

Modbus RTU Monitor

Information Sheet for Crimson v2.0

Compatible Devices

- Modbus devices using Standard Modbus

Verified Device

- Red Lion Controls G3 Modbus Master with Red Lion Controls Modular Controllers

Accessible Data

Prefix	Description	Element Size	Access
4	Holding Registers	32 bits	Read Only
3	Analog Inputs	32 bits	Read Only
0	Digital Coils	32 bits/bit	Read Only

Operation Information

This driver is designed to provide monitor-only display of data being exchanged between a Modbus Master and one, or more, slave devices, such as PLC's. As such, a G3 using this driver can be connected directly to the communications bus without the need of programming any other ports on another G3 for data transfer.

The driver is not capable of sending information to the system. The Modbus RTU Slave is required if the G3 is required to communicate on the network.

As the driver is a slave, it requires the programmer to use Gateway Blocks at the device level, and assign internal variables to the desired addresses.

A single data item to be displayed comprises two components. The lower 16 bits contain the data for the register addressed. The upper 16 bits contain the device address of the target device. If more than one Modbus Slave device is

connected to the master, the programmer has various methods available to test the upper word in order to route the data to the proper display variable for any given Modbus address.

IMPORTANT:

It is expected that this driver will normally be used on a 2-wire RS485 network, in order to monitor the data of both read and write commands from the master. However, it can monitor one direction, normally the slave's responses to read requests, using RS232 or RS422/RS485 four-wire communications. The physical connection must conform to the following:

- Using RS422 or RS485, do not connect the TxA or TxB lines of the G3 to the network. Connect the RxA and RxB of the G3 to the Tx lines of the device to be monitored.
- Using RS232, do not connect the TxD line of the G3 to the network. Connect the RxD of the G3 to the TxD line of the device to be monitored.

Cable Information

- Connection schemes vary among devices. Refer to Red Lion Controls port specifications, and the specifications of the network.