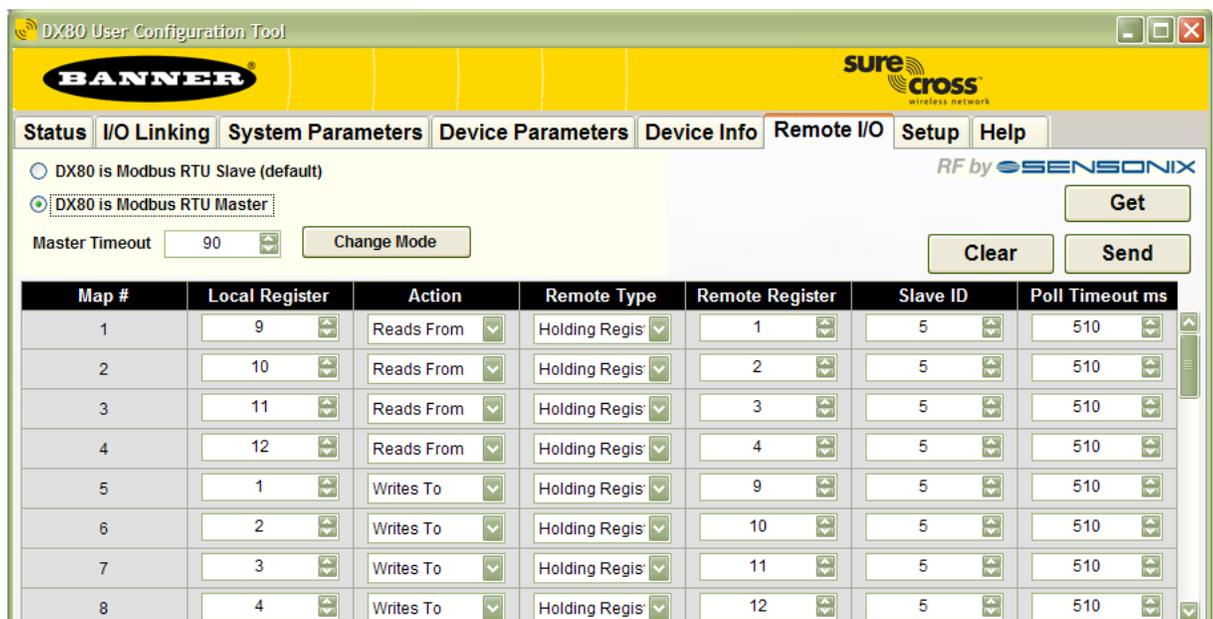


# Using a DX80 Gateway/DX85 Remote I/O as a Modbus Master

Use the Remote I/O tab of the DX80 User Configuration Tool to configure a DX80 Gateway or DX85 Modbus RTU Remote I/O slave to control remote registers as a Modbus master device.

Each table entry (Map #) specifies a register read or register write command to a Modbus slave device connected to the Gateway/DX85 Modbus RTU Remote I/O slave.

Use the Get button to read from the current master table. Use the Send button to send the user-defined table to the Gateway/DX85. The Clear button sets all master fields in the User Configuration Tool to zero. Clicking the Clear button does not affect the table entries stored in the Gateway or DX85 Modbus slave.



Map #	Local Register	Action	Remote Type	Remote Register	Slave ID	Poll Timeout ms
1	9	Reads From	Holding Regis	1	5	510
2	10	Reads From	Holding Regis	2	5	510
3	11	Reads From	Holding Regis	3	5	510
4	12	Reads From	Holding Regis	4	5	510
5	1	Writes To	Holding Regis	9	5	510
6	2	Writes To	Holding Regis	10	5	510
7	3	Writes To	Holding Regis	11	5	510
8	4	Writes To	Holding Regis	12	5	510

This example maps four inputs on remote slave 5 to output registers on the Master device and maps four inputs on the master device to four outputs on remote slave 5.

## MASTER TABLE

**Map Number.** There are 32 possible table entries in the master table. The map number is only an index into the master table.

**Local Register.** Setting the local register defines the Modbus register within the Gateway/DX85 master device.

**Action.** Select an action to define the operation to be performed between the registers of the master device and the slave device. Selecting Read From sets the master device to read the remote slave register and copies the result into the local register. Selecting Write To writes the local register contents to the remote slave register. Select None if this table entry is empty.

**Remote Type.** Selecting the remote type defines the data type (bit or 2-byte word) in the remote slave device. Different data types use different commands to access the data in the slave device. The DX80 devices always use holding registers. The master device can read the remote slave data in bit or 2-byte registers format.

**Remote Register.** Setting the remote register number defines the slave device register to read/write.

**Slave ID.** Use the slave ID field to select the unique Modbus slave ID number used for each slave.

**Poll Timeout (ms).** The poll timeout value defines how long the master waits for a slave response when performing that map action. If the slave device's response is not received within the timeout period, the master device continues to the next table entry.

## MASTER AND SLAVE MODE SWITCHES

The DX80 Gateway or DX85 Modbus Slave can operate in two distinct modes: master mode or slave mode. In master mode the Gateway or DX85 can read/write register data from other Modbus slave devices. In slave mode the Gateway or DX85 responds to a Modbus master request for data. The factory default sets the DX80 Gateway and DX85 to slave mode.

The Gateway or DX85 Modbus Slave device must be set to slave ID 1 for the configuration tool to communicate properly. Set the Gateway's slave ID using the Gateway's LCD menu system \*DVCFG > (SLID); the factory default is 1. Set the slave ID for a Modbus Slave device using the rotary switches.

To change the DX80 Gateway or DX85 Modbus Slave to a master device:

1. Fill out the UCT's master table with at least one entry.
2. Click the Send button to send the master table data to the Gateway or DX85.
3. Select the radio button for DX80 is Modbus RTU Master
4. Click the Change Mode button

After the Master Timeout time expires, the Gateway becomes the Modbus master device and begins executing the master table entries.

To change the Gateway to a Modbus slave device:

1. Turn off the power to the Gateway
2. Turn on the power to the Gateway.
3. Click the Change Mode button with the DX80 is Modbus RTU Slave radio button selected. The device must be changed to a Modbus RTU slave before the Master Timeout time expires.