



SIXNET

SIXTRAK Gateways, VersaTRAK RTUs

Overview

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

Compatible Controllers	
Family	Model
SIXTRAK Gateways	ST-GT-ETH-xxP, ST-GT-ETH-02N, ST-GT-232-xxP, ST-GT-232-02N, ST-GT-422-xxP, ST-GT-422-02N
VersaTRAK RTUs	VT-A#-xxx-xxP, VT-M2-xxx-xxP

Communications Cable

Connect the Maple OIT to the RS232 serial communications port on the SIXTRAK Gateways or VersaTRAK RTUs. Maple Systems provides both a list of communications cables it offers for sale and cable assembly instructions to assist you in assembling your own communications cable 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	Settings	Options	Important Notes
Port protocol	Modbus RTU Slave	No valid options	Only Modbus RTU Slave supported.
Baud rate	19200	19200, 9600, 4800, 2400, 1200, 600, 300	Must match the OIT configuration setting. Use the fastest baud rate supported by both.

Name	Settings	Options	Important Notes
Data bits	8	7, 8	Must match the OIT configuration setting
Parity	Even	Even, Odd, None	Must match the OIT configuration setting
Stop bits	1	1, 2	Must match the OIT configuration setting
Flow control	None	No valid options	If updates are slow or data errors occur, reduce the baud rate.
Address	1	1 to 247	Must match the OIT configuration setting

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 65535	300001 to 365536	Input registers	Read only
0 to 2998	400001 to 402999	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 65535	000001 to 065536	Discrete Coils/Output	Read/Write
0 to 65535	100001 to 165536	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 that 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 controller 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 you use the Bank 8 or Bank 16 register monitor formats to display information from the controller's discrete memory, the bits displayed must start on a byte boundary. The byte boundaries leave no remainder when the following formula is used: $(\text{discrete memory address} - 1) / 8$.

Floating point access is by two-word transfer. Therefore, the controller must not have Daniels' Extension enabled, and the OIT must have the low-order word transferred first. These addresses will then have a $2x + 1$ offset correspondence. For example, if the controller's FO0 corresponds to OIT's 47001, then FO3 corresponds to 47007.

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 values in the “[“ and “]” brackets correspond to controller addresses.

Name	Setting	Options	Important Notes
Baud rate	19200	19200, 9600, 4800, 2400, 1200, 600, 300	Must match the controller's configuration settings. Use the fastest baud rate supported by both.
Parity	Even	Even, Odd, None, Mark, Space	Must match the controller's configuration settings
Data bits	8	7, 8	Must match the controller's configuration settings
Stop bits	1	1, 2	Must match the controller's configuration settings
Status coils (optional)	385 [384]	1 to 65536 [0 to 65535]	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 402999 [0 to 2998]	Must be within the controller's supported memory range
Current message register (optional)	400003 [2]	400001 to 402999 [0 to 2998]	Must be within the controller's supported memory range
Function key coils (optional)	401 [400]	1 to 65536 [0 to 65535]	Must be within the controller's supported memory range
Screen dependent function key coils (optional)	369 [368]	1 to 65536 [0 to 65535]	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 65536 [0 to 65535]	Must be within the controller's supported memory range
Status LED coils (optional)	1 [0]	1 to 65536 [0 to 65535]	Must be within the controller's supported memory range. Applies to OITs with status LEDs.
Function key LED coils (optional)	417 [416]	1 to 65536 [0 to 65535]	Must be within the controller's supported memory range. Applies to OITs with function key LEDs.

