CTRIO Workbench, Overview

CHAPTER
4

In This Chapter...

Configuring a CTRIO Module for Do-more CPUs

NOTE: The functionality of CTRIO Workbench is integrated into the Do-more CPU software. Check Do-more documentation for help with CTRIO application.

What is CTRIO Workbench?

CTRIO Workbench is the software utility used to configure the CTRIO(2) module's inputs and outputs. Workbench provides a built-in scaling function to configure signals to desired engineering units, switch between the CTRIO(2) 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 or later 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 through the installation process. The utility install` defaults 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*SOFT 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.

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

In the Workbench Offline window, as shown below, click on the Select PLC button. Select desired PLC or interface device.
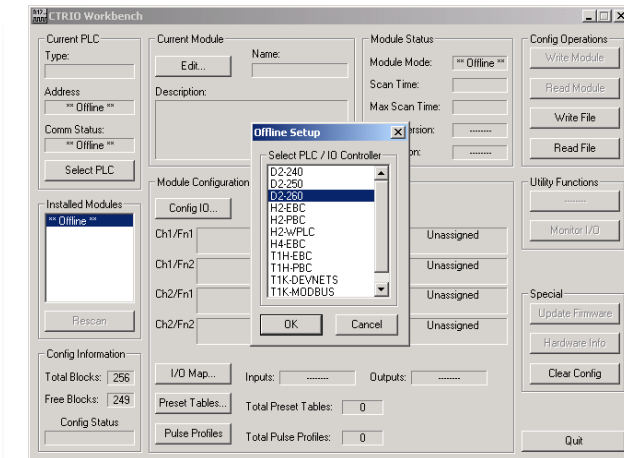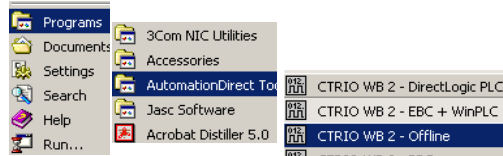
The only limitations in the Offline version are that Monitor I/O is not enabled and connecting to the CTRIO(2) from the Offline utility is not possible. Save the configuration file to disk and connect to the CTRIO(2) using the appropriate Workbench support version, then write the file to the CTRIO(2).

Online CTRIO Configuration

To configure the CTRIO(2) module Online, a CTRIO(2) must be installed in the PLC base or Terminator I/O system, and the system power must be on. The PC communicates with the CTRIO(2) module through the PLC or interface device port.

*Direct*SOFT Users

Connect the PC to the CPU, DCM or ECOM module. If linked to a CPU through *Direct*SOFT, CTRIO Workbench will start via the existing link. If disconnected from the PLC and open CTRIO Workbench, a prompt appears to establish a link to the CTRIO(2) module.
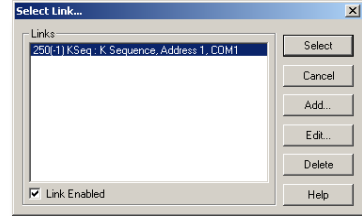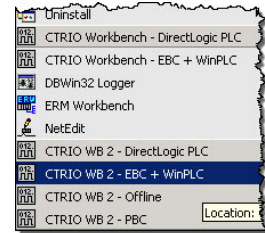
*Direct*SOFT users will find CTRIO Workbench in the DSLaunch Window's Utilities section.
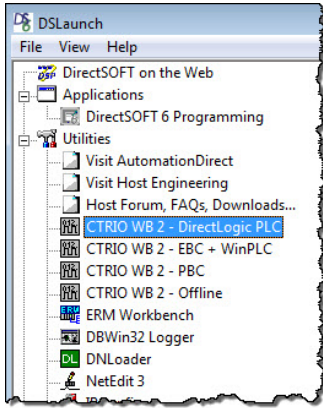
WinPLC, EBC and PLC>ERM>EBC Users

Connect to the PC with 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).
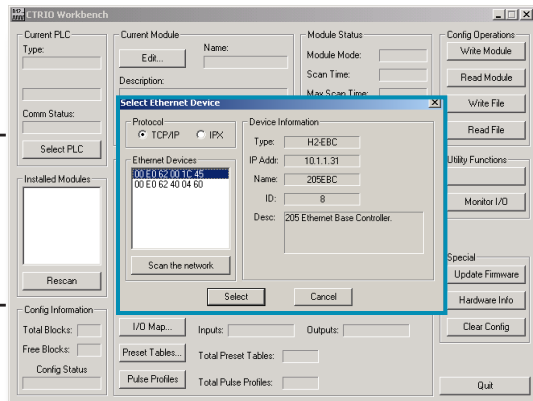
Access the WinPLC and EBC support version at

Start>Programs>AutomationDirect Tools>CTRIO WB2 - EBC + WinPLC or select CTRIO WB2 - EBC + WinPLC in the *Direct*SOFT Launch Window Utilities menu.

A prompt will appear to establish an Ethernet link to the CTRIO(2) 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.
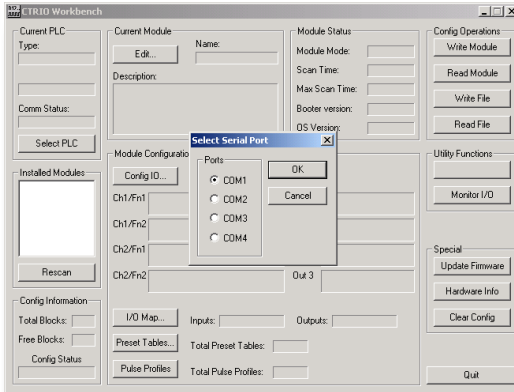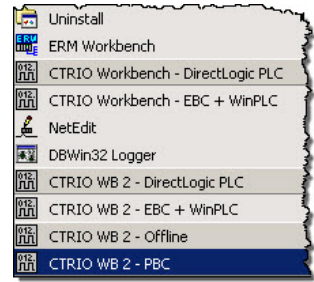
PBC Users

Connect PC to the RJ12 serial port on the PBC interface device.

Access the PBC support version at Start>Programs>AutomationDirect Tools>CTRIO WB2 - PBC or select CTRIO WB2 - PBC in the *Direct*SOFT Launch Window Utilities menu.

A prompt appears to establish a serial link to the CTRIO(2) module.

Select the PC serial port Workbench will use to connect to the CTRIO(2) module.

Successful On-line Connection

Once connected to the CTRIO(2) module, the main window of CTRIO Workbench is enabled. Here, select the CTRIO(2) module to configure by clicking on its slot number in the "Installed Modules" box.

In Workbench's Configuration dialog, after successfully configuring the module, toggle the CTRIO(2) module between Program Mode and Run Mode and enter the Monitor I/O dialog.
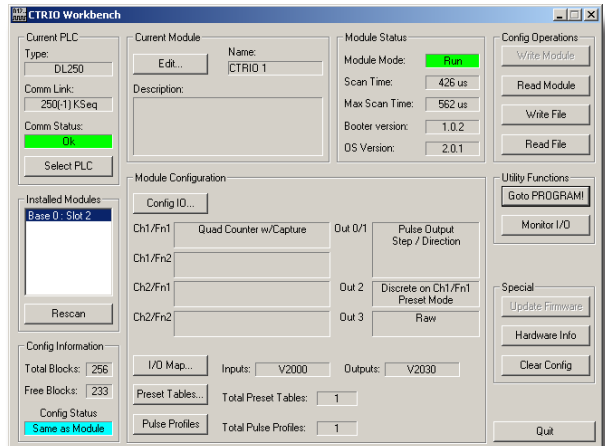
Module Modes of Operation

On the CTRIO Workbench main window, a single button toggles between Run Mode and Program Mode. The Module Mode indicator will show which mode the module is in. Make configuration changes in either Run Mode or Program Mode. To save the configuration to the module, 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(2) 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".
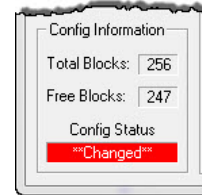
Program Mode - Configuring the CTRIO(2) Module

After the configuration is created or changed in CTRIO Workbench, it must be written to the CTRIO(2) 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, connect the PC to the CTRIO(2) module through the CPU/controller and write the configuration to the module.
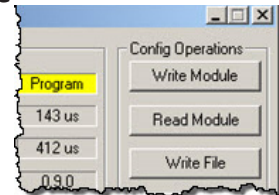
NOTE: Entering program mode takes the CTRIO(2) module offline. Input pulses are not read or processed in Program mode, and all outputs are disabled. CPUs will hold last value in memory while the CTRIO(2) is in Program Mode.

Run Mode - Start Processing I/O Pulses with the CTRIO(2) Module

Selecting Run Mode causes the CTRIO(2) module to begin processing pulses based on the I/O configuration created.

In Run mode the CTRIO Workbench utility also allows monitoring to verify the proper operation of inputs and outputs. Using Monitor I/O dialog, the count change, reset, etc. are displayed. Monitor I/O is very useful for debugging and commissioning a new system. See Chapter 8 "CTRIO Workbench, Monitor I/O" for more information.

The CTRIO mode follows the CPU mode. If the CPU is placed in Run Mode, the CTRIO(2) module will also enter Run Mode (see note below). If the CPU is placed in STOP or PROGRAM Mode, the CTRIO(2) will enter Program Mode. The CTRIO(2) 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(2) module responds to the most recent change whether performed in Workbench or from the CPU.

NOTE: The CTRIO(2) module will not enter Run Mode if it does not have a valid configuration.

Suspend (Output Reads) –
In Monitor I/O, Work Independently from the Controller

Another mode of operation is used in Monitor I/O. Suspended has the CTRIO(2) executing its code, but ignoring commands initiated in ladder logic. Instead, commands are taken only from Monitor I/O. Using Suspend prevents interference from the CPU while manually controlling the CTRIO module. CTRIO Workbench offers to '*Suspend* output reads' when Monitor I/O is opened.

Upon closing Monitor I/O, CTRIO Workbench offers to 'Enable output reads'. If left Suspended, the Outputs address field will be highlighted yellow, as seen below.