OPCWORX
USER MANUAL

red lion

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Written by Mike Granby and Jesse Benefiel.

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GETTING STARTED

Welcome to OPCWorx—an OPC server configuration package from Red Lion Controls. OPCWorx is designed as an easy to use tool for configuration of Red Lion's OPC servers.

SYSTEM REQUIREMENTS

OPCWorx is designed to run on PCs with the following specifications…

- A Pentium class processor as required by the chosen operating system.
- RAM and free disk space as required by the chosen operating system.
- An additional 10MB of disk space for software installation.
- A display of at least 800 by 600 pixels, with 256 or more colors.
- An installed OPC client compliant to v2 or v3 specifications.

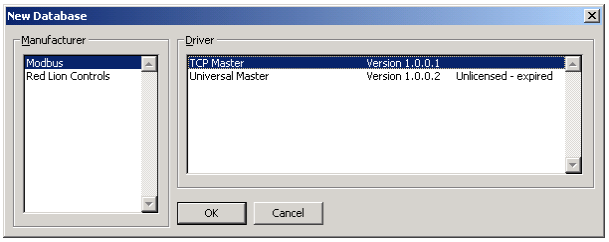
OPCWorx is designed to operate with all versions of Microsoft Windows from Windows 95 upwards.

INSTALLING THE SOFTWARE

You may obtain a free 30-day trial copy of OPCWorx from Red Lion's website. Simply execute the download file, and follow the instructions. After the time-out period expires, a key must be obtained to continue using OPCWorx.

CONFIGURING A SERVER

To create a new server, simply select the New command from the File menu. Assuming you have more than one server installed, the following dialog will appear…



Select the appropriate manufacturer and driver, and press the OK button to close the dialog box. The server will then be configured to use the appropriate protocol, and a single device icon will be created in the left-hand pane.

SERVER SETTINGS

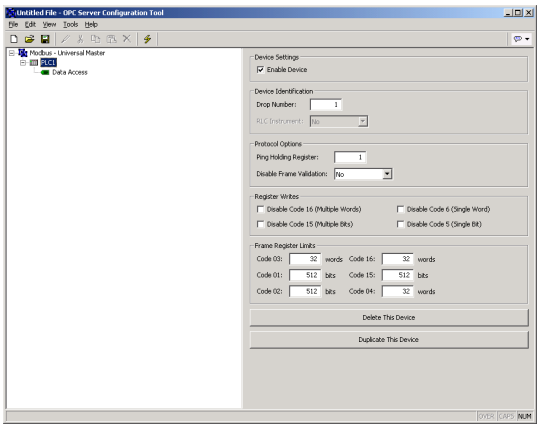
The Update Rate property allows you to adjust the time between updates of the server's data. Enter the desired value in milliseconds.

DRIVER SETTINGS

If you are configuring a serial port, the various Port Settings fields (Baud Rate, Data Bits, Stop Bits and Parity) will be set to values appropriate to the protocol in question. You should check these settings to make sure that they correspond to the settings for the device to be addressed.

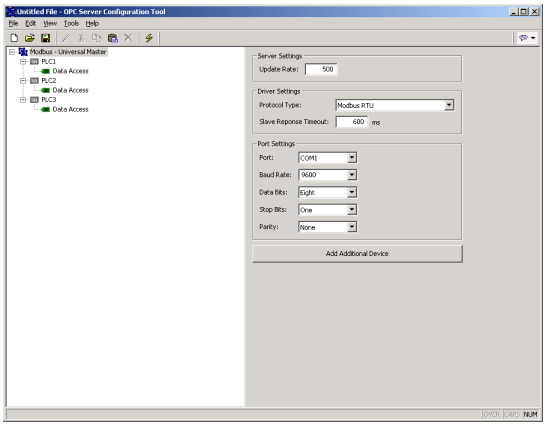
PROTOCOL OPTIONS

Some protocols require additional configuration of parameters specific to that protocol. These appear in the right-hand pane of the window when the corresponding device icon is selected. The example below shows the additional parameters for the Modbus Universal Master driver, which appears on the right hand pane of the window.



WORKING WITH DEVICES

As mentioned above, when a device driver is selected, a single device icon is created. This represents the initial remote device to be addressed via the protocol. If the protocol supports access to more than one device, you can use the Add Additional Device button included with the port icon's properties to add further target devices. Each device is represented via an icon in the left-hand pane of the Communications window, and, depending on the protocol in question, may have a number of properties to be configured…

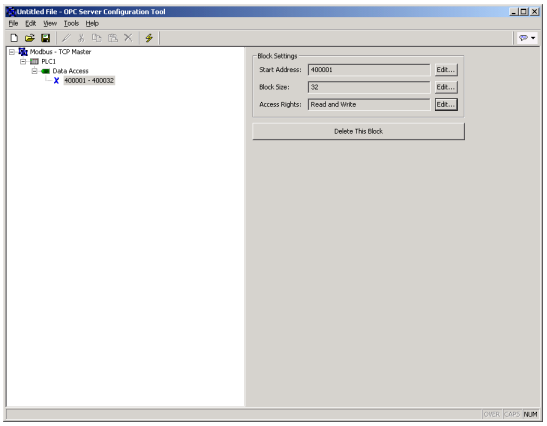


In the example above, the Modbus Universal Master protocol has been selected, and two additional devices have been created, indicating that a total of three remote devices are to be accessed. The right-hand pane of the window shows the properties of a single device. Note that the devices are given default names by OPCWorx when they are created. These names may be changed by selecting the appropriate icon in the left-hand pane, and simply typing the new device name.

DATA ACCESS

GENERIC SERVER

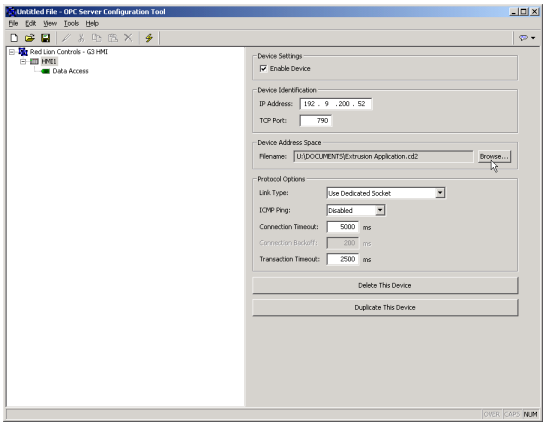
Having configured the protocol, you must now decide what range of addresses you want the protocol to access. In this example, we want to access Modbus registers **40001** through **40032**. We begin by selecting the device icon in the left-hand pane of the OPCWorx window, and clicking the Create New Block button in the right-hand pane. An icon to represent Block 1 will appear, and selecting it will show the following settings…



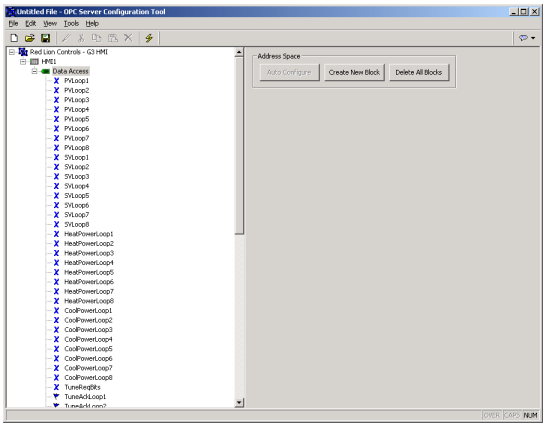
In the example above, we have configured the Start Address to **40001** to indicate that this is where we want the block to begin. We have also configured the Block Size to 32. Finally, we have configured the Access Rights as Read and Write, to indicate that we want the OPC client to be able to read and write data items exposed via this block.

G3 HMI SERVER

The G3 HMI server allows you to reference the same database used to configure the HMI, saving considerable time while preventing mapping errors. Start by selecting the device icon in the left-hand pane of the OPCWorx window, and click the Browse button under Device Address Space on the right-hand pane. Select the proper cd2 file.



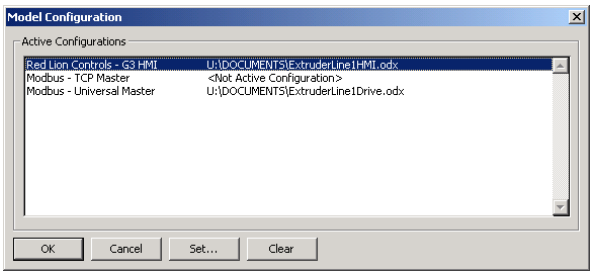
Finish by clicking the Data Access item on the left-hand pane, and then the Auto Configure button on the right-hand pane. The data items will be configured automatically, using the tag names from the cd2 file.


Untitled File - OPC Server Configuration Tool
File Edit View Tools Help
Red Lion Controls - G3 HMI
HMI1
Data Access
PVLoop1
PVLoop2
PVLoop3
PVLoop4
PVLoop5
PVLoop6
PVLoop7
PVLoop8
SVLoop1
SVLoop2
SVLoop3
SVLoop4
SVLoop5
SVLoop6
SVLoop7
SVLoop8
HeatPowerLoop1
HeatPowerLoop2
HeatPowerLoop3
HeatPowerLoop4
HeatPowerLoop5
HeatPowerLoop6
HeatPowerLoop7
HeatPowerLoop8
CoolPowerLoop1
CoolPowerLoop2
CoolPowerLoop3
CoolPowerLoop4
CoolPowerLoop5
CoolPowerLoop6
CoolPowerLoop7
CoolPowerLoop8
TuneRegBits
TuneAckLoop1
Address Space
Auto Configure
Create New Block
Delete All Blocks
OVER CAPS NUM

SETTING ACTIVE CONFIGURATION

Once the configuration is complete, you must set it as the active configuration for that particular device driver. If you haven't yet saved your configuration, do so before proceeding.

You can select the active configuration by using the Tools-Set Active Config command, or via the lightning-bolt symbol on the toolbar.



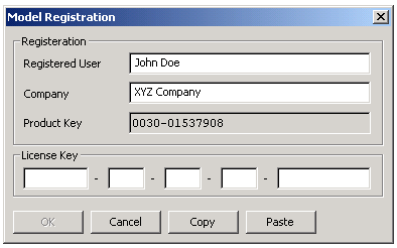
In the above example, the G3 – HMI and Modbus – Universal Master servers are configured, while the Modbus – TCP Master is not. To use a different configuration, click the Set button, and select a different file. If you want to disable an existing server, click the Clear button.

REGISTRATION

The OPCWorx demo is available as a free 30-day trial copy. If you wish to continue using OPCWorx, you must register each of the servers you want to use.

NOTE: Before proceeding, make sure you've either opened an existing server configuration, or create a new one, with the appropriately selected device driver. As the registration information is unique to each PC, you must ensure that you are using the PC on which you want the server registered.

From the Tools menu, select Register Server. A dialog box similar to this one will appear…



The Product Key is unique to each PC, and it is this information that is used to generate the License Key. Therefore, the Product Key must be provided at the time of order. To facilitate this process, you may click the Copy button, and then paste the information into the necessary forms during ordering.

Further to this, if you receive the License Key electronically, you may copy the number, and by using the Paste button, quickly enter the information into the registration dialog. By pressing OK, the number is stored, and the server is now registered.

USING THE SERVER

Within the client's configuration environment, there will exist a method to select from a list of available servers. You will find the OPCWorx servers listed as **`RedLionControls.name`**, where **`name`** is the type of server(s) you've configured, and have set active.

The server data exposed to the client will be named in the same fashion as OPCWorx provided under Data Access.