Converting a Discrete Input into a Synchronous Counter

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Any discrete input can be converted to a synchronous counter, as long as the synchronous counter rate is less than 10 Hz and the pulse width is greater than 62.5 milliseconds. Higher counter rates can be achieved with special settings. Contact the factory for more information.

Converting a discrete inputs into a synchronous counter is fairly easy to do when using the User Configuration Tool (UCT). Before changing any configuration settings, first connect your Gateway to the RS-485 to USB Conversion cable and plug it into your computer. Launch the UCT software.

1. Go to the **Configuration** screen.
2. Click the arrow next to the Node whose discrete inputs you want to convert into a counter.
3. Click the arrow next to the input number you'd like to convert.
4. Enable this input and from the drop-down list, select the discrete type.
5. Change the Report Type to Analog for a 16-bit counter or Double for a 32-bit counter.
6. Change the Sync counter type to 16-bit or 32-bit.
7. Define a Report rate in hh:mm:ss.sss.
8. Click SEND to send these configuration changes to the wireless network.
9. Cycle power to the Node after making changes to its configuration.

The counter value is stored in the Modbus registers. Creating a 32-bit counter allocates two Modbus registers, N and N+1. Verify the next Modbus register is not being used by another I/O point. For example, a 32-bit counter created in I/O 1 uses the Node's Modbus registers N and N+1. If the Node is using I/O 2 (Modbus register N+1), there will be a conflict. Disable I/O 2.

Some older Nodes with discrete I/O cannot be configured for the synchronous counter input.