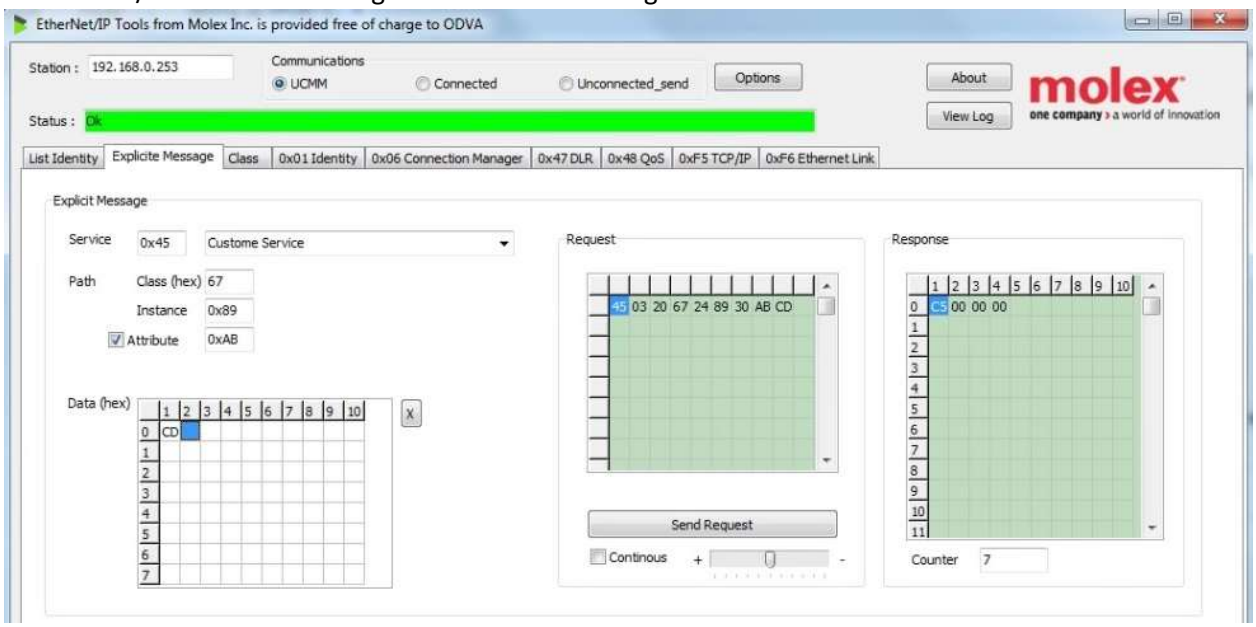
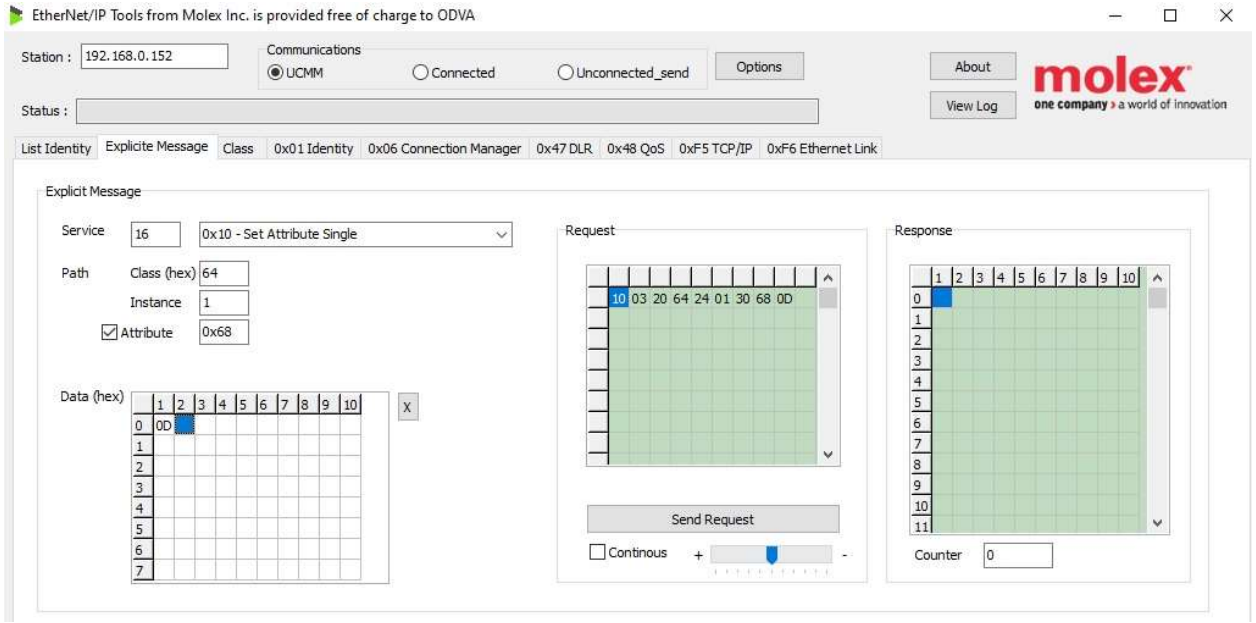
Setting up EIP Module and Reader for the first time

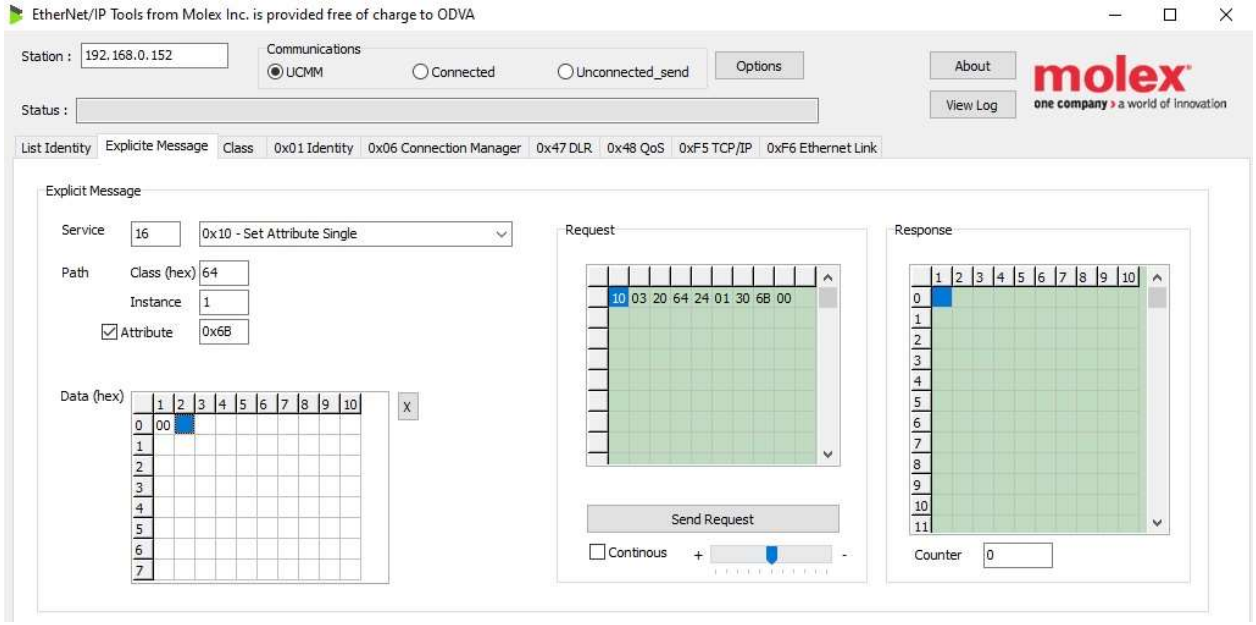
1. Using USB Send [DIP127] command to enable MODBUS TCP at 115200 baud
2. Then send [DIP2C0] To enable FIELD BUS and select a single antenna mode
3. On a brand new EIP XPORT the configuration is unlocked on power up. If you need to lock/unlock while testing use this secret message:



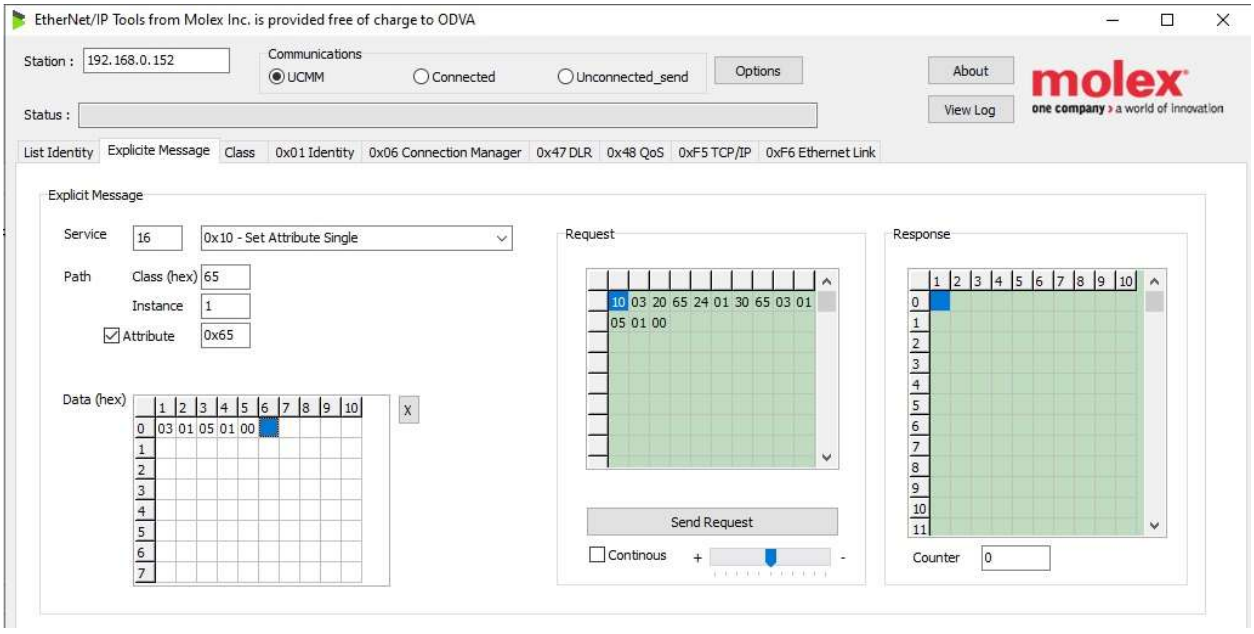
4. First set the baud rate of the EIP port:



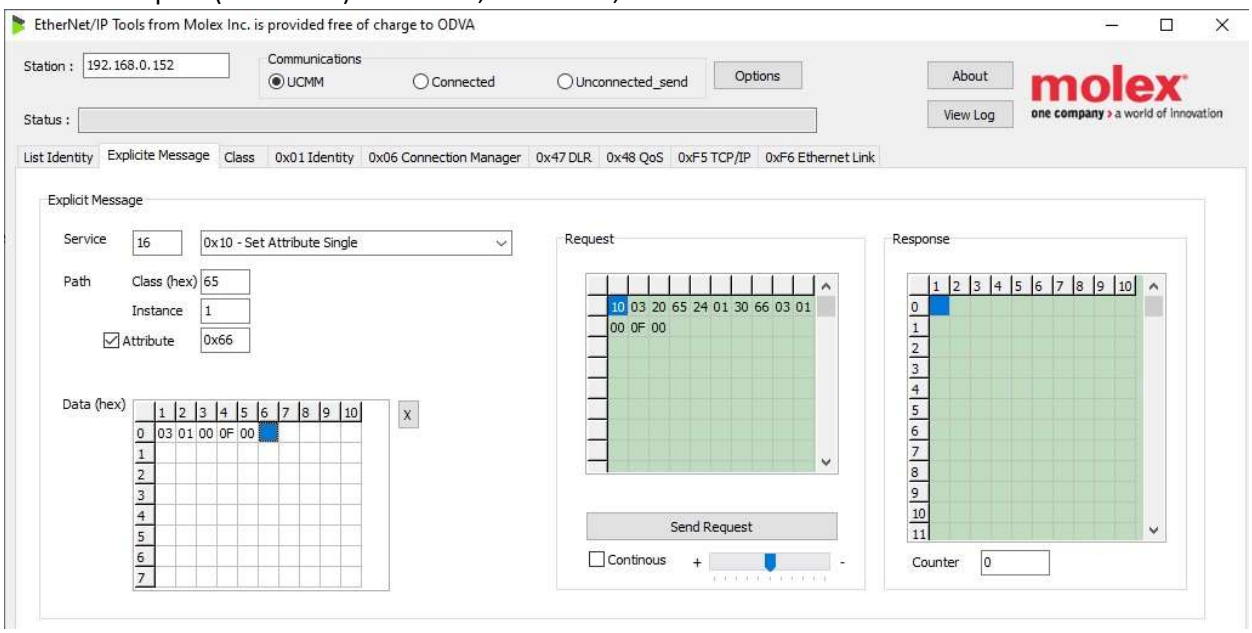
5. Next Change parity to none:



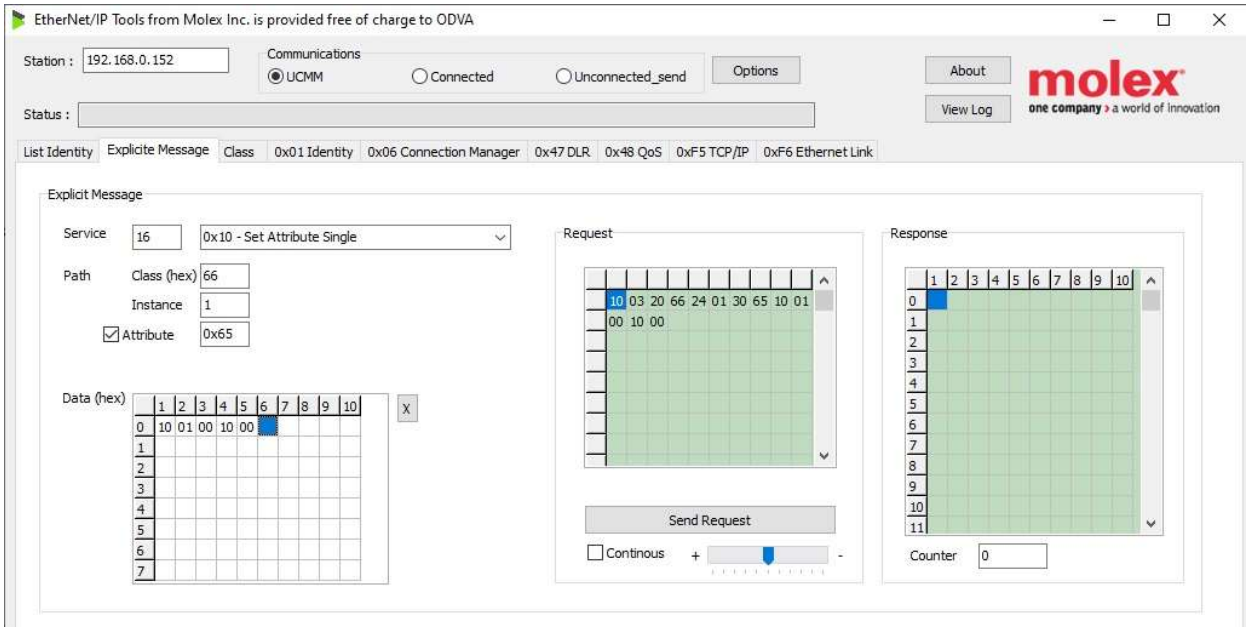
6. Reset Power to allow baud rate and parity changes to take effect
7. Set counter (1 antenna) class 0x65, instance 1, attribute 0x65



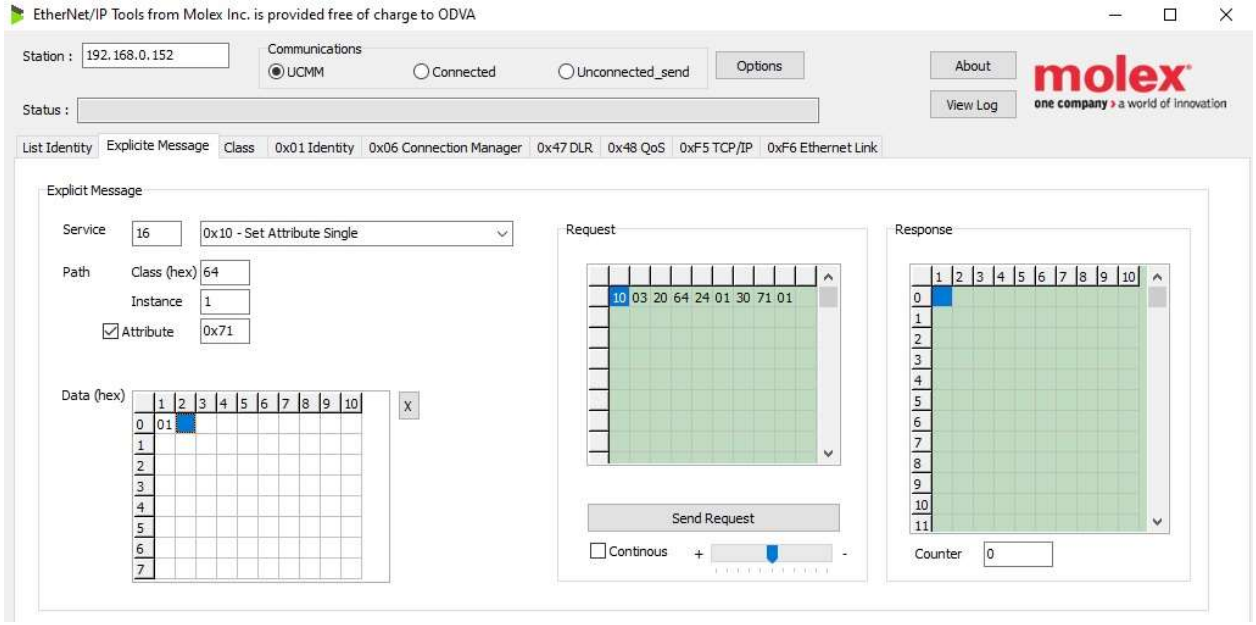
8. Set inputs (1 antenna) class 0x65, instance 1, attribute 0x66



9. Set outputs. Class 0x66, instance 2, attribute 0x65



10. Once configuration is complete set the configuration lock to 01



11. Once the configuration is complete and locked reset power one more time to apply all changes

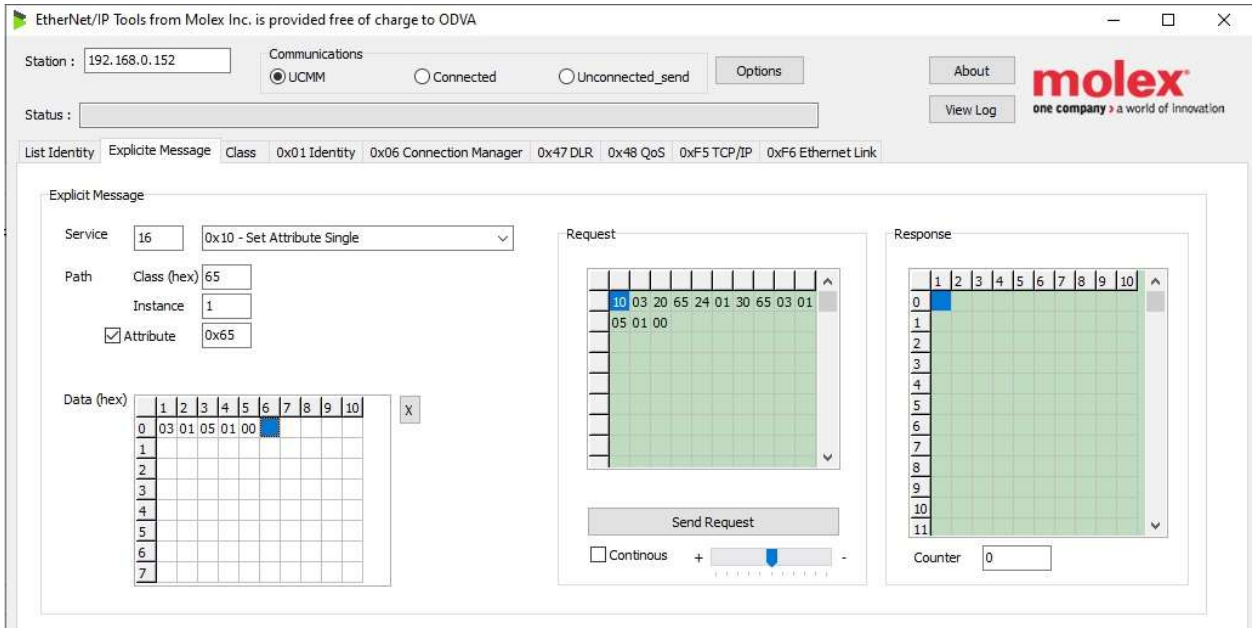
To add more antennas the reader must be changed to multiple antenna mode and new input attributes configured (0x66, 0x67, 0x68, 69, 6A, 6B)

1. Using USB send [DIP240] command to enable FIELD BUS and use multiple antennas
2. For every antenna you enable you will need to configure two more inputs on the EIP module, one for the counter and one for the antenna read data
3. Reset power after all the DIP commands are set to apply changes

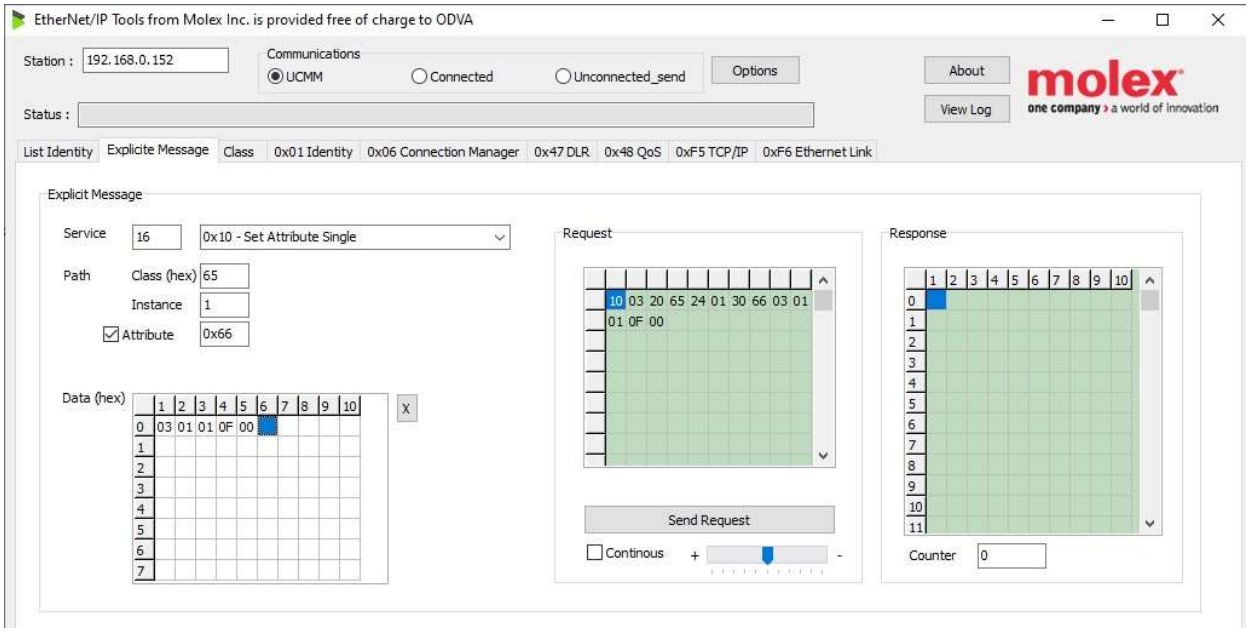
The Reader has a counter register per antenna port. This counter increases every time the antenna reads and rolls over when it goes over 65535.

When using multiple antennas configure inputs with antenna counter first and antenna data next as in the following screenshot examples

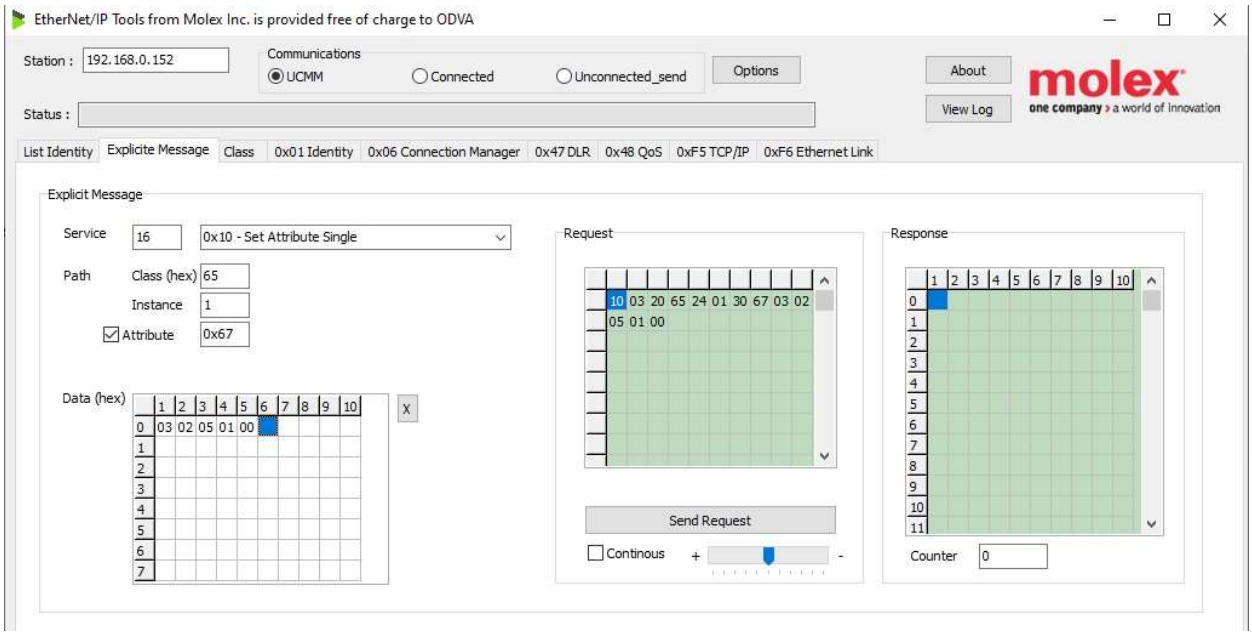
1. Antenna 1 counter



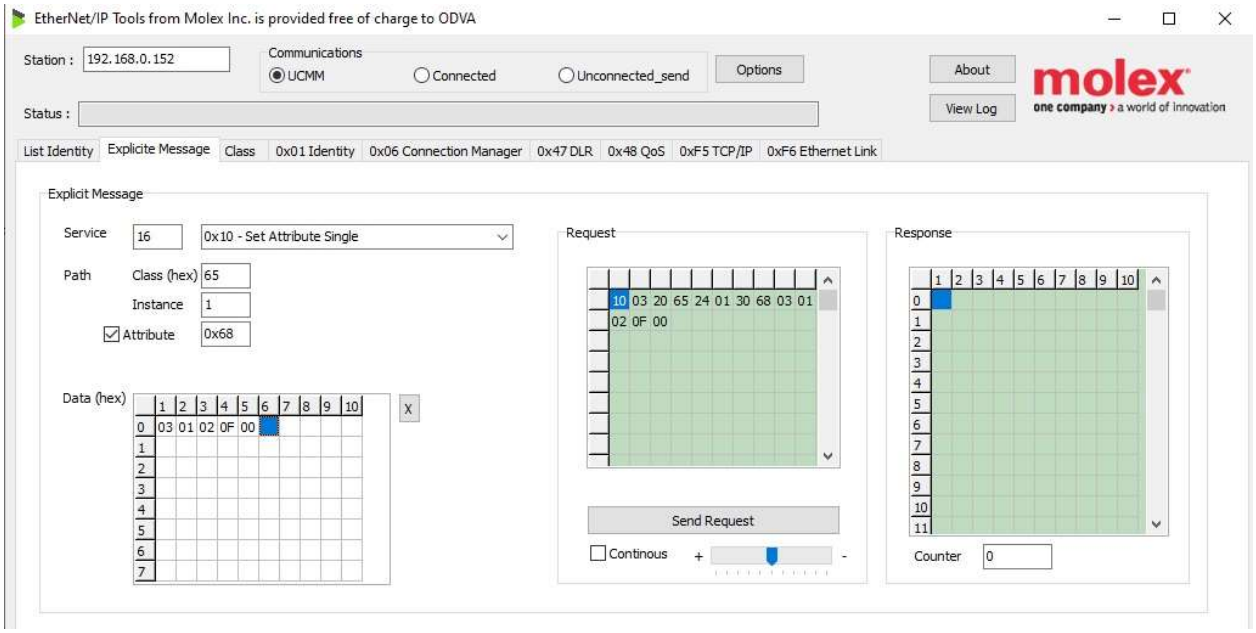
2. Antenna 1



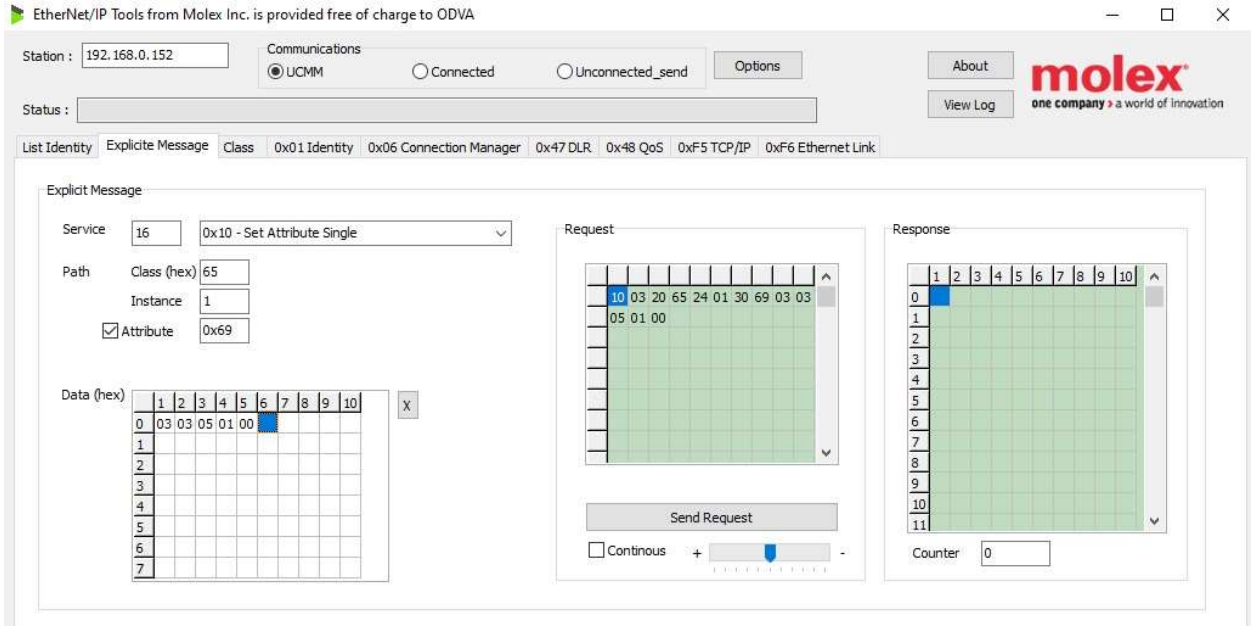
3. Antenna 2 counter



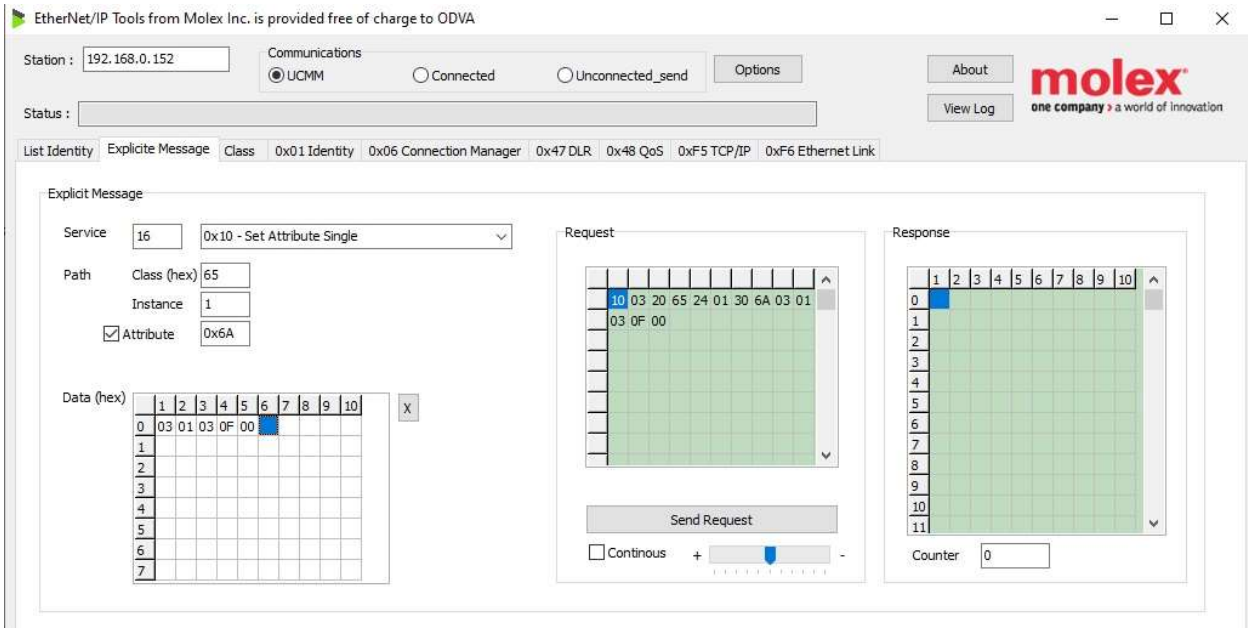
4. Antenna 2



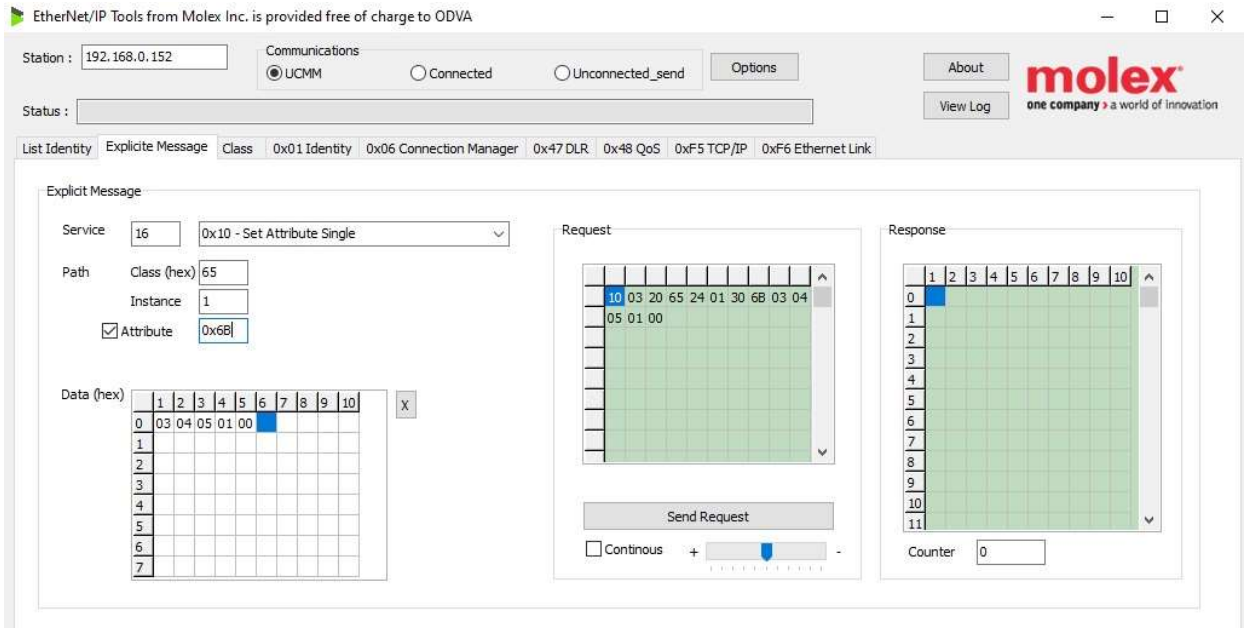
5. Antenna 3 counter



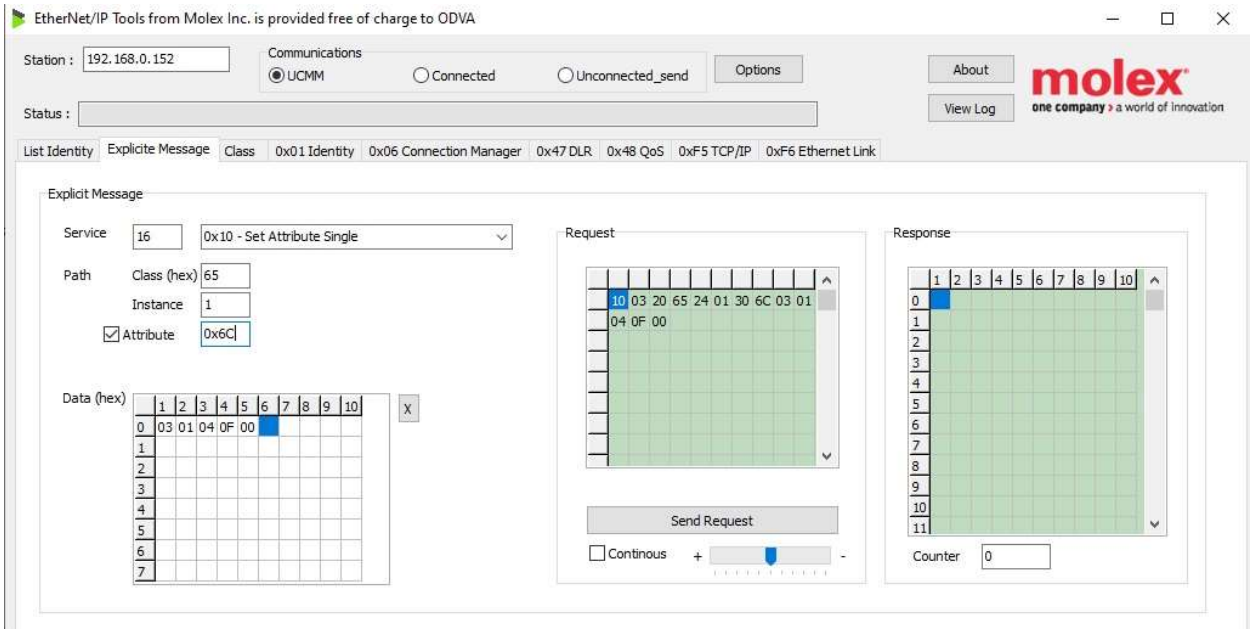
6. Antenna 3



7. Antenna 4 counter



8. Antenna 4

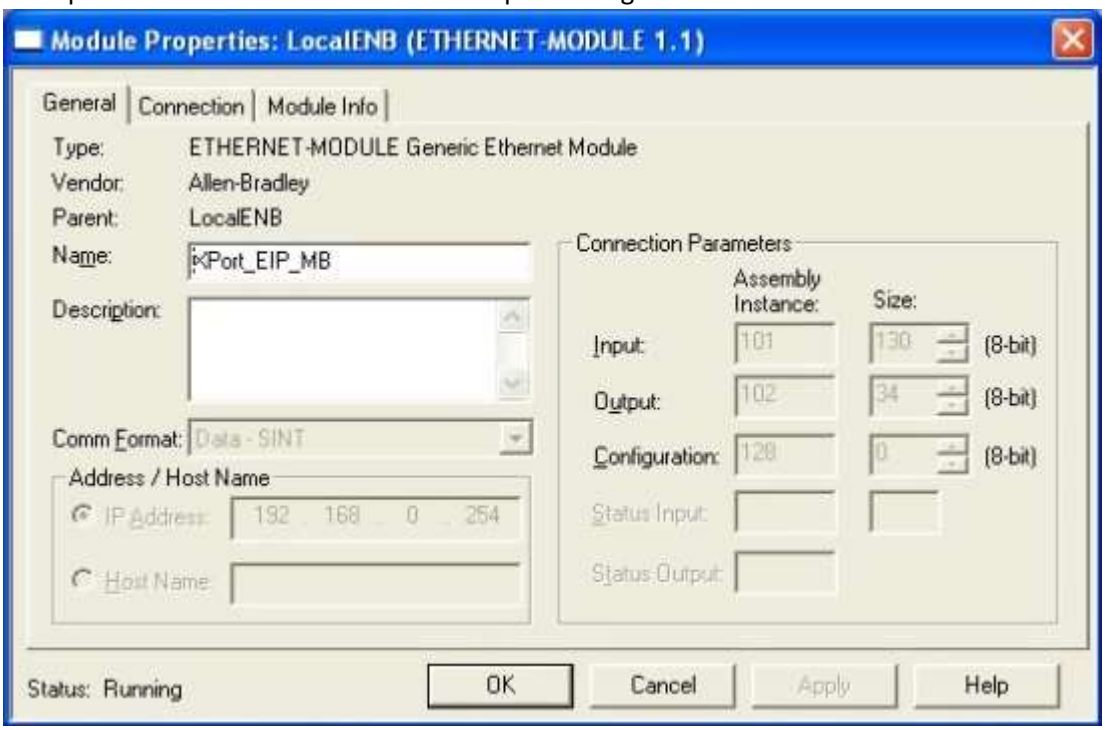


After mapping all the INS and OUTS set up PLC to match number of registers used. Use SINT (byte size) and for OUTs the instance is 102 and quantity is always 34

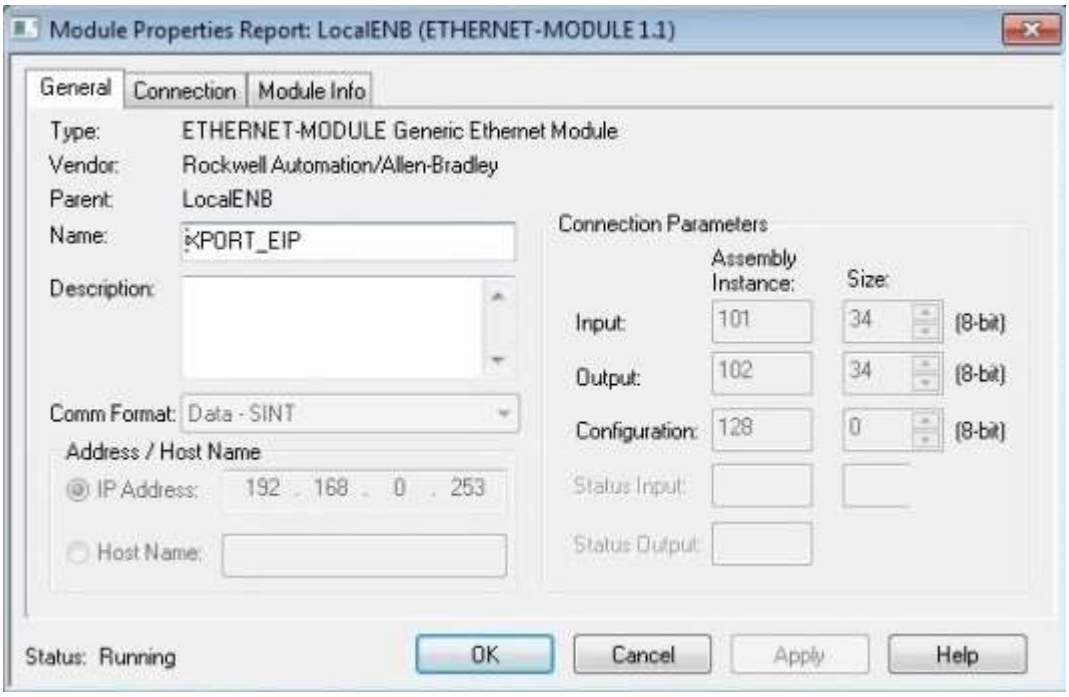
For INS is more complicated. Each antenna uses 30 bytes, each antenna counter if mapped uses 2 bytes. So, for example one antenna plus 1 counter is 32 bytes. The EIP module adds 2 more bytes at the top so total would be 34 bytes.

2 antennas plus 2 counters would be 64 bytes plus the 2 EIP control bytes that's 66 bytes

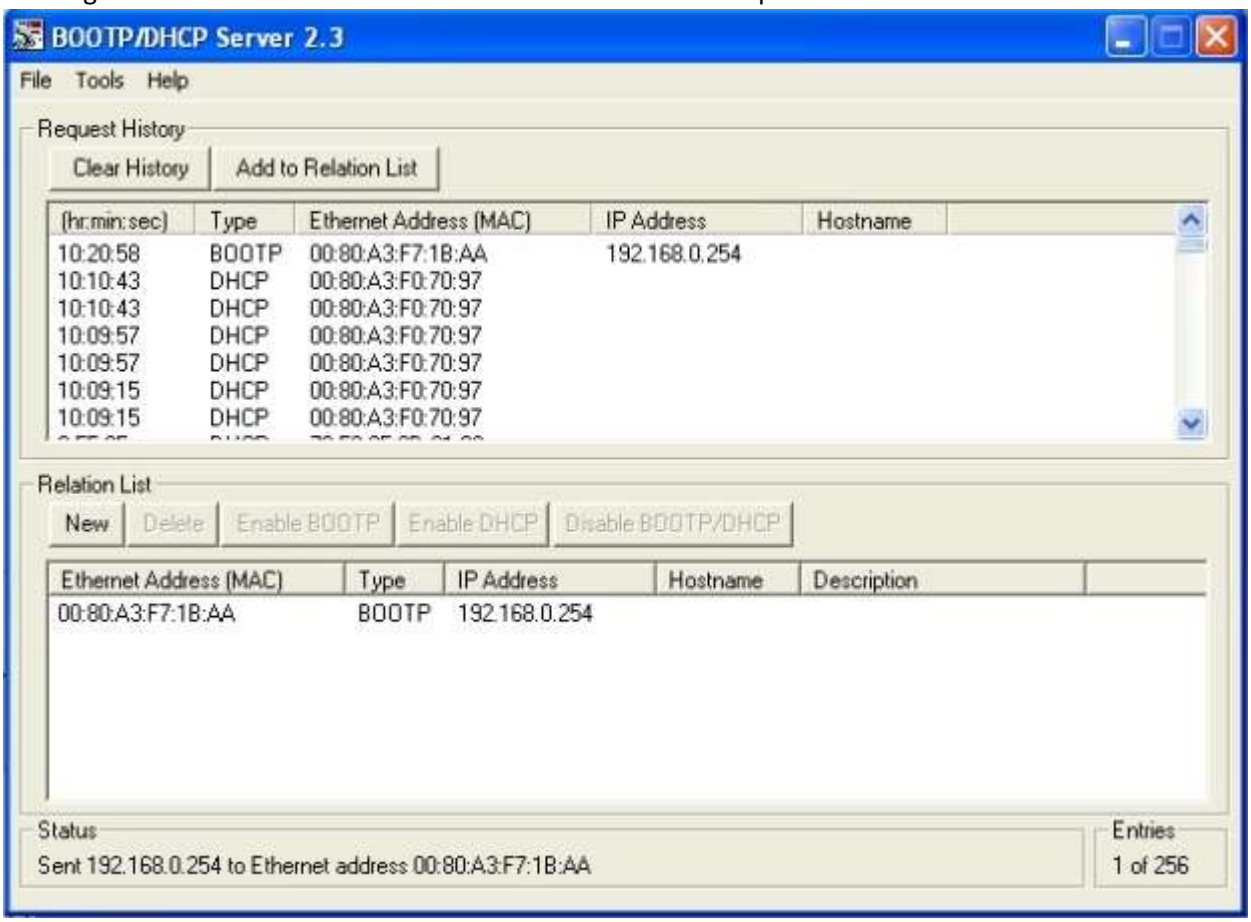
Example of Generic Ethernet Module Setup on RSLogix5000 for use with 4 antennas and 4 counters



Example of Generic Ethernet Module of one antenna with single antenna mode



To assign an IP address to the reader use BOOTP as in the example below



NOTE: readers will be preconfigured before shipping to the number of antennas requested, if only one antenna is used it will be preconfigured to single antenna mode. So, all the end used needs to do is configure an IP address with BOOTP and add a Generic Ethernet Module to their RSLogix5000 project with the proper number of ins and outs

Example of Controller tags for counter 1 and antenna 1