



Giddings & Lewis

MMC & PiC Family

Overview

Maple Systems' OIT Family Operator Interface Terminals (Maple OITs) communicate with Giddings & Lewis controllers using the Modbus Network-Generic communications protocol. The Maple OIT is the master in a point-to-point single master, single slave format.

Compatible Controllers	
Family	Model
MMC	SA-MMC-A2, SA-MMC-A4, SA-MMC-S8
PiC	PiC9, PiC90, PiC900

Communications Cable

The Maple OIT should be connected to the RS-232 serial communications User Port on the PiC or MMC Controller. 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.

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

Controller Settings

Name	Setting	Options	Important Notes
Port	User	Comm Module	For RS485, use the Comm Module.
Port Protocol	Modbus RTU Slave	No valid options	Only Modbus RTU Slave supported.
Address	1	1-247	Must match the OIT configuration setting.

Name	Setting	Options	Important Notes
Configuration String: Baud Rate	19200	19200, 9600, 4800, 2400, 1200, 600, 300	Must match the OIT configuration setting.
Data Bits	8	7, 8	Use the fastest baud rate supported by both.
Parity	Even	Even, Odd, None	
Stop Bits	1	1, 2	If updates are slow or data errors occur, reduce the baud rate.
Synchronization	None	No valid options	

Accessible Controller Memory

Register Memory

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

Register Address	Modbus Address	Register Description	Access
0 to 998	300001 to 300999	Input Registers	Read Only
0 to 998	400001 to 400999	Holding/Output Registers	Read/Write

Discrete Memory

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

Register Address	Modbus Address	Register Description	Access
0 to 998	000001 to 000999	Discrete Coils/Output	Read/Write
0 to 998	100001 to 100999	Discrete Inputs	Read Only

Important Memory Considerations

If your controller's memory range is smaller than the range supported by Maple's OITs, it is possible to configure the Maple OIT to monitor a memory address which does not exist. Since this can cause unpredictable results, when you configure the Maple OIT please ensure that all selected memory addresses are valid for your controller model.

Do not configure the Maple OIT to write to any memory address which should only be written to by the controller.

Accessing the 1XXXX Coils or 3XXXX Registers

Although the OITware-200 configuration software allows the programmer to select read/write access for 1XXXX and 3XXXX memory, these controller memory areas are designed to be read only.

When using the Bank 8 or Bank 16 register monitor formats to display information from discrete memory, the bits displayed must start on a byte boundary. The byte boundaries leave no remainder when the following formula is used: $(G\&L's\ discrete\ memory\ address - 1) / 8$.

OITware-200 Settings

The following table lists the communications settings that must be configured in OITware-200.

Please note:

- the Setting column lists OITware-200’s recommended setting; your controller’s default may be different
- the Options column lists OITware-200’s options; your controller may not support every option
- The value(s) in the “[”and”]” brackets correspond to the controller address(es)

Name	Setting	Options	Important Notes
Baud Rate	19200	19200, 9600, 4800, 2400, 1200, 600, 300	Must match the programming port settings. Use the fastest baud rate supported by both.
Parity	Even	Even, Odd, None, Mark, Space	Must match the port settings.
Data Bits	8	7, 8	Must match the port settings.
Stop Bits	1	1, 2	Must match the port settings.
Status Coils (optional)	385 [384]	1 to 999 [0 to 998]	Must be within the controller’s supported memory range.
Destination Address	1	1 to 247	Must match the controller’s address.
Message Request Register (optional)	400001 [0]	400001 to 400999 [0 to 998]	Must be within the controller’s supported memory range.
Current Message Register (optional)	400003 [2]	400001 to 400999 [0 to 998]	Must be within the controller’s supported memory range.
Function Key Coils (optional)	401 [400]	1 to 999 [0 to 998]	Must be within the controller’s supported memory range.
Screen Dependent Function Key Coils (optional)	369 [368]	1 to 999 [0 to 998]	Must be within the controller’s supported memory range. Applies to OITs with Screen Dependent Function Keys.
Control Key Coils (optional)	433 [432]	1 to 999 [0 to 998]	Must be within the controller’s supported memory range.
Status LED Coils (optional)	1 [0]	1 to 999 [0 to 998]	Must be within the controller’s supported memory range. Applies to OITs with Status LEDs.
Function Key LED Coils (optional)	417 [416]	1 to 999 [0 to 998]	Must be within the controller’s supported memory range. Applies to OITs with Function Key LEDs.