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## **APPLICATION NOTE NO. 68**

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### **Using USB Ports to Communicate with Sea-Bird Instruments**

Most Sea-Bird instruments use the RS-232 protocol for transmitting setup commands to the instrument and receiving data from the instrument. However, most newer PCs and laptop computers have USB port(s) instead of RS-232 serial port(s).

USB serial adapters are available commercially. These adapters plug into the USB port, and allow one or more serial devices to be connected through the adapter. Sea-Bird tested USB serial adapters from several manufacturers on computers at Sea-Bird, and verified compatibility with our instruments. These manufacturers and the tested adapters are:

- **FTDI** ([www.ftdichip.com](http://www.ftdichip.com)) -  
“ChiPi” USB-RS232 Converter (model # FTDI UC232R-10).  
*Note: This adapter can also be purchased from Sea-Bird, as Sea-Bird part # 20200.  
Drivers for this adapter can be found at <http://www.ftdichip.com/Drivers/VCP.htm>.*
- **IOGEAR** ([www.iogear.com](http://www.iogear.com)) –  
USB 1.1 to Serial Converter Cable (model # GUC232A).  
*Note: We have had several reports from customers that they could not communicate with their instrument using a laptop computer and this adapter.*
- **Keyspan** ([www.keyspan.com](http://www.keyspan.com)) -  
USB 4-Port Serial Adapter (part # USA-49WLC, replacing part # USA-49W)  
*Note: We have one report from a customer that he could not communicate with his instrument using a notebook computer and this adapter. He was able to successfully communicate with the instrument using an XH8290 DSE Serial USB Adapter ([www.dse.co.nz](http://www.dse.co.nz)).*
- **Edgeport** ([www.ionetworks.com](http://www.ionetworks.com)) -  
Standard Serial Converter Edgeport/2 (part # 301-1000-02)

Other USB adapters from these manufacturers, and adapters from other manufacturers, **may** also be compatible with Sea-Bird instruments.

**We recommend testing any adapters, including those listed above, with the instrument and the computer you will use it with before deployment, to verify that there is no problem.**

See Application Note 56: Interfacing to RS-485 Sensors for information on using a USB port to communicate with a Sea-Bird instrument that communicates via RS-485 telemetry.