

CONTROLLER INFORMATION SHEET

Maple Model(s)

Graphic HMCs

PLC or Controller

Allen-Bradley Compact /ControlLogix



P/N: 1038-0173

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Summary

Maple Systems **HMC7000 Series** Human Machine Controllers Terminals (Maple HMCs that use the MAPware-7000 configuration software) to communicate with Allen-Bradley Logix Family of Programmable Controllers via the CIP protocol using the Ethernet port located on the PLC or communication module.

Communications Cable

The Maple HMC can be connected directly to the Ethernet port located on the Logix controller. If connecting to the PLC/module directly from the Maple HMC, a crossover cable is required.

WARNING *If your communications cable is not wired exactly as shown in our cable assembly instructions, damage to the HMI or loss of communications can result.*

Accessible PLC Memory

The driver makes use of the tag list exported from the Rockwell RSLogix5000 software. Please note the following:

- Tags must be created at the Controller Tags level.
- Tags of type BOOL, INT, DINT, and REAL are supported. Tags of any other type will *not* be imported.
- User-Defined Tags (UDTs) *cannot* be imported.

NOTE: To use controller data in HMC logic, the data will have to be copied to internal registers using task

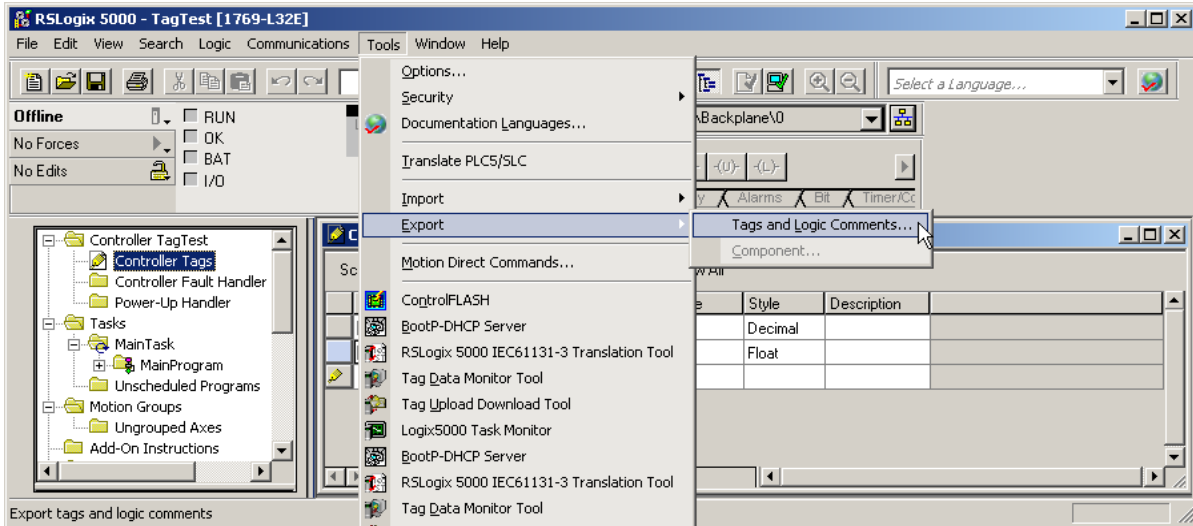
Adding tags from your controller

Tags can be added to the MAPware-7000 application in two ways:

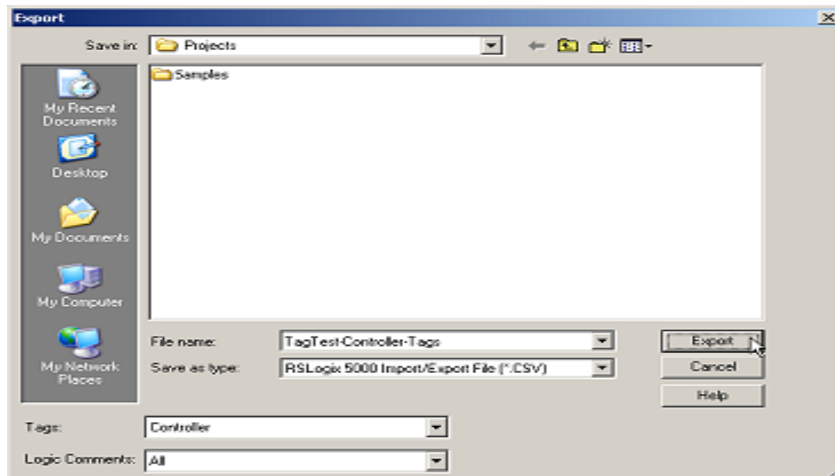
1. Tags can be imported from a CSV file generated by RSLogix5000
2. Manually added to the tag list in MAPware-7000

To export tags from RSLogix5000:

1. In the RSLogix5000 *Controller Organizer* window, select *Controller Tags*.
2. From the *Tools* menu, select *Export*, then *Tags and Logic Comments*.



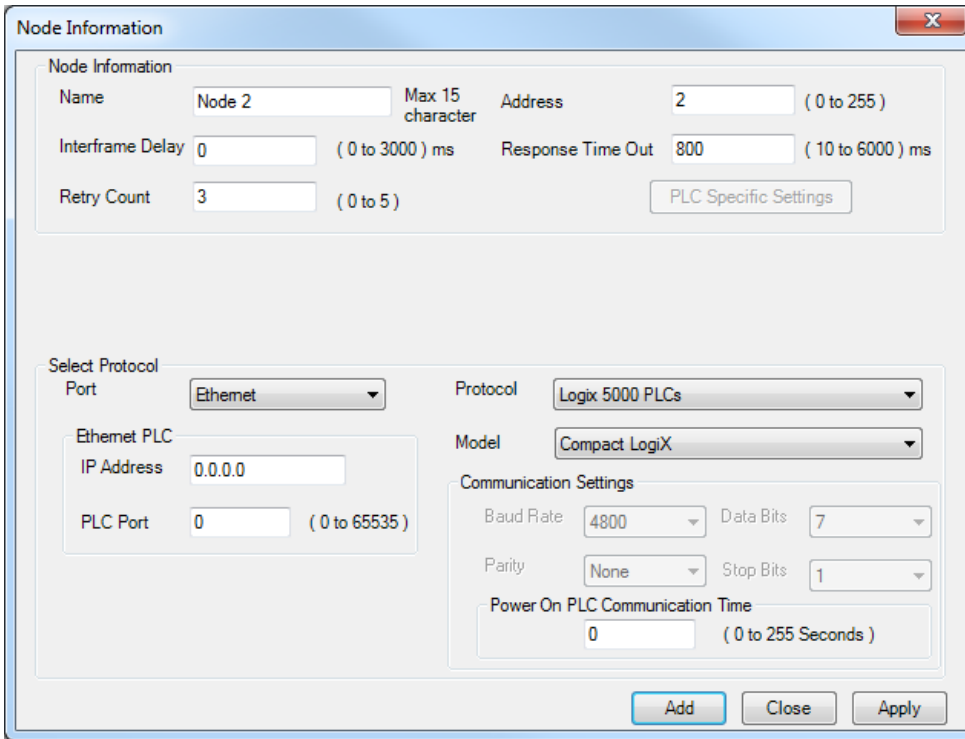
3. The *Export* dialog box will appear. The path and filename will be automatically assigned based on the name of the RSLogix5000 project. Make sure that *Save as Type* is set for the *CSV* option.



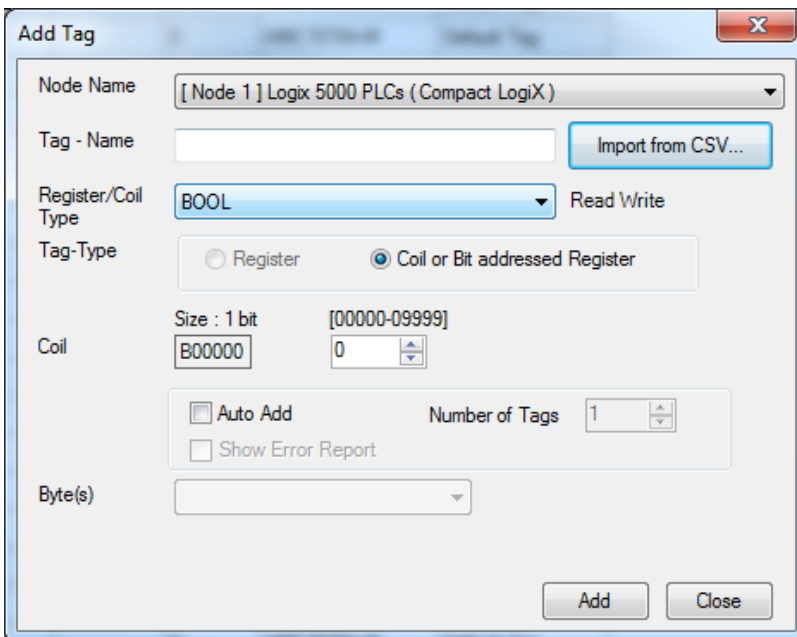
4. Click the *Export* button.

To import the tag list into MAPware-7000:

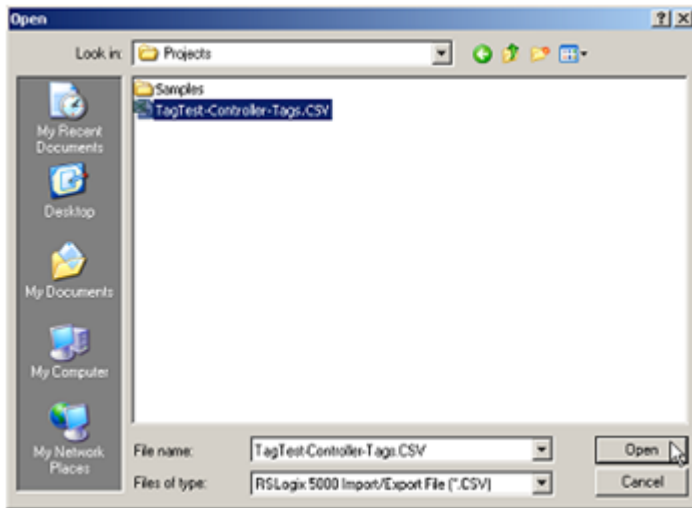
1. Go to the Network Configuration folder in the project tree
2. Right click on the folder and select add... from the menu
3. Change the port to Ethernet to see the Logix 5000 PLC protocol



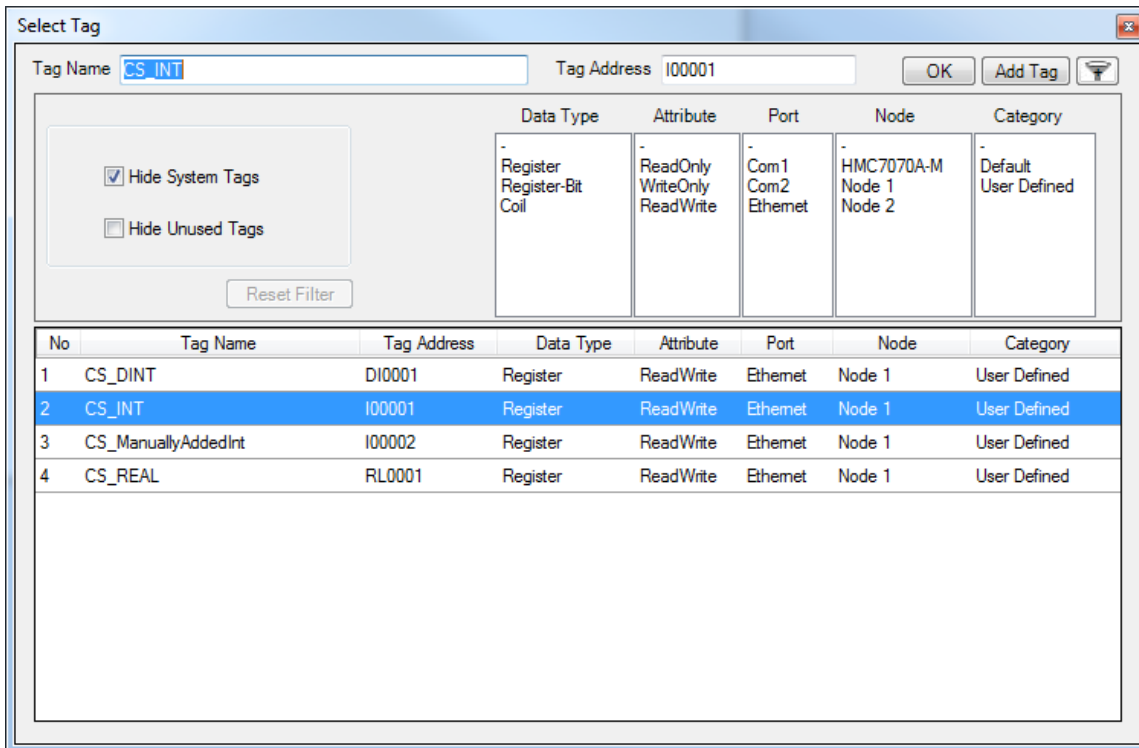
4. Click Add to add the protocol to the Network Configuration
5. Right click on the Tags folder then click on Add...
6. From the Node Name drop down, select the Logix driver
7. Click on the Import from CSV... button and select the tag file exported from RSLogix to import your tags



- Select the CSV file exported from RSLogix5000, and click the Open button. The tag list will be imported into MAPware-7000.



Once the tag list has been imported into MAPware-7000, any object that references a PLC address will present the available tags in the select tag properties. Below is an example of accessing a word type tag.



To manually add tags

1. Go to the tag list in MAPware-7000
2. Right click anywhere in the tag list and select Add... to display the Add Tag dialogbox
3. Select the PLC from the Node Name list

The screenshot shows the 'Add Tag' dialog box with the following configuration:

- Node Name: [Node 1] Logix 5000 PLCs (Compact LogiX)
- Tag - Name: Status
- Register/Coil Type: DINT
- Tag-Type: Register (selected)
- Register: DI0000
- Size: 4 bytes
- Number of Tags: 1
- Byte(s): 4-Bytes(2-words)

4. Select the Register/Coil Type that matches the tag in your PLC
5. Enter the tag name exactly as it is in RSLogix5000 to ensure the HMC can find the associated tag

NOTE: If the tag name manually entered in MAPware-7000 does not exactly match the tag name in the controller, communications will not function.

Troubleshooting Notes:

The A-B PLC itself will set a “MINOR FAULT” error in its processor status.

If communications are erratic the Logix PLC may not be devoting enough time to the communication task.

- On the *Advanced* tab of the Controller Properties dialog box, increase the *System Overhead Time Slice* percentage.
- For Periodic tasks, increase the *Period* setting and/or lower the *Priority*.

For more information, refer to the RSLinx documentation.

MAPware-7000 Settings

The following table lists the communications settings that must be configured in MAPware-7000. These settings can be found in the *Edit-Set System Parameters* menu under the *Device* tab. Please note:

- The **Recommended Settings** column provides the recommended setting based upon the default settings most commonly used in the Allen-Bradley Compact/ControlLogix Controllers.
- The **Options** column lists MAPware-7000 options; your PLC may not support every option

Name	Recommended Settings	Options	Important Notes
Port	Ethernet	Com1, Com2, Ethernet	This is the HMC port that the PLC is connected to
Protocol	Logix 5000 PLCs	All available protocol drivers	Select the appropriate protocol for your PLC
Model	Compact LogiX	Varies depending upon protocol selected	Select the model that is most closely associated with your PLC
Ethernet PLC: IP Address	xxx.xxx.xxx.xxx	---	Enter the IP Address that is assigned to the PLC Ethernet port
Ethernet PLC: PLC Port	44818	0 - 65535	Network address assigned to the PLC Ethernet port
Power On PLC Communication Time	0	0-255 seconds	Delays communications with the PLC after applying power to the