

Quatech Serial Data Rate Information Sheet

Data rates (or baud rates) are highly system dependent. It is impossible for Quatech to know exactly how one of our products will perform in your specific system. Therefore, when we provide a data rate specification, we provide the maximum speed **each port** on the product can achieve under optimal, yet realistic, conditions. We determine the maximum data rate specification based on board design and on what we see in a variety of testing scenarios.

When assessing the capabilities of Quatech products it is important to remember that any given port on the product is capable of the specified maximum data rate at the hardware level, and at the device driver level. As far as the device drivers are concerned, all ports are independent and equally capable.

However, there are many factors that can affect baud rate over which Quatech has no control. If your card is not performing up to the maximum speed, the following are some (but by no means all) system parameters that may be causing reduced data rates:

- Processor speed (horsepower)
- Degree of load placed on the card's outputs
- Cable length or design
- Operating system and service pack level
- Overall software load on the system (other apps and drivers consuming CPU time)
- Use or nonuse of flow control protocols
- Efficiency of the software application using the port

In addition, with USB or Ethernet products third-party controller chips and their associated drivers and operating system components come between Quatech device drivers and our hardware and sometimes have unpredictable effects on throughput.

A special note on products with the surge suppression option (IND):

As noted above, one of the factors that can affect baud rate is capacitive loads. When the ports are equipped with surge suppressors, those suppressors add enough capacitance to prevent the transceivers from reaching speeds as high as the standard cards can achieve. Typically, Quatech products with the surge suppression option are limited to 115.2 kbps maximum under optimal conditions. As with the standard cards, this value was determined by observing the cards' performance in a variety of testing scenarios.

If you still have questions about data rates and how Quatech boards will perform in your system, we encourage you to contact your [local sales representative or a Quatech sales engineer](#) to discuss your application.