



SIXNET

SIXTRAK Gateway, VersaTRAK RTU

Overview

Maple Systems’ **BLU300 Series** Operator Interface Terminals (Maple OITs) communicate with SIXNET SIXTRAK Gateways and VersaTRAK RTUs using the Modbus RTU protocol. When configured with BlueLeaf configuration software, the Maple OIT is the master in a point-to-point single master, single slave format.

Compatible Controllers	
Family	Model
SIXTRAK Gateway	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 RTU	VT-A#-xxx-xxP, VT-M2-xxx-xxP

Communications Cable

The Maple OIT should be connected to the RS232 Serial Communications Port on the SIXTRAK Gateway or VersaTRAK RTU.

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 OIT or loss of communications can result.

Controller Settings

Name	Default	Options	Notes
Port Protocol	Modbus RTU Slave	No Valid Options	Only Modbus RTU Slave is supported.
Baud Rate	19200	19200, 9600, 4800, 2400, 1200, 600, 300	Must match the OIT configuration. Use the highest rate supported by both. If updates are slow or data errors occur, reduce the baud rate.
Data Bits	8	7, 8	Must match the OIT configuration.
Parity	Even	Even, Odd, None	Must match the OIT configuration.
Stop Bits	1	1, 2	Must match the OIT configuration.
Flow Control	None	No Valid Options	Must match the OIT configuration.
Address	1	1 - 247	Must match the OIT 'PLC Station' setting.

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, 32, or 64 bit format on the Maple OIT.

Controller Register Address	Modbus Address	Description
1 - 9998	30001 - 39998	Input Register, Read Only
1 - 2999	40001 - 42999	Output/Holding Register

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.

Controller Bit Address	Modbus Address	Controller Bit Description
1 - 9998	00001 - 09998	Discrete Coils/Outputs
1 - 9998	10001 - 19998	Discrete Inputs, Read Only

Important Controller Memory Considerations

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

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

The Maple OITs use the following Modbus function codes:

- 01 - Read output coils (ex. 00001)
- 02 - Read input coils (ex. 10001)
- 03 - Read data registers (ex. 40001)
- 04 - Read input registers (ex. 30001)
- 05 - Write output coils (ex. 00001)
- 06 - Write data registers (ex. 40001)

BlueLeaf Communication Settings

The following table lists the communications settings that must be configured in BlueLeaf software. These settings can be found in the Tools...HMI-PLC Communications Settings menu.

- The **Recommended Settings** column provides recommended settings based upon the default settings most commonly used in the Sixnet controller
- The **Options** column lists BlueLeaf's options; your controller may not support every option.

Name	Default	Options	Important Notes
PLC Type	Modbus RTU Master (Modicon, etc.)		
Com Port	RS232	RS232, RS485 (2-wire only)	Tools...Set HMI-PLC Port
Baud Rate	19200	115200, 57600, 38400, 19200, 9600, 4800	Must match the Drive's port settings. Use the fastest baud rate supported by both.
Data bits	8	7, 8	Must match the Drive's port settings
Stop bits	1	1, 2	Must match the Drive's port settings
Parity	Even	Even, Odd, None	Must match the Drive's port settings
Net Addr:	1	0-255	Must match the Drive's port setting (configure in each object attribute).