

# **Allen-Bradley Micro800 Series**

## Information Sheet for Crimson v3.0+

## **Compatible Devices**

• Allen-Bradley Micro800 Series PLCs

## **Verified Device**

• Micro820 2080-LC20-20QBB

## Overview

The Micro800 Series driver allows access to data tags in Allen-Bradley Micro800 series PLCs. It also provides a method to import tag definitions from Connected Components Workbench into Crimson 3.0.

## **Device Configuration**

The driver is found in the driver picker dialog, listed as "Micro800 Master" under the manufacturer "Allen-Bradley". There are several properties that can be configured for Ethernet and serial communications:

## **Ethernet**

IP Address: This is the IP address of the target Micro800 PLC.

*Transaction Timeout:* This is the amount of time that the driver will wait before a transaction is considered to have failed. Shorter times will detect failures sooner, but longer times will be more tolerant of slow connections.

#### <u>Serial</u>

Source Address: This is the source address that the HMI will use.

*Data Link Layer:* Select between Full-Duplex or Half-Duplex communications. This should be configured to match the setting used by the Micro800 PLC.

*Frame Validation:* Choose from CRC or BCC for the frame validation. This should be configured to match the setting used by the Micro800 PLC.

*Station Number:* This is the station number of the target Micro800 PLC.

*Transaction Timeout:* This is the amount of time that the driver will wait before a transaction is considered to have failed. Shorter times will detect failures sooner, but longer times will be more tolerant of slow connections.

### **Tag Creation**

The driver maintains a list of tag names that correspond to the tags configured in the Micro800 PLC. A tag import mechanism is provided, but these tags can also be manually created.

To create a tag, click on the Manage button from the device configuration page:

Communications - No	etwork - Protocol 1 - PLC2
Device Settings — Enable Device:	Yes 👻
Tag Names Manag	ge Import Export
Device Options —	
IP Address: Transaction Time	192.168.1.100 eout: 1000 ms

The following dialog will appear:

Manage Tag Names		<b>—</b> ×-
Tag Names		Create Tags
	*	BOOL  Create
		C Array
		Details
		Type:
		Minimum:
		Maximum:
	-	CIP Type:
Delete		Close

To create a new tag, select the appropriate type from the drop-down box:

Manage Tag Names	
Tag Names         BigArray         CounterVal         CountUpBit         CountUpDone         CountUpReset         DINT_Array         DoubleArray         Global_add_bit         Global_REAL         Global_reset_bit         Global_STRING         MultiArray         SingleArray         TextString	Create Tags

Then click the Create button and the following dialog will appear:

Create Tag
Tag Name
OK Cancel

Enter the name of the tag as found in Connected Components Workbench and click OK.

To create an array, click the Array checkbox and set how many dimensions the array should be, up to a maximum of 3. This will enable a corresponding box for each dimension. Enter the maximum size of the array for each dimension. The dimensions are assumed to start at index and span to the maximum dimension, inclusive. Then click create and name the tag as above. Arrays of strings are not supported.

Manage Tag Names	X
Tag Names         BigArray         CounterVal         CountUpBit         CountUpDone         CountUpReset         DINT_Array         DoubleArray         Global_add_bit         Global_REAL         Global_STRING         MultiArray         MyTag         SincleArray	Create Tags DINT Create Array 3 10 10 10 Details Type: Minimum: Maximum: CIP Type: Close

## **Tag Import and Export**

This section will describe the procedure to export tags from Connected Components Workbench and then import the file into Crimson 3.0.

First, open the project for the Micro800 PLC in Connected Components Workbench. There are two ways to export the tags in the project to a file.

The first way is to select the Device menu from the main menu bar. Then select Export->Variables to Excel:



Alternatively, right-click on the controller's name, and select Export->Variables to Excel:

Project Organ	izer	▼ ₽ × Quick Tips	MyController	x	
Name: MicroT	est	Micro8	20	1	Remote OMODE:
		Open Build Connect Download	F7	ose Secure	
	1	Upload Diagnose Secure	Þ		
	₩9+ ₩	Parameters Change Controller Import	•		
	× A	Cut Copy Delete	Ctrl+X Ctrl+C Del	Variables to Excel	000
		Rename Paste	Ctrl+V	Controller - Ger Name:	neral MvCont
	8	Document Generator (print) Properties	Alt+Enter	Description:	
		Ethe	met		

A dialog will appear. Select the desired location and name for the exported file and click the Export button:

Variable Expo	ort/Imp	oort - Micro820	<b>→</b> □ ×
Import Vari	ables	Export Variables	
File name	U:\De	sktop\test.xls	Browse
			Export Cancel

Now the variables are in a spreadsheet file in Excel format, but Crimson 3.0 is unable to read Excel files directly. The file will need to be saved as a Comma Separated Values (CSV) file as described below.

First, open the exported spreadsheet file in Excel. Then, select File->Save As from the main menu bar. Select the CSV file type from the drop-down menu, and save the file:

File name:	test.xls
Save as type:	Excel 97-2003 Workbook (*.xls)
Authors:	Excel Workbook (*.xlsx) Excel Macro-Enabled Workbook (*.xlsm) Excel Binary Workbook (*.xlsb) Excel 97-2003 Workbook (*.xls) XML Data (*.xml) Single File Web Page (*.mht;*.mhtml) Web Page (*.htm;*.html)
Theronders	Evcel Template (* vitv)
	Excel Macro-Enabled Template (* vitm)
23	Excel 97-2003 Template (*.xlt)
24	Text (Tab delimited) (*.txt)
25	Unicode Text (*.txt)
26	XML Spreadsheet 2003 (*.xml)
27	Microsoft Event 5.0/05 Workbook (*.xls)
28	CSV (Comma delimited) (*.csv)
29	Formatted Fort (Space delimited) (*.prn)
30	Text (MS_DOS) (* txt)
50	

Now go to Crimson 3.0, and click on the import button in the driver's configuration page:

Tag Names		$\sim$	
	Manage	Import	Export

Use the file selection dialog to navigate to the location where the CSV file was saved. Click the Open button and the tags in the file will be automatically created and are available to map in Crimson 3.0.

Tags can also be exported from Crimson 3.0 to a CSV file. Select the export button and use the dialog to select a name and location for the exported file. This file can be imported in other Crimson 3.0 databases.

## Mapping to Crimson 3.0 Tags

Once the Micro800 PLC tags have been configured for the driver, the PLC tags can be mapped to tags in Crimson 3.0. Simply create a tag in Crimson 3.0, select the name of the device and the following dialog will appear:

Select Address	
Tag <u>N</u> ames BigArray CounterVal CountUpBit CountUpDone CountUpReset	Address       DINT_Array       3
DINT_Array DoubleArray Global_add_bit Global_DINT Global_REAL Global_reset_bit Global_STRING MultiArray SingleArray TestString	Details Type: Long as Long Minimum: DINT_Array[0] Maximum: DINT_Array[999] CIP Type: DINT OK Cancel

Highlight the desired tag name and click OK. If the tag name represents an array, enter the desired offsets into the offset boxes and the click OK.

## **Cable Information**

RS232 Serial Connection

Micro800	<b>Red Lion Device</b>
Tx	2 Rx
Rx	5 Tx
G	3/4 COMM

Ethernet – Standard Ethernet Cable

## **Revision History**

2/4/2016 - Created