



Trio Motion

Motion Coordinator Master

Controllers

Overview

Maple Systems’ OIT Family Operator Interface Terminals (Maple OITs) communicate with Motion Coordinator Master Controllers using the Modbus Network-Generic communications protocol. The Maple OIT is the master in a single master, single slave format or a single master, multiple slaves format (except for MC202).

Compatible Controllers	
Family	Model
Motion Coordinator Master Controllers	MC202, EURO205, MC206, MC216

Communications Cable

The Maple OIT should be connected to the Motion Coordinator serial communications port 1 or port 2. 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.

NOTE: Connection to the MC202 requires P349 RS-485 adapter.

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

The serial port on the motion controller must be configured for Modbus RTU using the Address and Setcom command.

Name	Default	Options
Communication address	1	1-32
Baud rate	9600	1200, 2400, 4800, 9600, 19200 or 38400
Parity	Even	None, Even, Odd
Data Bits	7	7 or 8
Stop Bits	2	1 or 2

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.

Controller Register Address	Modbus Address Range	Controller Register Description	Access
VR(0) to VR(1023)	400001 to 401024	Holding 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.

Controller Bit Address	Modbus Address Range	Controller Bit Description	Access
OP(8) to OP(271)	00009 to 000272	Discrete Outputs	Read/Write
IN(0) to IN(271)	100001 to 100272	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 the 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.

On using Bank 8 or Bank 16 formats

When using these formats, each controller coil (bit) is individually displayed in terms of 1 and 0, with the lowest addressed coil displayed in the left-most position in the field. Therefore, if using coils 00001-00016, then 00016 is the least significant bit displayed in the right-most position and 00001 is the most significant bit displayed in the left-most position. The address used must start on a byte boundary when using these formats, which can be determined if the first coil's address, minus 1 and then divided by 16, leaves no remainder.

OITware-200 Settings

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

Please note:

- the Settings column lists OITware-200's default setting; your Controller's default may be different
- the Options column lists OITware-200's options; your Controller may not support every option

Name	Setting	Options	Important Notes
Baud Rate	9600	19200, 9600, 4800, 2400, 1200, 600, 300	Must match the Controller's port settings. Use the fastest baud rate supported by both.
Parity	Even	Even, Odd, None	Must match the Controller's port settings.
Data Bits	7	7, 8	Must match the Controller's port settings.
Stop Bits	2	1, 2	Must match the Controller's port settings.
Status Coils	Disabled	None	Not supported due to lack of bit addressing.
Address, Source Address	N/A		
Destination Address	31	1 to 31	Must match the Controller's Network address.
Password	N/A		

Message Request Register (optional)	400001, Sub = 0	000001 to 065536 400001 to 465536, Sub = 0	Must be within the Controller's supported memory range.
Current Message Register (optional)	400003, Sub = 0	000001 to 065536 400001 to 465536, Sub = 0	Must be within the Controller's supported memory range.
Function Key Coils	Disabled	None	Not supported due to lack of bit addressing. Use Screen Dependent Function Keys.
Screen Dependent Function Key Coils (optional)	369, Sub = 0 to 15	000001 to 065536 400001 to 465536, Sub = 0 to 15	Must be within the Controller's supported memory range. Applies to OITs with Screen Dependent Function Keys.
Control Key Coils (optional)	433, Sub = 0 to 15	000001 to 065536 400001 to 465536, Sub = 0 to 15	Must be within the Controller's supported memory range.