C O N T R O L L E R I N F O R M A T I O N S H E E T

Maple Model(s)	PLC or Controller
HMI5000 Series	Allen-Bradley Compact/Control/FlexLogix (Ethernet IP-CIP) – Free Tag Names

Summary

Maple Systems' **HMI5000 Series** Human/Machine Interface Terminals (Maple HMIs that use the EZware-5000 configuration software) communicate with Allen-Bradley Logix Family of Programmable Controllers via the CIP protocol using the Ethernet port located on the PLC or communication module.

Compatible PLCs

Family	Model
ControlLogix Series	1756-L55M12, M13, M14, M16, M22, M23, M24 1756-L63
CompactLogix Series	1769-L31x, 1769-L32x, 1769-L35x
FlexLogix Series	1794-L33x, 1794-L34x

Communications Cable

The Maple HMI can be connected directly to the Ethernet port located on the Logix controller. If connecting to the PLC/module directly from the Maple HMI, a crossover cable is required. A list of communications cables offered by Maple Systems as well as cable assembly instructions to assist you in assembling your own communications cable are available on our website at www.maplesystems.com.

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.*

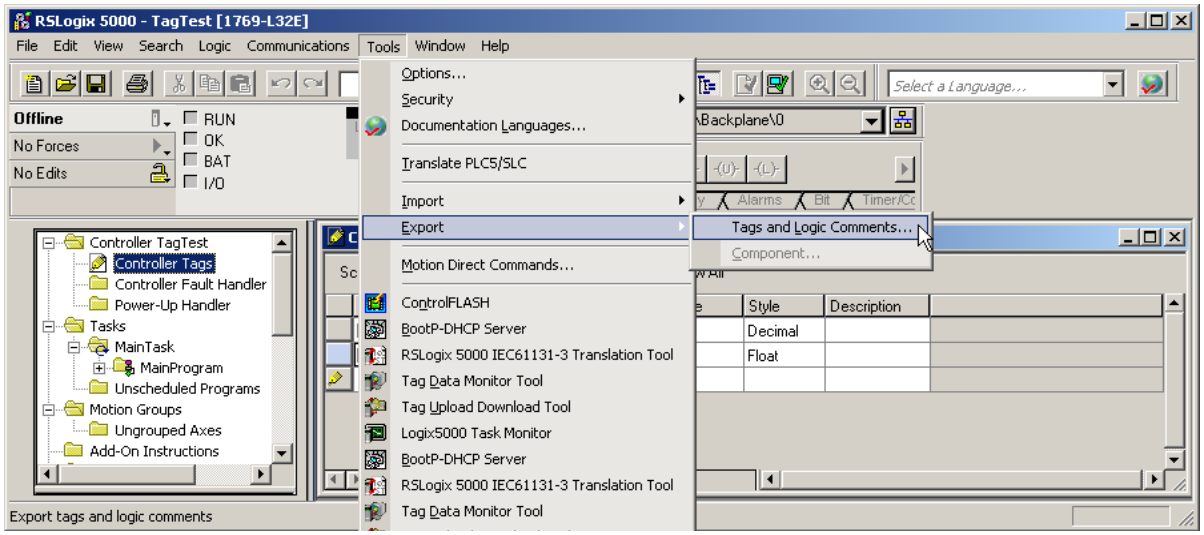
Accessible PLC Memory

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

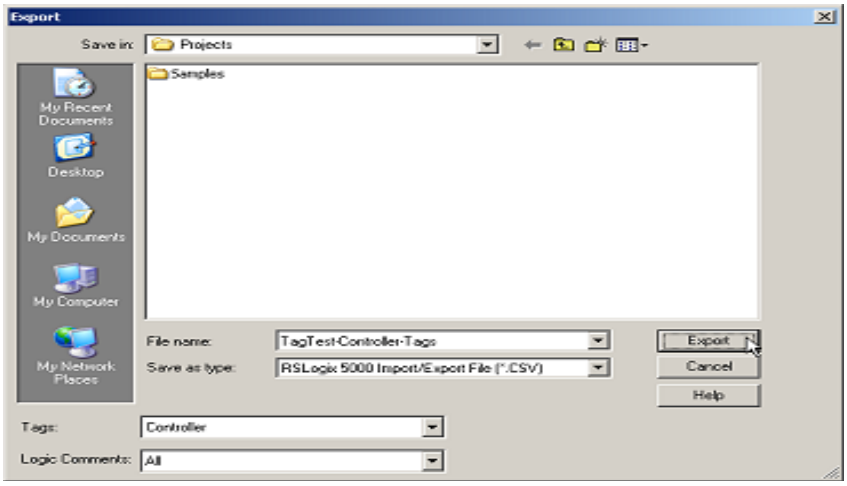
- Tags must be created at the Controller Tags level.
- Tags of type BOOL, INT, DINT, and REAL are supported. Tags of any other type will *not* be imported.
- User-Defined Tags (UDTs) are not supported.

To export the tags from RSLogix5000:

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



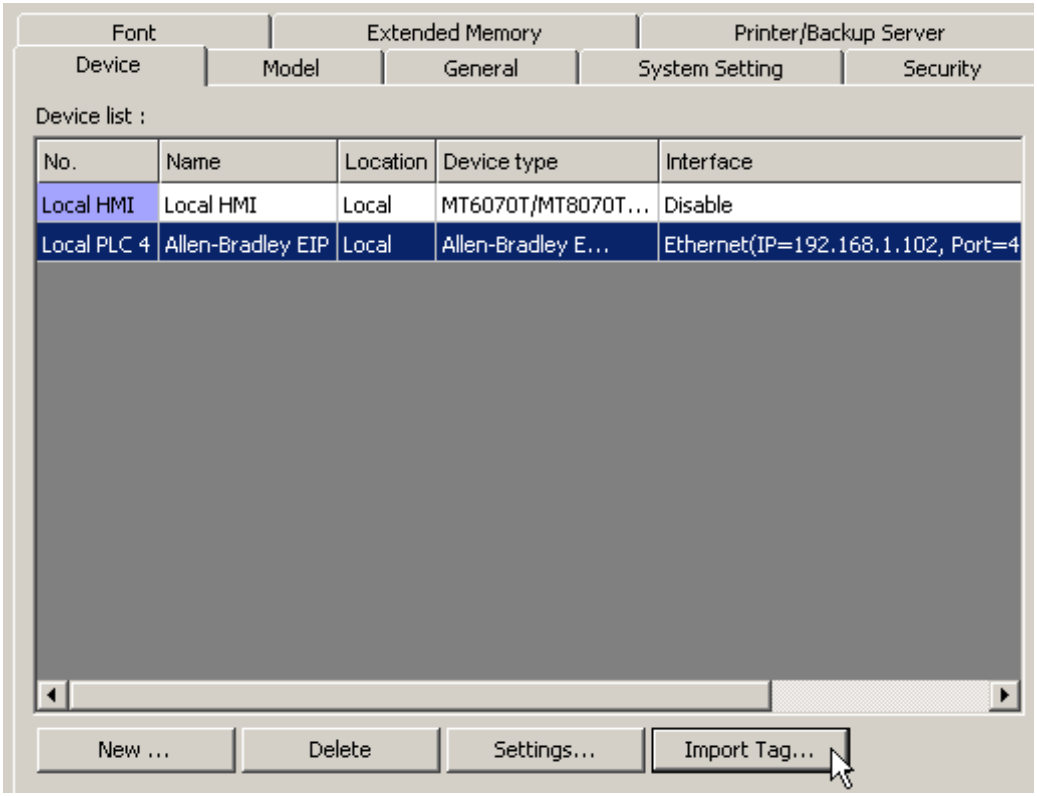
3. The *Export* dialog box will appear. The path and filename will be automatically assigned based on the name of the RSLogix5000 project. Make sure that *Save as Type* is set for the *CSV* option.



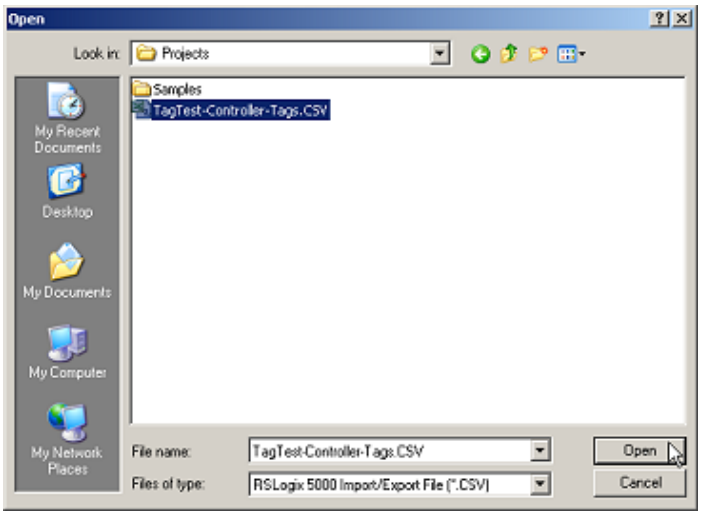
4. Click the *Export* button.

To import the tag list into EasyBuilder5000:

1. From the *Edit* menu, select *System Parameters.* The *Device* tab of the *System Parameters* dialog box is displayed. Select (or add) the driver. Click the *Import Tag* button.

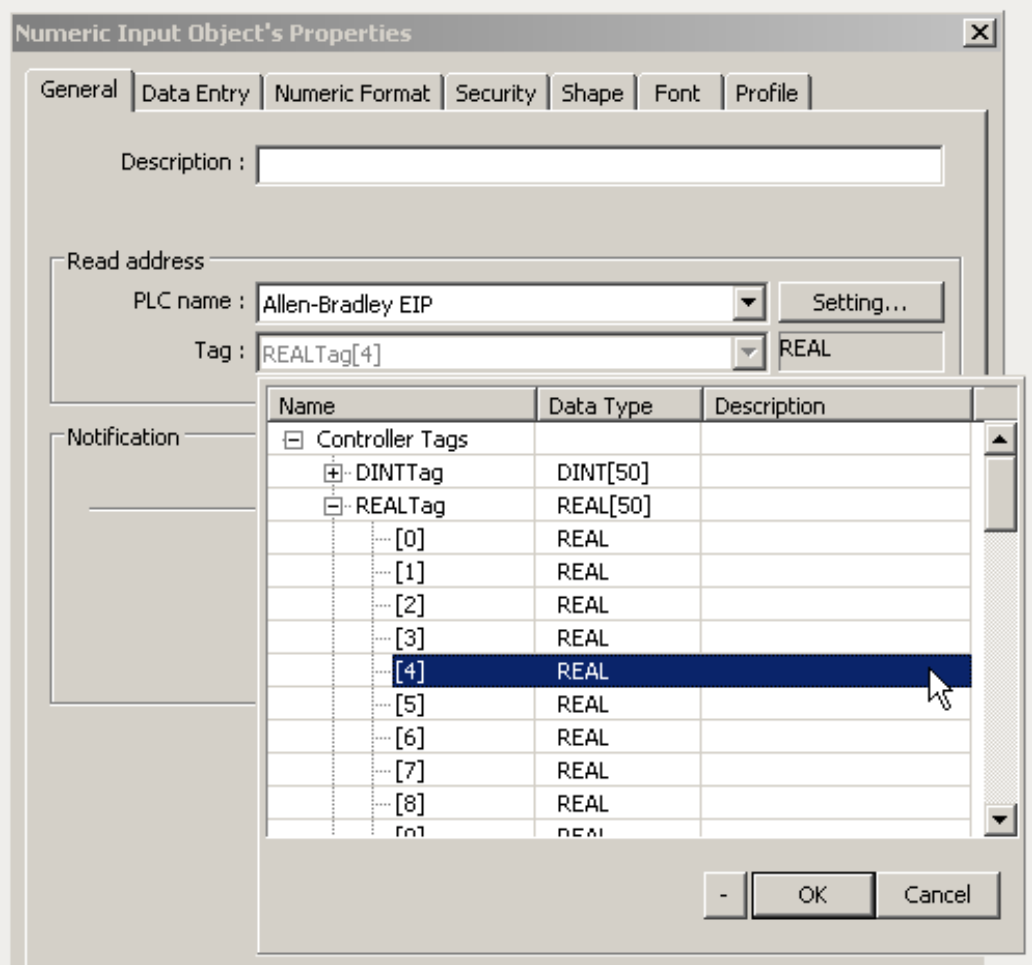


2. Select the CSV file exported from RSLogix5000, and click the *Open* button. The tag list will be imported into EasyBuilder5000.



Once the tag list has been imported into EasyBuilder, any EasyBuilder object that references a

PLC address will present the available tags in a drop-down list.



Important Memory Considerations

If your PLC's memory range is smaller than the range supported by the Maple HMIs, it is possible to configure the HMI to monitor a PLC memory address which does not exist. Since this can cause unpredictable results, when you configure the HMI please ensure that all selected PLC memory addresses are valid for your PLC model.
Do not configure the HMI to write to any PLC memory address which should only be written to by the PLC.

Troubleshooting Notes:

If the HMI attempts to address an invalid register reference, the HMI may display "PLC No Response". Also, 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.

EZware Settings

The following table lists the communications settings that must be configured in EZware. 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/Control/FlexLogix Controllers.
- The **Options** column lists EZware's options; your PLC may not support every option

Name	Recommended Settings	Options	Important Notes
Name:	Allen-Bradley Compact/Control/ FlexLogix (EthernetIP-CIP) – Free Tag Names		Description label
HMI or PLC	PLC		
Location	Local	Local, Remote	Select *Local* if PLC directly connected to HMI, *Remote* if PLC connected thru another HMI
PLC type:	Allen-Bradley Compact/Control/ FlexLogix (EthernetIP-CIP) – Free Tag Names		

PLC I/F:	Ethernet	RS-232, RS-485 2W, RS-485 4W, Ethernet	Must match the controller port setting
PLC default station no.:	1	0-255	Must match the controller's setting.
Setting: Use UDP:	Unchecked	Checked or Unchecked	Must be unchecked.
Settings: IP Address:	xxx.xxx.xxx.xxx	0.0.0.0-255.255.255.255	Must match the controller port's IP Address. See Below
Settings: Port	44818	0-65535	See below
Settings: Timeout (sec)	1.0	0.1 to 25.5	Adjust if longer timeout is required
Settings: Turn around delay (ms):	0	0-1000	Timeout period between HMI polls
Settings: Send ACK Delay :	0		Not Applicable
Settings: Parameter 1:	0		Not Applicable
Settings: Parameter 2:	0		Not Applicable
Settings: Parameter 3:	0		Not Applicable
Interval of Block Pack (words):	5	1-512	
Interval of Block Pack (words):	5	1-512	
Max. read-command size (words):	100	1-512	
Max. write-command size (words):	100	1-512	