

# SCADAPack Controller

## Quick Start Guide

5/19/2011



The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein. If you have any suggestions for improvements or amendments or have found errors in this publication, please notify us.

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All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components.

When devices are used for applications with technical safety requirements, the relevant instructions must be followed. Failure to use Schneider Electric software or approved software with our hardware products may result in injury, harm, or improper operating results.

Failure to observe this information can result in injury or equipment damage.

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## Safety Information

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Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a Danger or Warning safety label indicates that an electrical hazard exists, which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

### **DANGER**

**DANGER** indicates an imminently hazardous situation which, if not avoided, **will result in** death or serious injury.

### **WARNING**

**WARNING** indicates a potentially hazardous situation which, if not avoided, **can result in** death or serious injury.

### **CAUTION**

**CAUTION** indicates a potentially hazardous situation which, if not avoided, **can result in** minor or moderate.

### **CAUTION**

**CAUTION** used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, **can result in** equipment damage..

**PLEASE NOTE**

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and the installation, and has received safety training to recognize and avoid the hazards involved.

**BEFORE YOU BEGIN**

Do not use this product on machinery lacking effective point-of-operation guarding. Lack of effective point-of-operation guarding on a machine can result in serious injury to the operator of that machine.

 **CAUTION****EQUIPMENT OPERATION HAZARD**

Verify that all installation and set up procedures have been completed.

Before operational tests are performed, remove all blocks or other temporary holding means used for shipment from all component devices.

Remove tools, meters, and debris from equipment.

**Failure to follow these instructions can result in injury or equipment damage.**

Follow all start-up tests recommended in the equipment documentation. Store all equipment documentation for future references.

**Software testing must be done in both simulated and real environments.**

Verify that the completed system is free from all short circuits and grounds, except those grounds installed according to local regulations (according to the National Electrical Code in the U.S.A, for instance). If high-potential voltage testing is necessary, follow recommendations in equipment documentation to prevent accidental equipment damage.

Before energizing equipment:

- Remove tools, meters, and debris from equipment.
- Close the equipment enclosure door.
- Remove ground from incoming power lines.
- Perform all start-up tests recommended by the manufacturer.

**OPERATION AND ADJUSTMENTS**

The following precautions are from the NEMA Standards Publication ICS 7.1-1995 (English version prevails):

- Regardless of the care exercised in the design and manufacture of equipment or in the selection and ratings of components, there are hazards that can be encountered if such equipment is improperly operated.
- It is sometimes possible to misadjust the equipment and thus produce unsatisfactory or unsafe operation. Always use the manufacturer's instructions as a guide for functional adjustments. Personnel who have access to these adjustments should be familiar with the equipment manufacturer's instructions and the machinery used with the electrical equipment.
- Only those operational adjustments actually required by the operator should be accessible to the operator. Access to other controls should be restricted to prevent unauthorized changes in operating characteristics.

## About The Book

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### At a Glance

#### Document Scope

This manual describes the quick start procedure for the SCADAPack controller using Telepace firmware.

#### Validity Notes

This document is valid for all versions of SCADAPack controller and Telepaceo.

#### Product Related Information

### **WARNING**

#### **UNINTENDED EQUIPMENT OPERATION**

The application of this product requires expertise in the design and programming of control systems. Only persons with such expertise should be allowed to program, install, alter and apply this product.

Follow all local and national safety codes and standards.

Failure to follow these instructions can result in death, serious injury or equipment damage.

#### User Comments

We welcome your comments about this document. You can reach us by e-mail at [technicalsupport@controlmicrosystems.com](mailto:technicalsupport@controlmicrosystems.com).

## Overview

This document is meant to be a guide to help new users configure, program and operate the SCADAPack controller, in a timely fashion. It is not meant as a substitute for the Telepace Ladder Logic and SCADAPack Controller manuals, but rather as a companion to these manuals. A strong background in both programmable logic controllers (PLC) and personal computers (PC) using Windows is highly recommended. If any difficulty is encountered during the setup, it may be necessary to then consult the appropriate manual or call the Control Microsystems Technical Support Department for assistance.



## Quick-Start Procedure

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### Connect Input Power

Connect the 16Vrms or 24V wiring to the AC/DC PWR IN terminals on the 5203/5204 board. Power to the controller is not applied at this time

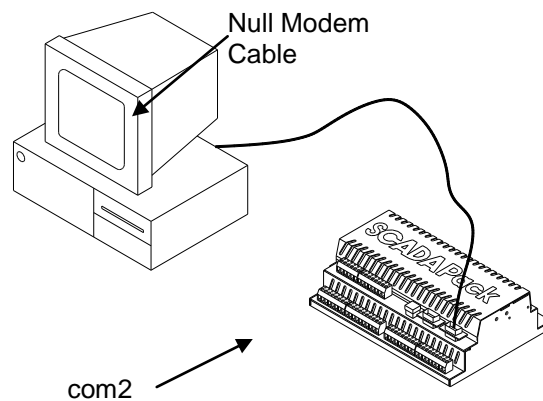
### Power Up In Cold Boot Mode

This procedure initializes the serial communication parameters and the I/O database registers to their default values, erases the Register Assignment, Ladder Logic and C programs, and unlocks the controller.

- Hold down the LED POWER button.
- Apply power to the SCADAPack controller.
- Continue holding the LED POWER button for 25 seconds until the STAT LED begins to flash on and off continuously.
- Release the LED POWER button.

### Connect Computer to SCADAPack

Connect a null modem cable from the computer serial port to com2 on the SCADAPack controller board.



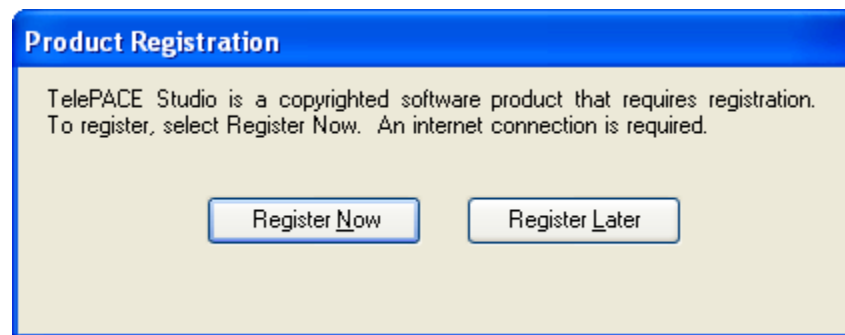
### Install Telepace Software

Insert the Telepace Studio CD into the CD ROM drive. The CD will autorun and start the installation wizard. Follow the installation wizard instructions to install the Telepace Studio programming software.

When Telepace Studio is run a prompt is displayed to register Telepace.

- Select **Register Now** to go to the registration page or **Register Later** to continue without registering Telepace.

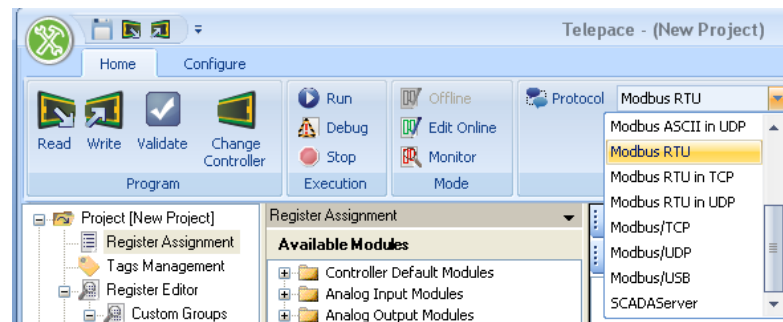
The prompt will be displayed each time Telepace is opened until the registration process is completed.



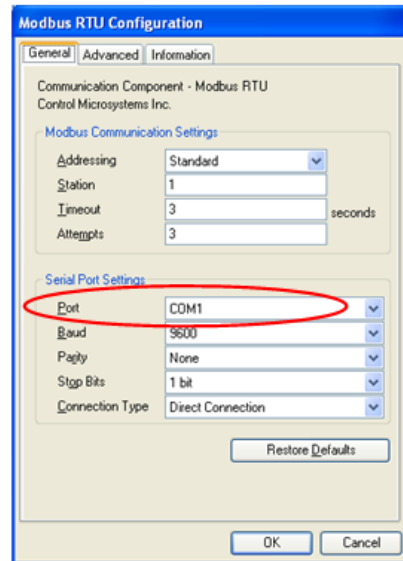
## Configure Computer Serial Port

For this Quick Start Guide a serial communication link is used to connect Telepace Studio and the target SCADAPack 32 controller. This communication link is used to control the downloading of applications to the target controller, monitoring the applications running in the target controller and the starting and stopping of applications in the target controller.

To set the PC Communication parameters select **Modbus RTU** from the **Protocol** selection window in the **PC Communications** group of the Program ribbon.



Check that **Modbus RTU** is selected and click the **Settings** button. The **Modbus RTU Configuration** dialog is opened.



The **Modbus Communication Settings** grouping contains Modbus specific communication settings.

- Set the **Addressing** parameter to **Standard**.
- Set the **Station** parameter to **1**.
- Set the **Timeout** parameter to **3**.
- Set the **Attempts** parameter to **3**.

This **Serial Port Settings** grouping contains details directly related to the PC's communication port including the port number, the baud rate, parity and stop bit settings.

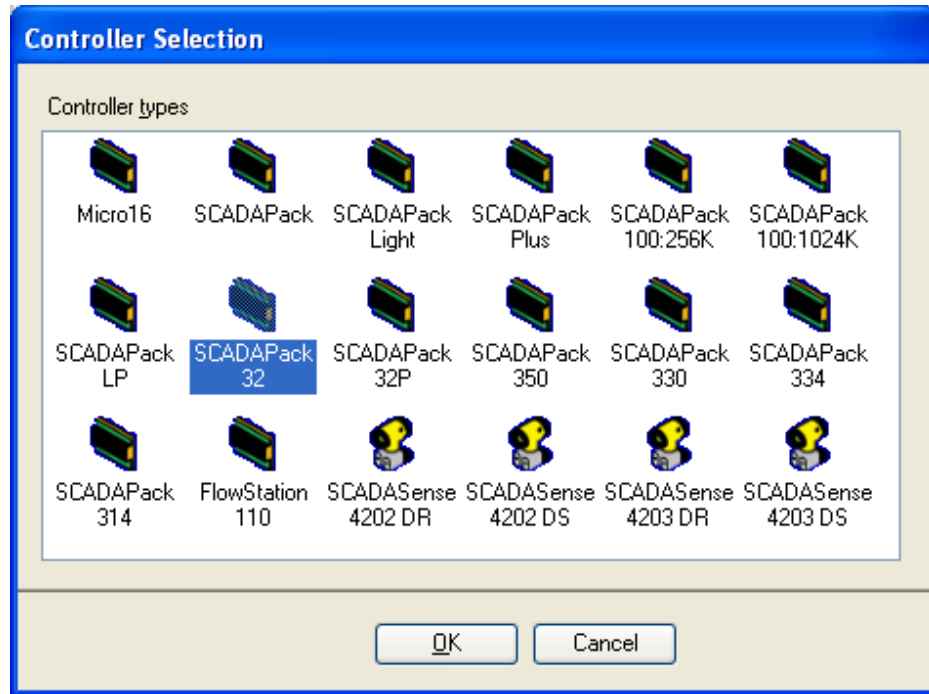
Set the **Port** parameter for the PC serial port to use. The drop-down list will display available serial ports on the PC. The available serial ports list will include any USB to serial converters used on the PC.

- Set the **Baud** parameter to **9600**.
- Set the **Parity** parameter to **none**.
- Set the **Stop Bits** parameter to **1**.
- Set the **Connection Type** parameter to **Direct Connection**.

## Select Controller Type

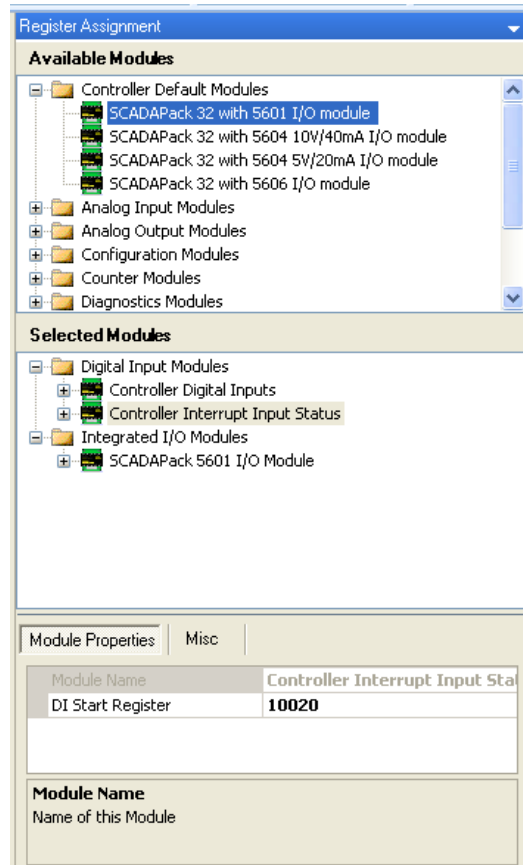
When the New command is selected the Controller Selection window is displayed. Projects in Telepace Studio are created for a specific controller type.

Select **SCADAPack** from the displayed list of controllers.



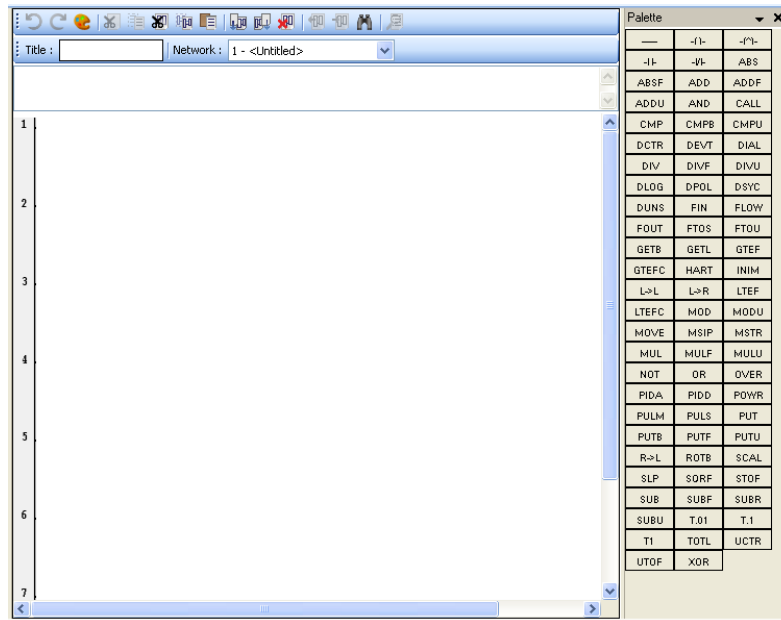
### Configure Register Assignment

I/O hardware that is used by the controller are assigned to I/O database registers in order for the I/O data to be used by the ladder program. Ladder logic programs may read data from, or write data to, the I/O hardware through user-assigned registers in the I/O database.



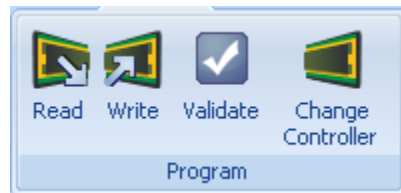
## Program Ladder Logic

The Ladder Editor view contains an editor canvas, a Ladder Function selection control and a function properties grid.



## Write Ladder Logic to the Controller

The Write command writes the ladder logic program, register assignment, serial port settings and Ethernet settings in the Telepace program to the SCADAPack 32 controller.



- Once the application is written to the controller the application will start to run.

The application may now be viewed in real time. Select Monitor Dictionary from the Mode group in the Program ribbon.



The Quick-Start procedure is complete! 😊

## Troubleshooting

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If difficulty arises at any step in the procedure, review the pertinent steps to check that they have been followed correctly and if needed contact the technical support department at Control Microsystems for further assistance.

### Toll Free Technical Support

Users in Canada and the United States may call our technical support department free of charge. You will be connected to the nearest support center to your time zone.

Telephone: 1-888-226-6876 (1-888-2CONTROL)

### Kanata Technical Support Center

Telephone, facsimile and e-mail support are available from 8:00 to 18:30 (North American Eastern Time Zone) at the following numbers. When calling, please ask for a Technical Support Representative.

Telephone: 1-613-591-1943

Facsimile: 1-613-591-3145

E-Mail: [technicalsupport@controlmicrosystems.com](mailto:technicalsupport@controlmicrosystems.com)

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