Making Data Acquisition Easy

Using Different Baud Rates in a Modbus Network

Modbus is usually implemented on an RS-485 network. RS-485 allows multiple slave devices to communicate to a single master from a single port by daisy chaining devices. In order for this to work properly, all devices must have a unique slave ID, matching baud rates and matching parity along the same RS-485 bus.

Under some circumstances, this may not be possible. Some devices have fixed baud rates or parity; while others do not have the same options. This can make matching baud rates and parity difficult or impossible. If one of your devices forces you to use a slow baud rate, all devices must be made to match this baud rate; thus slowing down communication to all devices on the bus.

One of the most common solutions for this is to use a completely separate port (and RS-485 bus) for this single device. If the device is near and ports are available, this can be accomplished easily. In other situations, it is not as easy. For instance, if the single device is at the end of a long bus or cable laying is not easy or costly.

For this application, we have a solution which permits this device to be added to the system along the same bus. Using our TSH-725 will allow you to add one or more devices with different baud rates or parity settings.

When the device(s) with different baud rates or parity are at the end of the RS-485 bus, we recommend using the TSH-725.
https://www.icpdas-usa.com/tsh_725.html

If the device(s) are centralized, you can use a 2nd TSH-725 afterwards to change the baud rate back or you can use an I-7514 which is an active star hub which allows for different baud rate setting for each RS-485 output channel.
https://www.icpdas-usa.com/i_7514u.html

Making Data Acquisition Easy

If you have any questions concerning any of our RS-485 products, please contact us via email or phone. We are here to help.