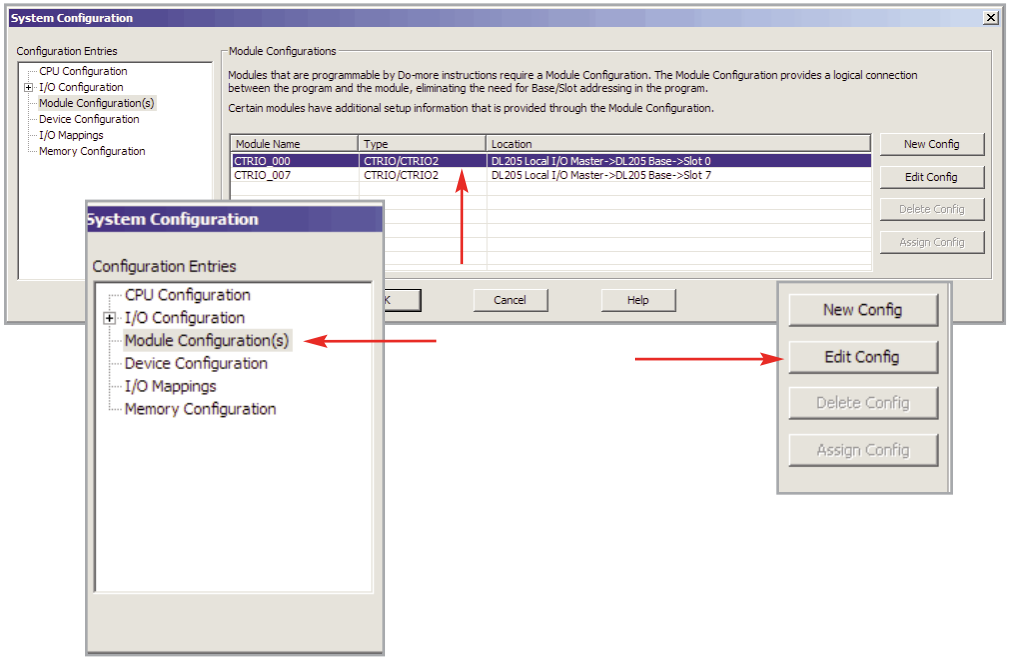
Introduction to CTRIO Workbench

In This Chapter...

Configuring a CTRIO Module for Do-more CPUs

With Do-more CPUs, the CTRIO Workbench software utility is not used. The functionality of CTRIO Workbench is integrated into the Module Configuration for the CTRIO module. To access it in Do-more Designer, open the System Configuration page, select Module Configuration from the directory on the left, then find the CTRIO module you are configuring in the list provided. Click the module to select it, then select Edit Config.



If you are using a Do-more CPU, the rest of this chapter does not pertain to you. See the following chapters for information on configuring the inputs and outputs of your module using Do-more Designer.

What is CTRIO Workbench?

CTRIO Workbench is the software utility you will use to configure the CTRIO module's inputs and outputs. Workbench also lets you setup the CTRIO's built-in scaling function that will scale signals to desired engineering units, switch between the CTRIO's Program mode and Run mode, monitor I/O status and functions, and have diagnostic control of module functions.

NOTE: *CTRIO Workbench Version 2.2.0 is required for the Hx-CTRIO2. Download the latest version of the CTRIO Workbench utility at no charge from the Host Engineering Web site:* ***www.hosteng.com.***

Installing CTRIO Workbench

The CTRIO Workbench utility installs directly from its executable file. Double click on the Setup.exe icon. The install shield will step you through the installation process. The utility installs into C:\HAPTools directory. Find shortcuts to CTRIO Workbench from the Windows Start Menu under All Programs>AutomationDirect Tools.

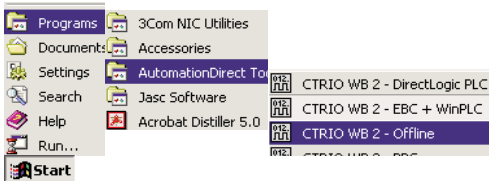
Getting Started with CTRIO Workbench

Several paths are available to start CTRIO Workbench. All users will find CTRIO Workbench at Start>Programs>AutomationDirect Tools>CTRIO Workbench. ***Direct***SOFT5 users will find CTRIO Workbench in the Utilities section of the DSLaunch Window.

Offline CTRIO Configuration

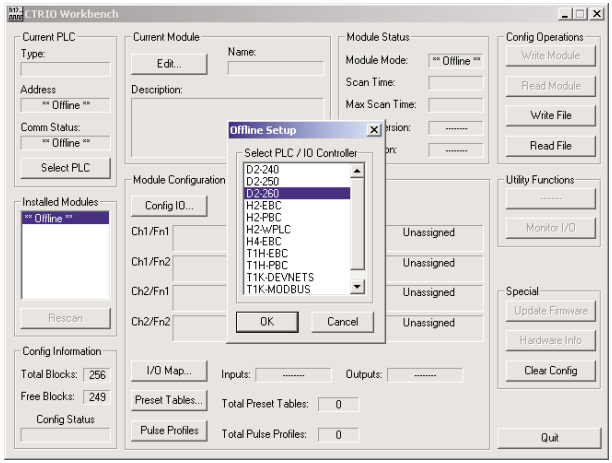
A complete CTRIO configuration file (.cwb) can be created Offline. (Refer to chapter 6 for offline addressing guidelines for some of the interface devices.)

To launch the CTRIO Workbench 2 Offline version, go to Start>Programs>AutomationDirect Tools>CTRIO WB2 - Offline.



In the Workbench Offline window shown to the right, click on the Select PLC button. Select desired PLC or interface device.

The only limitations in the Offline version are that you cannot access Monitor I/O and that you cannot connect to the CTRIO from the Offline utility. Save the configuration file to disk and connect to the CTRIO using the appropriate Workbench support version, then write the file to the CTRIO.

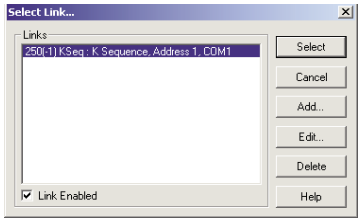


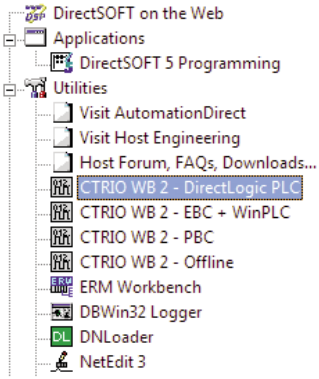
Online CTRIO Configuration

To configure the CTRIO module Online, a CTRIO must be installed in the PLC base or Terminator I/O system, and the system power must be on. Your PC communicates with the CTRIO module through the PLC or interface device port.

*Direct*SOFT5 Users

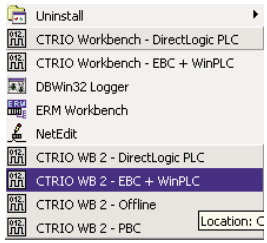
You will need to connect your PC to the CPU, DCM or ECOM module. If you are linked to your CPU through *Direct*SOFT5, CTRIO Workbench will start via the existing link. If you are "disconnected" from your PLC and start CTRIO Workbench, you will be prompted to establish a link to your CTRIO module.





*Direct*SOFT5 users will find CTRIO Workbench in the DSLaunch Window's Utilities section.

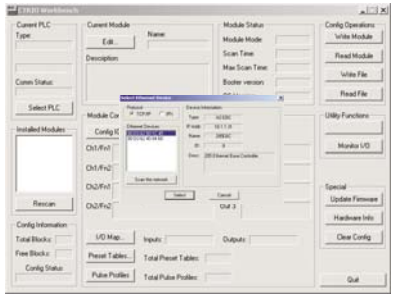
WinPLC, EBC and PLC>ERM>EBC Users



You will need to connect your PC to the RJ45 Ethernet port on the WinPLC or EBC interface device directly or via hub, switch,etc. (Connect to the ST-style fiber optic port on the Hx-EBC-F units.)

Access the WinPLC and EBC support version at Start>Programs>AutomationDirect Tools>CTRIO Workbench or in the *Direct*SOFT5 Launch Window Utilities menu. Then select the appropriate Workbench version.

You will be prompted to establish an Ethernet link to your CTRIO module.

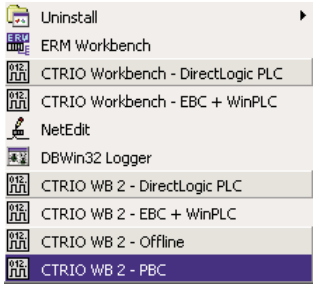


NOTE: *WinPLCs will need to be given an IP address before connecting with Workbench.*
EBCs will need to have an address selected by DIP Switch or via NetEdit before connecting with Workbench.

PBC, DEVNETS and MODBUS Users

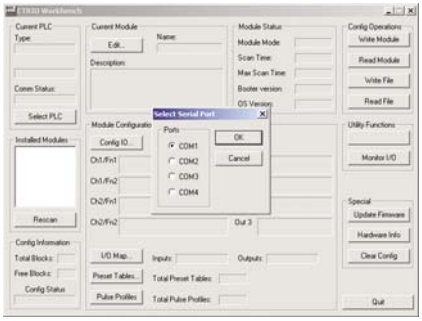
You will need to connect your PC to the RJ12 serial port on the PBC, DEVNETS or MODBUS interface device.

Access the various support versions at Start>Programs>AutomationDirect Tools>CTRIO Workbench or in the *Direct*SOFT5 Launch Window Utilities menu. Then select the appropriate Workbench version.



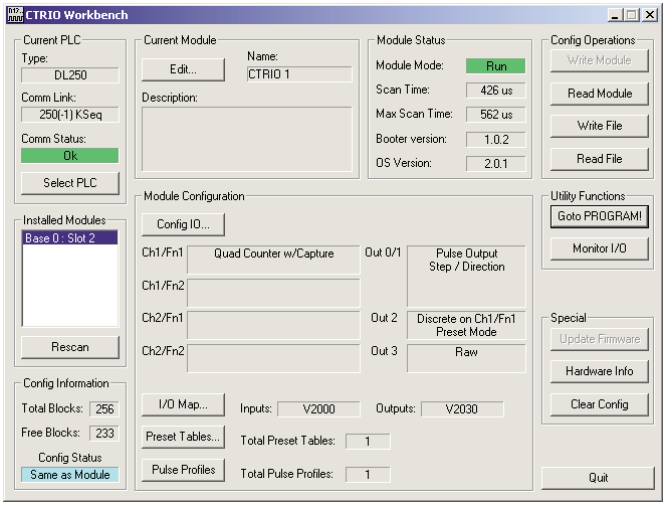
You will be prompted to establish a serial link to your CTRIO module.

Select the PC serial port Workbench will use to connect to the CTRIO module.

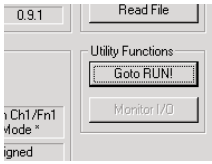


Successful On-line Connection

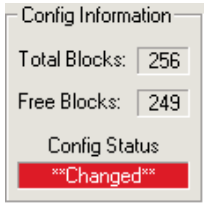
Once you are connected to your CTRIO module, you will enter the main window of CTRIO Workbench. Here, you select the CTRIO module you wish to configure by clicking on its slot number in the "Installed Modules" box. You will be able to enter Workbench's Configuration dialog, and after successfully configuring the module you will be able to toggle the CTRIO module between Program Mode and Run Mode and enter the Monitor I/O dialog.



Module Modes of Operation



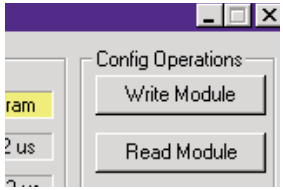
On the CTRIO Workbench main window, a single button toggles between Run Mode and Program Mode. The Module Mode indicator will tell you which mode your module is in. You can make configuration changes in either Run Mode or Program Mode, but to save your configuration to the module, you must click "Write Module" which is only active in Program Mode.



In the lower left corner of the main Workbench dialog, is the Config Status indicator. If the current configuration is different from the CTRIO and different from any saved files, the indicator will display the word "Changed." If the current configuration has been written to the module or a file, the message will read "Same as Module," "Same as File," or "Same as Both."

Program Mode - Configuring the CTRIO Module

After the configuration is created or changed in CTRIO Workbench, it must be "written" to the CTRIO module. This is accomplished by returning to the main CTRIO Workbench window and clicking on "Write Module."



If the configuration was created using Workbench Offline version, you must connect your PC to the CTRIO module through the CPU/controller and write the configuration to the module.

NOTE: *Entering program mode takes the CTRIO module offline. Input pulses are not read or processed in Program mode, and all outputs are disabled. CPUs will hold last value in memory while the CTRIO is in Program Mode.*

Run Mode - Start Processing I/O Pulses with the CTRIO Module

Selecting Run Mode causes the CTRIO module to begin processing pulses based on the I/O configuration you created.

In Run mode the CTRIO Workbench utility also allows you to monitor and verify the proper operation of inputs and outputs. You can see the count change, reset, etc. using the Monitor I/O dialog. Monitor I/O is very useful for debugging and commissioning of a new system. See chapter 7 for information on Monitor I/O.

The CTRIO mode follows the CPU mode. If the CPU is placed in Run Mode, the CTRIO module will also enter Run Mode. If the CPU is placed in STOP or PROGRAM Mode, the CTRIO will enter Program Mode. The CTRIO also responds to mode changes made in Workbench and can be placed in Run Mode while the CPU is in Stop or Program Mode. The CTRIO module responds to the most recent change whether performed in Workbench or from the CPU.

NOTE: *The CTRIO module will not enter Run Mode if it does not have a valid configuration.*