



# Cal Controls CALogix

## Overview

Maple Systems' **Silver Plus Series** Operator Interface Terminals (Maple OITs) communicate with the CALogix using the Modbus RTU protocol. The Silver Plus Series uses the **CALogix Controller** protocol driver, to allow the Maple OIT to act as the master in a point-to-point single master, multiple slave format. RS485 networking is supported to connect multiple CALogix controllers to a single Maple OIT.

The CALogix protocol driver in EZware-5000 also has the following features:

- Ability to set a turnaround delay that can be used to slow the rate at which the HMI polls the PLC/controller for data

## Communications Cable

The Maple OIT should be connected to the device's RS485 IN port.

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.maple-systems.com/cables.htm](http://www.maple-systems.com/cables.htm).

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

# Accessible Memory

## Register Memory

The following table lists the controller's register memory ranges that the Maple OITs are able to access. Please note that your controller's memory range may be *smaller* or *larger* than that supported by these OITs. The following register memory can be displayed in 16 or 32 bit format on the Maple OIT.

Register Range	Controller Register Type	Controller Register Description
0-FFFF	Byte	Reads/Writes "Byte" Format addresses
0-FFFF	Word	Reads/Writes "Word" Format addresses
0-FFFF	DWord	Reads/Writes "DWord" Format addresses
0-FFFF	FPoint	Reads/Writes "Float" Format addresses

## Discrete Memory

The following table lists the controller's discrete memory ranges that the Maple OITs are able to access. Please note that your controller's memory range may be *smaller* or *larger* than that supported by these OITs. The following discrete memory is displayable in single-bit format on the Maple OIT.

Register Range	Controller Bit Type	Controller Bit Description
0-FFFF0	Bool <sup>1</sup>	Reads/Writes "Bool" Format addresses
00-FFFFFF	Byte Bit	Reads/Writes bits in byte addresses

### Notes:

1. Addresses must be followed by a trailing 0.

## Address Format when Networking

If you are connecting multiple PLCs/Controllers on a network to an Silver Plus Series OIT, you can specify the network node address for each object placed onto the HMI screen. To target a specific slave address, you must use the following format when entering the address in the Device Address box: `aaa#nnnn` where `aaa`=network address (1-255) and `nnnn`=memory address. The pound sign (#) is used as a delimiter. For example, to configure the Numeric Data object to read a Float value at address 7D0 in a controller that has been assigned a network address of 2: Device Type=Float, Device Address=2#7D0.

# EZware-5000 Settings

The following table lists the communications settings that must be configured in EZware-5000. These settings can be found in the Edit-Set System Parameters menu under the PLC tab. Please note:

- the **Recommended Settings** column provides the recommended setting based upon default settings most commonly used in the CAllogix controllers
- the **Options** column lists EZware-5000's options; your controller may not support every option

Name	Recommended Settings	Options	Important Notes
Name:	CAllogix Controller		Description label
HMI or PLC:	PLC		
Location:	Local	Local, Remote	Select local if PLC directly connected to OIT, remote if PLC connected through another OIT
PLC type:	CAllogix Controller		
PLC I/F:	RS485 4W	RS-232, RS-485 2W, RS-485 4W, Ethernet	Must match the controller's port setting.
PLC default station no.:	1	0-255	Must match the controller's port setting.
Settings: COM.:	COM1	COM1-COM3	Serial port of OIT connected to PLC.
Settings: Baud rate:	19200	9600, 19200, 38400, 57600, 115200	Must match the controller's port setting. Use the fastest baud rate supported by the controller.
Settings: Data bits:	8	7 or 8	Must match the controller's port setting.
Settings: Stop bits:	1	1 or 2	Must match the controller's port setting.
Settings: Parity:	None	Even, Odd, None	Must match the controller's port setting.
Settings: Timeout (sec):	1.0	0.1 to 25.5	Adjust if longer timeout is required.

Name	Recommended Settings	Options	Important Notes
Settings: Turn around delay (ms):	25	0 to 1000	Timeout period between OIT polls.
Settings: Parameter 1:	0		Not applicable
Settings: Parameter 2:	0		Not applicable
Settings: Parameter 3:	0		Not applicable
Interval of block pack (words):	5	0-512	<i>See Silver Plus Series Installation and Operation Manual</i>
Max. read-command size (words):	32		Not adjustable
Max. write command size (words):	32		Not adjustable