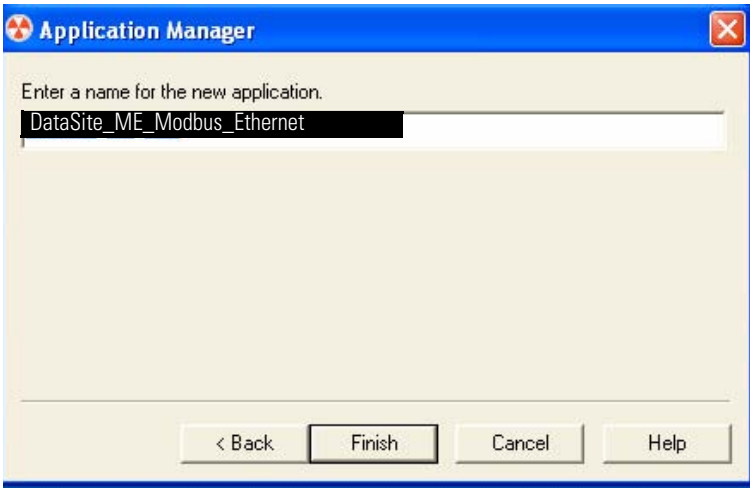
The Application Manager window opens.

2. Select Restore the FactoryTalk View SE (local) application, then click Next.

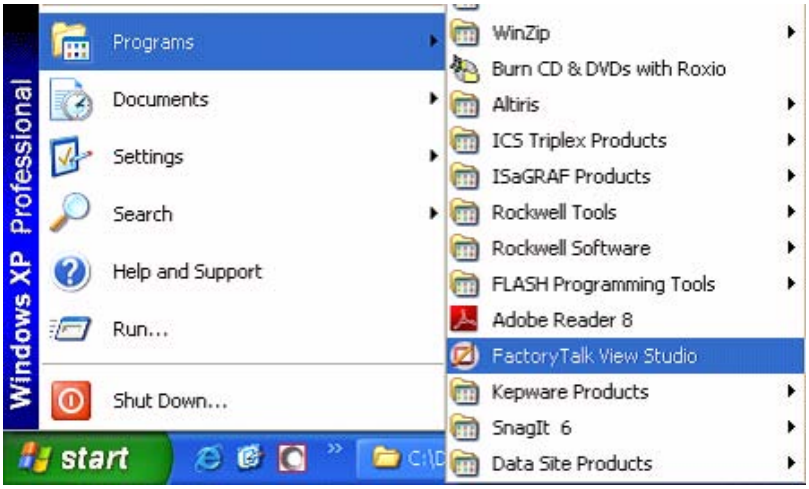


3. Enter DataSite_ME_Modbus_Ethernet as the application name and click Finish.

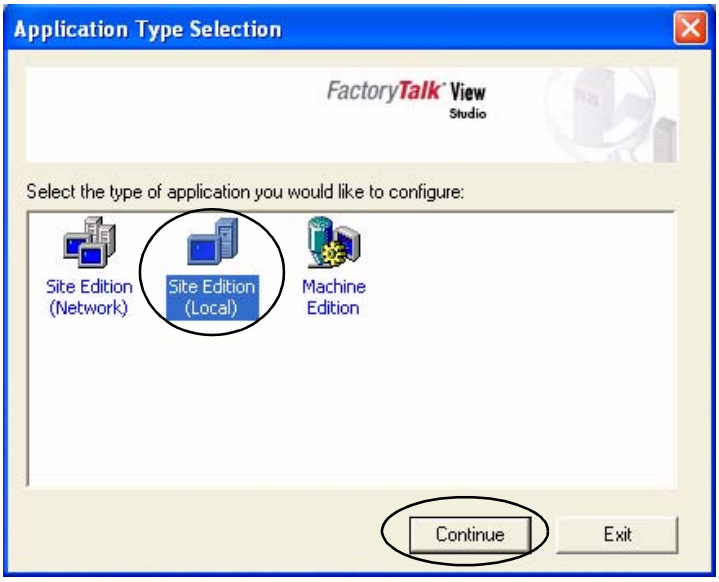
   The Application Manager closes after it restores the application.



4. Launch FactoryTalk View Studio software.

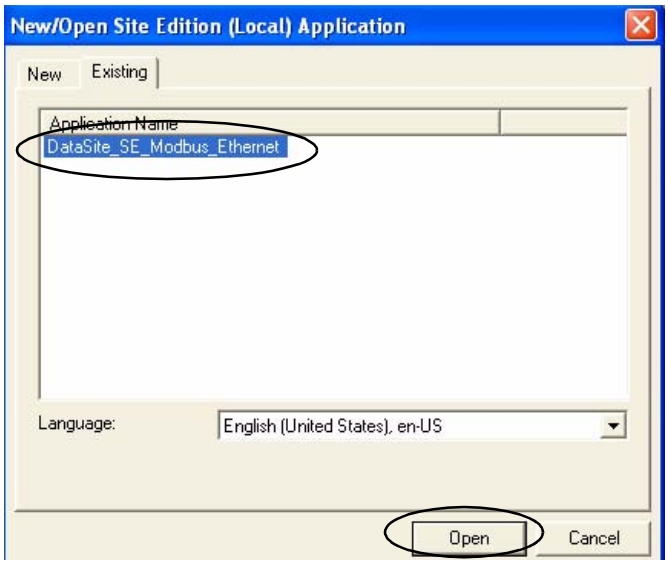


5. If this dialog box opens, select Site Edition (Local) and click Continue.

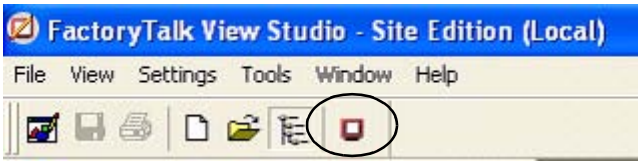


6. Select DataSite_SE_Modbus_Ethernet from the Existing tab and click Open.

The FactoryTalk View SE application opens.

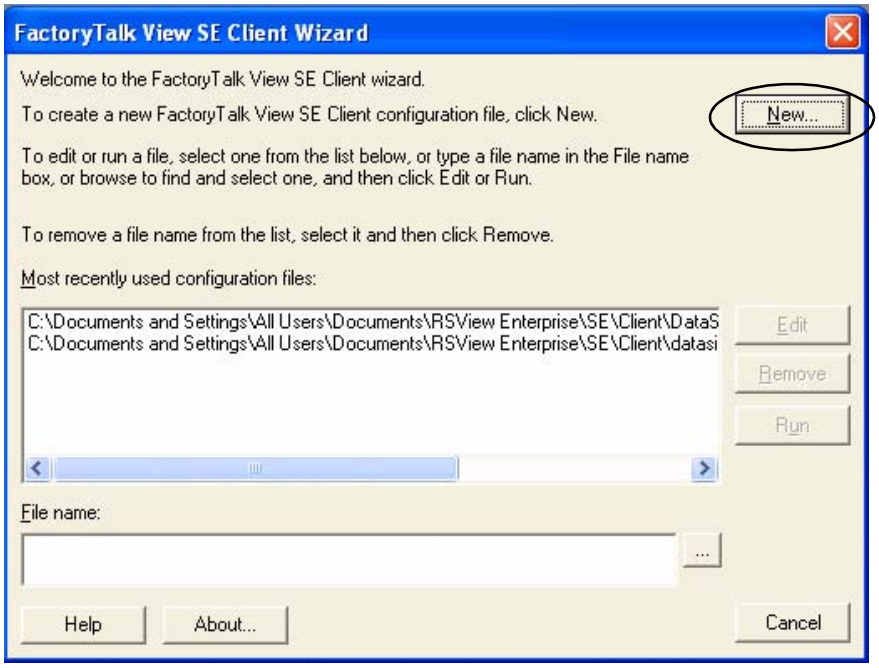


7. Click Launch SE Client on the toolbar.

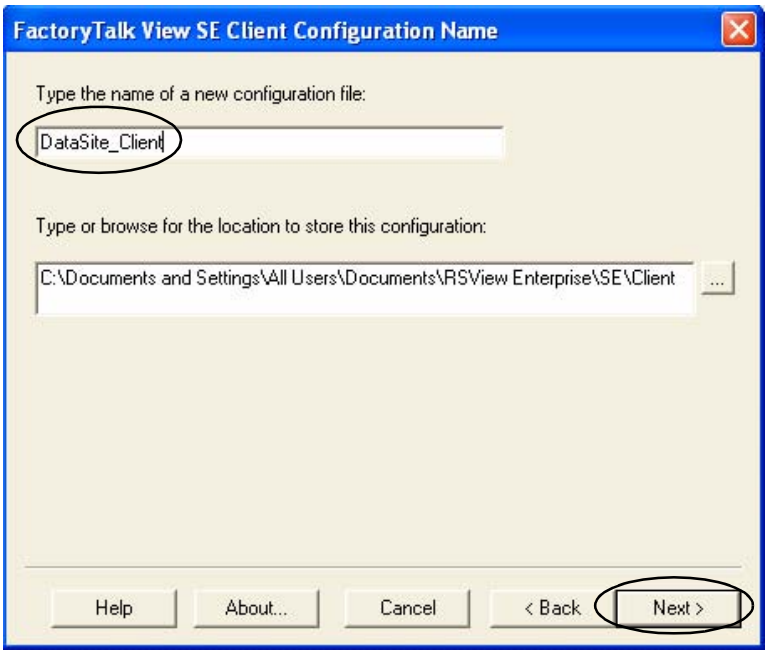


8. Click New.

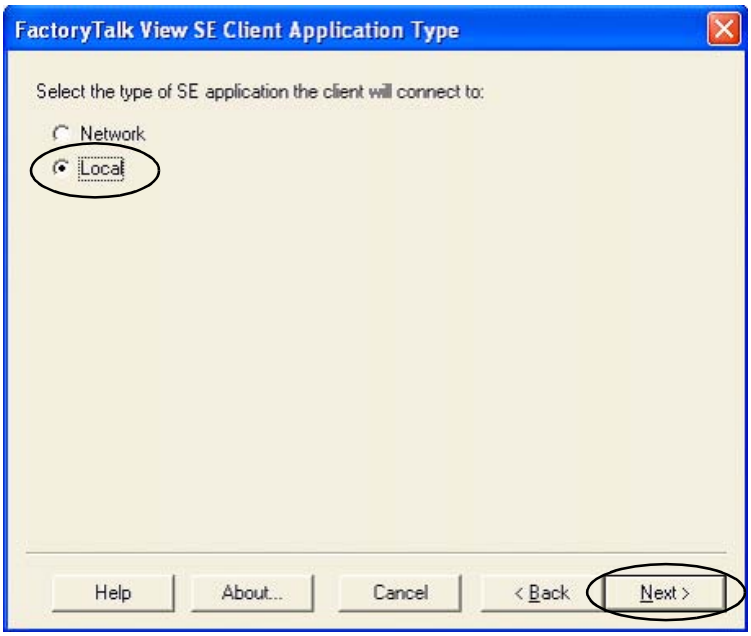
9. Click New.



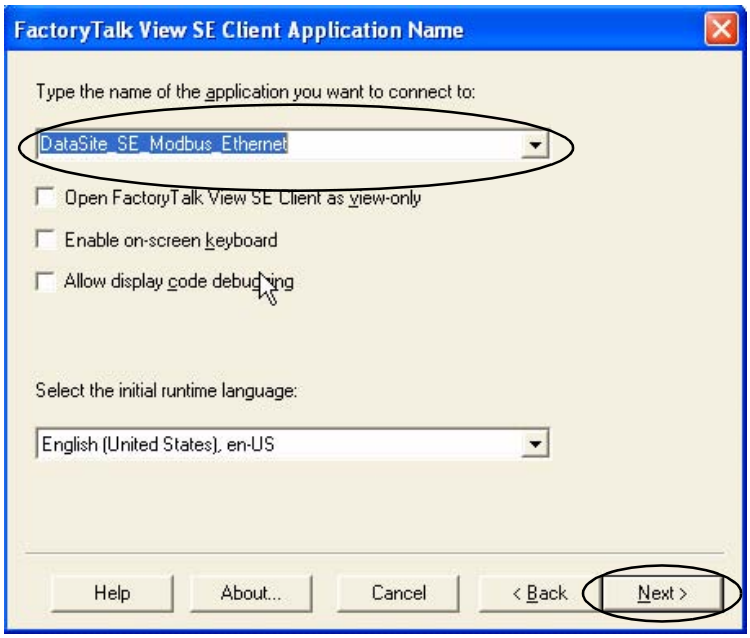
10. Enter DataSite_Client as the configuration file name, then click Next.



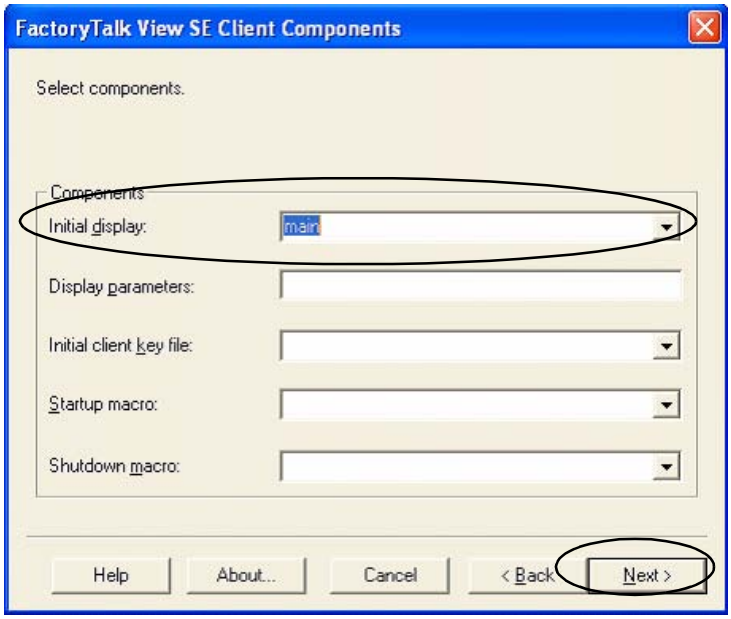
11. Select Local, then click Next.



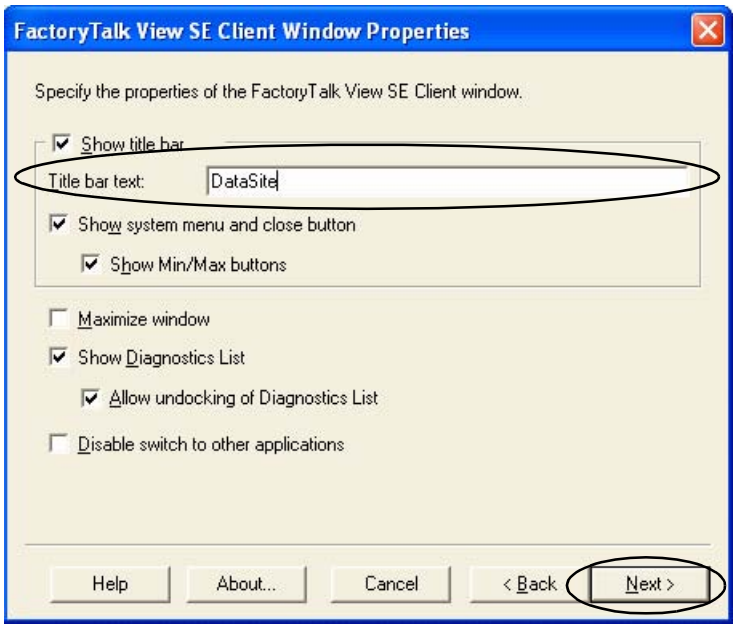
12. Select DataSite_SE_Modbus_Ethernet from the pull-down list or the name of the application assigned during the restore, then click Next.



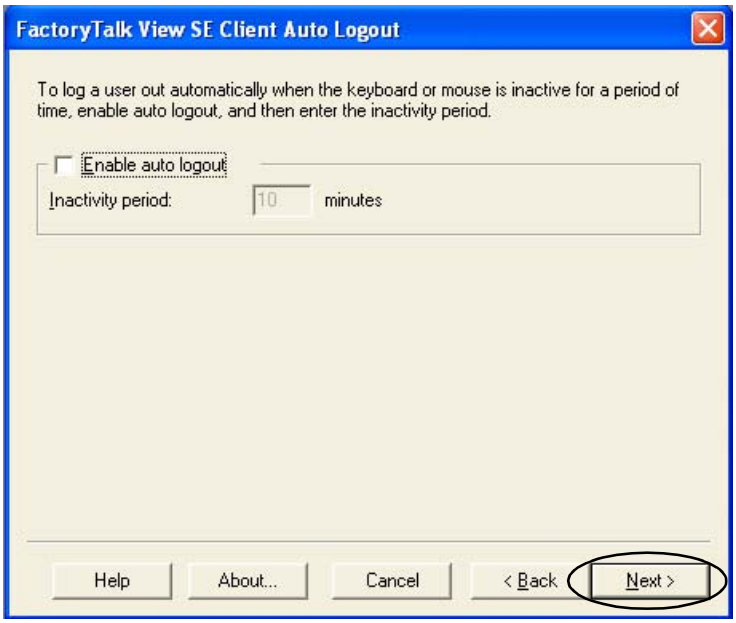
13. Select Main from the Initial Display pull-down list, then click Next.



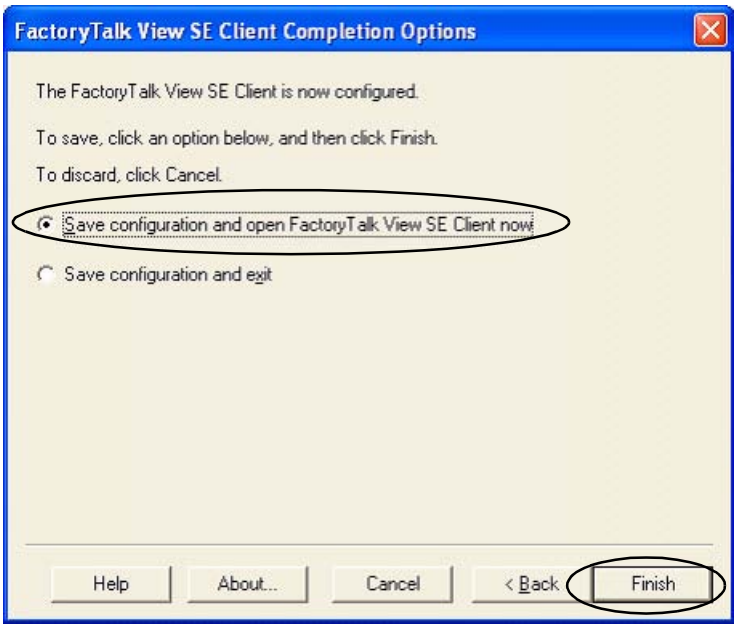
14. Enter DataSite as the Title bar text and click Next.



15. Click Next.



16. Select Save configuration and open FactoryTalk View SE Client now and click Finish.



Factory Talk View SE Client launches the application. Continue to the next section to validate communication and perform data logging.

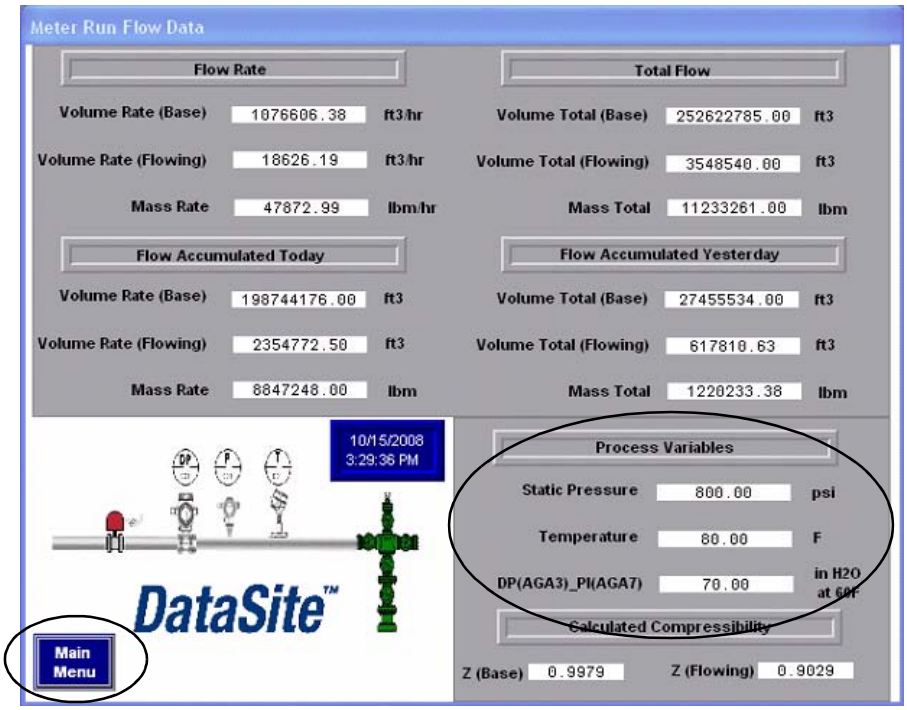
Validate Communication Between DataSite and Computer

You are now ready to validate communication between the DataSite unit and the industrial computer.

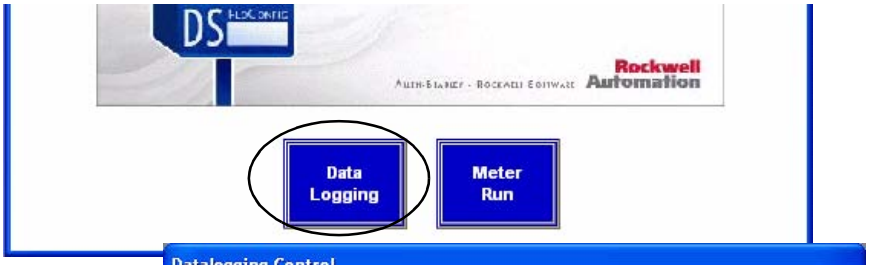
1. Press Meter Run.

You should see a screen with gas flow values for Meter Run 0.

2. Verify the process variables are correct and press Main Menu.



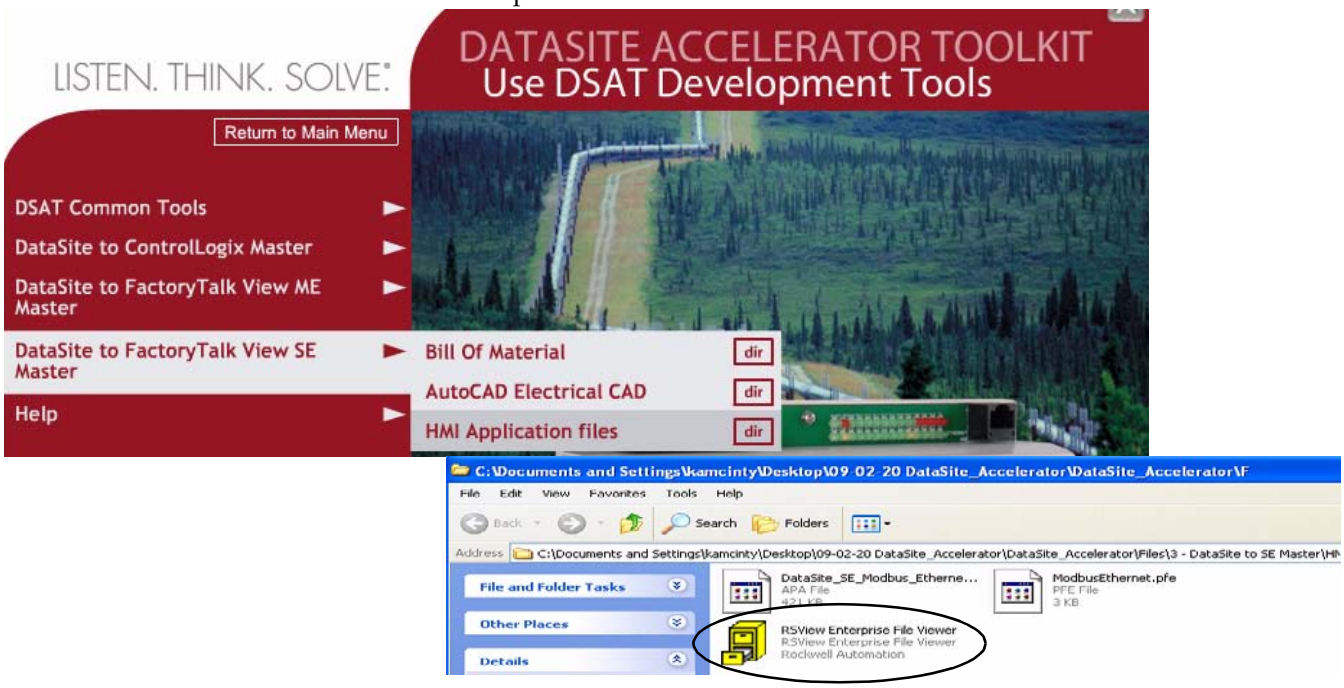
3. Press Data Logging.



4. Press Datalog ON.

5. Allow data logging to run for about one or two minutes, then press Datalog OFF.

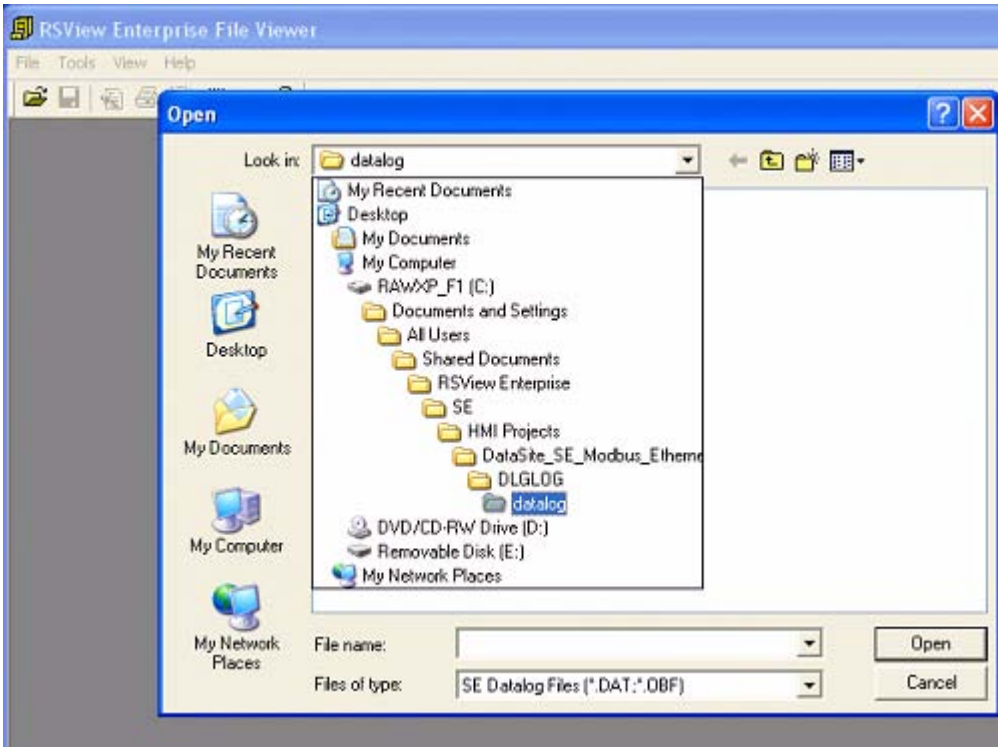
6. On the toolkit CD, choose DataSite to FactoryTalk View SE Master>HMI Application files, then double-click RSView Enterprise File Viewer.



7. From the File menu, choose Open.

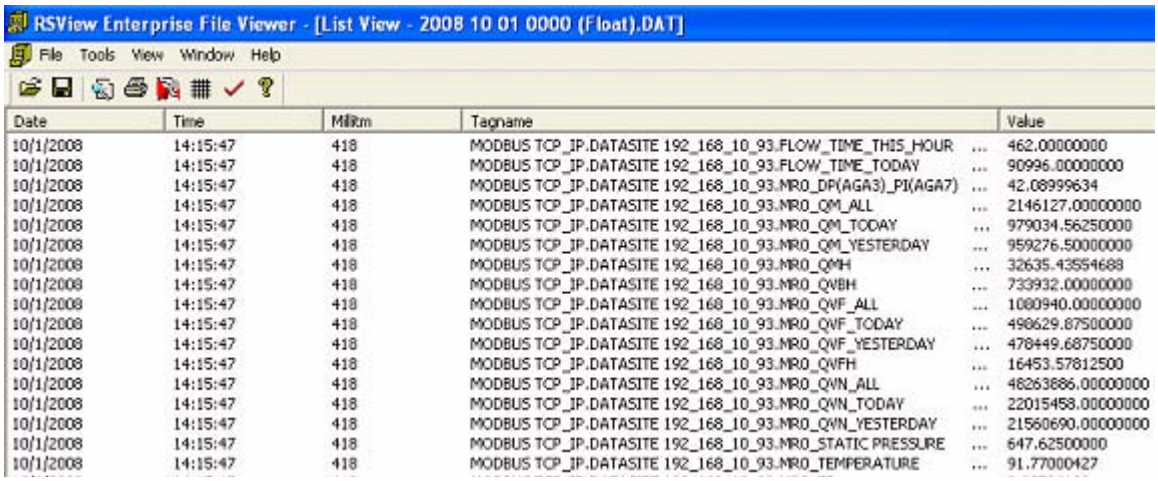
8. Drill down to the datalog folder and double-click it.

Default Location for datalog folder:
C:\Documents and Settings\All Users\Documents\RSView Enterprise\SE\HMI Projects\DataSite_SE_Modbus_Ethernet\DLGLOG\datalog



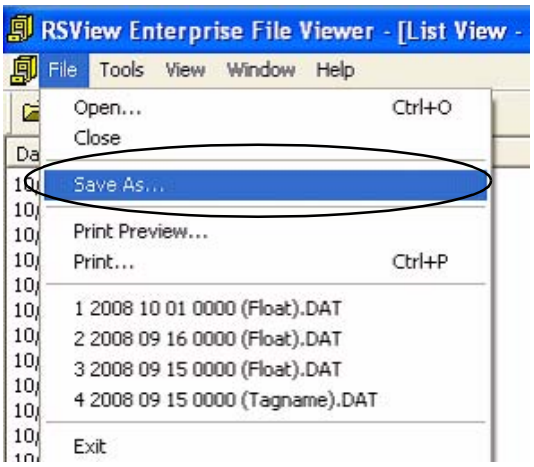
9. Select the file with the latest date, where the format of the file name is YYYY MM DD 0000 (Float).DAT.

A file similar to this displays.



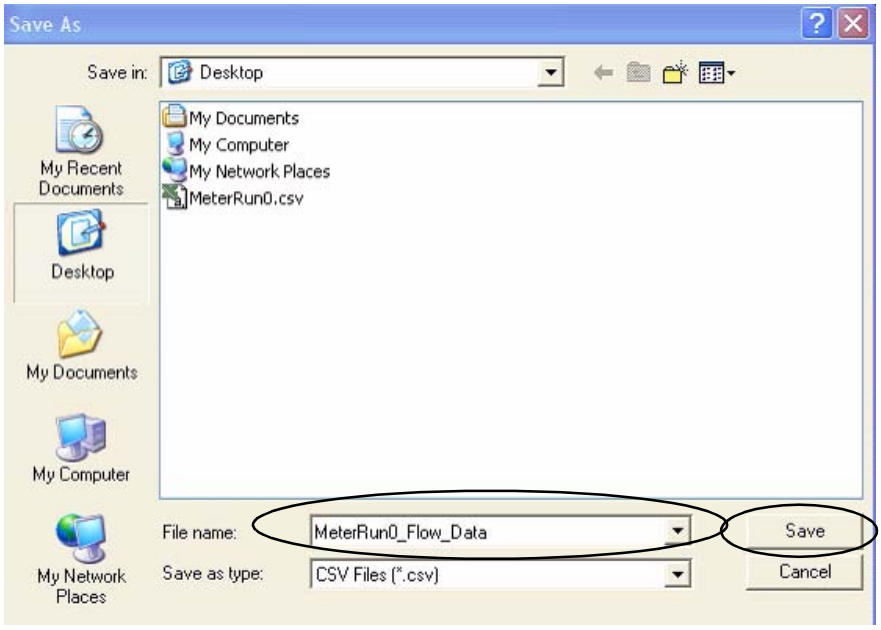
Date	Time	Millitm	Tagname		Value
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.FLOW_TIME_THIS_HOUR	...	462.00000000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.FLOW_TIME_TODAY	...	90996.00000000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_DP(AGA3)_PI(AGA7)	...	42.08999634
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_QM_ALL	...	2146127.00000000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_QM_TODAY	...	979034.56250000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_QM_YESTERDAY	...	959276.50000000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_QMH	...	32635.43554688
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_QVBH	...	733932.00000000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_QVF_ALL	...	1080940.00000000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_QVF_TODAY	...	490629.87500000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_QVF_YESTERDAY	...	478449.68750000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_QVFH	...	16453.57812500
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_QVN_ALL	...	48263686.00000000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_QVN_TODAY	...	22015458.00000000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_QVN_YESTERDAY	...	21560690.00000000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_STATIC PRESSURE	...	647.62500000
10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MRO_TEMPERATURE	...	91.77000427

10. From the File menu, choose Save As.



11. Enter a file name, then click Save.

The file is saved in a .csv format for viewing in Excel.



12. Go to your desktop and locate the file just created.

13. Double-click MeterRun0_Flow_Data.csv to view the data in Microsoft Excel.

14. View and manipulate the data if necessary.

Microsoft Excel - MeterRun0_Flow_Data.csv

File Edit View Insert Format Tools Data Window Help

SnagIt Window

I2

	A	B	C	D	E
1	;Date	Time	Millitm	Tagname	Value
2	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.FLOW_TIME_THIS_HOUR	462
3	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.FLOW_TIME_TODAY	90996
4	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_DP(AGA3)_PI(AGA7)	42.08999634
5	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_QM_ALL	2146127
6	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_QM_TODAY	979034.5625
7	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_QM_YESTERDAY	959276.5
8	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_QMH	32635.43555
9	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_QVBH	733932
10	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_QVF_ALL	1060940
11	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_QVF_TODAY	498629.875
12	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_QVF_YESTERDAY	478449.6875
13	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_QVFH	16453.57813
14	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_QVN_ALL	48263886
15	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_QVN_TODAY	22015458
16	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_QVN_YESTERDAY	21560690
17	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_STATIC PRESSURE	647.625
18	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_TEMPERATURE	91.77000427
19	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_ZB	0.99786103
20	10/1/2008	14:15:47	418	MODBUS TCP_IP.DATASITE 192_168_10_93.MR0_ZF	0.92668304

You have just completed the setup and validation of the DataSite to Master SE configuration.

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At http://support.rockwellautomation.com, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration, and troubleshooting, we offer TechConnect support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit http://support.rockwellautomation.com.

Installation Assistance

If you experience a problem within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your product up and running.

United States	1.440.646.3434 Monday – Friday, 8 a.m. – 5 p.m. EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

New Product Satisfaction Return

Rockwell Automation tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

United States	Contact your distributor. You must provide a Customer Support case number (see phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

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