

Using the Spectrum Universal Gateway with the RMC75E and RMC75S

This device can convert between multiple protocols. This tutorial will focus on how to setup the gateway to communicate with the RMC. See <http://www.spectrumcontrols.com> for examples of how to configure the gateway to talk to other devices.

- For the RMC75E, configure the gateway as a Modbus TCP Client.
- For the RMC75S, configure the gateway as a Modbus RTU Client.

The RMC75E and Modbus/TCP

To configure the RMC75E with ModbusTCP, do the following:

1. **Connect Cables**
 - Connect the RMC75E to the same Ethernet network as the Universal Industrial Gateway.
 - Connect the Universal Industrial Gateway to the same Ethernet network as your computer.
2. **Configure the Universal Industrial Gateway per the Universal Industrial Gateway Quick Start.**
 - See the Spectrum documentation for these steps.
3. **Add the RMC75E device**
 - Protocol: ModbusTCP
 - Gateway Role: Client
 - TCP Port: 502
 - Address: IP Address of RMC you will be communicating with.
 - Slave ID: 1 (not used by RMC)
 - One-Based Addressing: Checked
4. **Test the connection, it should work**
5. **Add tags for data that will be communicated**
 - The address is a Holding Register Address.
This means you need to add 4 to the beginning of the address, i.e. the Modbus address shown for **Variable 0** in RMCTools is 1537 and will need to be addressed as 41537.
6. **Add the other device with it's tags that you will be transferring data between**
7. **Create Tag Maps**
8. **Activate Tag Map**
 - Now the data should be transferring back and forth.

The RMC75S and Modbus/RTU

To configure the RMC75S with Modbus RTU, do the following:

1. **Connect Cables**
 - Connect the RMC75S to the serial port of the Universal Industrial Gateway.
 - Connect the Universal Industrial Gateway to the same Ethernet network as your computer.
2. **Configure the Universal Industrial Gateway per the Universal Industrial Gateway Quick Start**
 - See the Spectrum documentation for these steps.
3. **Add the RMC75S device**
 - **Protocol:** Modbus RTU
 - **Gateway Role:** Client
 - **Serial Port:** Port of Gateway that RMC is connected to.

- Select Configure, than match the settings of the RMC75S (e.g., baud rate, parity, stop bits, etc.)
 - **Slave ID:** Modbus address of the RMC you will be communicating with.
 - **Response Timeout:** 1 (default)
 - **Retry Count:** 1 (default)
 - **End of Message Delay:** 4 (default)
 - **Min Command Delay:** 100 (default)
 - **One-Based Addressing:** Checked
4. **Test the connection**
 - Ensure the connection works properly.
 5. **Add tags for data that will be communicated**
 - The address is a Holding Register Address.
 - This means you need to add 4 to the beginning of the address, i.e., the Modbus address shown for Variable 0 in RMCTools is 1537 and will need to be addressed as 41537
 6. **Add the other device with its tags that you will be transferring data between**
 7. **Create Tag Maps**
 8. **Activate Tag Map**
 - Now the data should be transferring back and forth.