



Sea-Bird Electronics, Inc.
13431 NE 20th Street
Bellevue, WA 98005
USA

Phone: (425) 643-9866
Fax: (425) 643-9954
E-mail: seabird@seabird.com
Web: www.seabird.com

APPLICATION NOTE NO. 68

Revised **October 2012**

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) -
“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) –
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.
- **TrippLite** (www.tripplite.com) -
USB 4-Port Serial Adapter (part # USA-49WG, replacing Keyspan part # USA-49WLC)
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).
- **Edgeport** (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.

Application Note Revision History

Date	Description
April 2002	Initial release
March 2004	Add information on an additional supplier (IOGEAR) of USB adapters.
June 2004	Update Keyspan adapter part number, and provide Sea-Bird part number for IOGEAR adapter that we are stocking and selling.
November 2006	Add caution to test instrument with computer you will be using and adapter prior to deployment, prompted by unsuccessful use of one of our recommended adapters with a notebook computer. Add information about DSE adapter used successfully with that computer.
June 2009	Update recommended USB adapter from IOGEAR GUC232A (PN20163) to FTDI UC232R-10 (PN20200). Some PCs have problems with the IOGEAR; FTDI works fine.
October 2012	Update Keyspan link (now Tripp Lite) and product # (USA-49WG instead of 49WLC)