



The *BE|USB* Sensor Converter provides simple, small-footprint computer connectivity via USB for *BE2100* sensors

Direct Digital Sensor Communication

The *BE|USB* is among the latest additions to BugLab's noninvasive optical monitoring systems, designed for use in both research laboratory and industrial environments. It provides both power and digital connectivity via USB for one *BE2100* biomass/OD sensor. The functionality is virtually identical to that of the *BE2100* base unit, but is a smaller-footprint and lower-cost solution for those users who do not need the features of the base unit such as: analog outputs, RS-232 connectivity, fluorescent display, or keypad operation.

Software Included

The *BE|USB* sensor converter is controlled through software via USB, enabling straightforward integration into a fermentor or bioreactor control system or connectivity with a computer. The included software program provides intuitive controls and the ability to track growth in real time. The software can also calibrate the sensor output to any desired units (OD, g/L, cells/mL, etc.) as well as track important events (e.g. inoculation, nutrient additions).

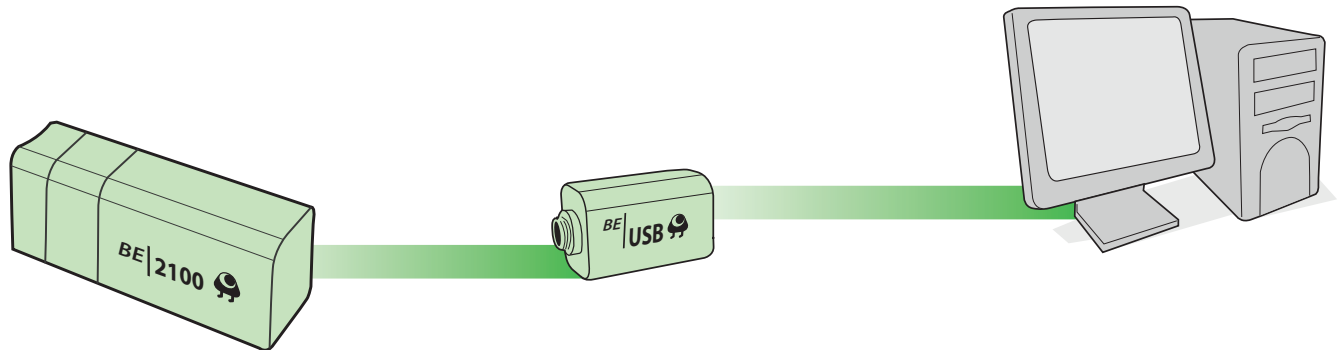
Simple Command Set

As an alternative to running the standard computer program, a well-documented serial command set is provided for communicating with the sensor using simple commands. The commands can be called from within any other computer program or control system that has the ability to send and receive serial commands. This makes it easy to integrate the BE system with other instrumentation. A LabView® instrument driver is also available on request.



How it Works

The *BE2100* sensor stores all key settings and converts measurements into digital format internally. The *BE|USB* provides power for the *BE2100* sensor, and creates a Virtual Communications Port (VCP) for communicating with the sensor using serial commands. The *BE|USB* can also be interfaced through USB expansion hubs (available as an accessory), making it possible to communicate with multiple sensors, while using only a single USB port on a computer.



BE|USB Features and Specifications

User Interface Software Features (CD included with *BE|USB*)

- Real-time graphical and numerical display for each sensor.
- Event marking on graph, both pre-defined and user-defined.
- Baseline setting and subtraction.
- User calibration of sensor output to any reference units.
- Access to all sensor and base unit settings.

User Interface Software Requirements

- Windows XP/ Vista / 7 Operating System.
- Available USB or 9-pin RS-232 COM port.
- Minimum 200 MB free hard disk space.
- CD reader (required only at time of software installation).



BE|USB Features and Specifications

BE|USB (Electrical)

DC Power In	5 V, 90 mA
Digital Output	USB
Connectors	USB-B female and BE2100 sensor female (4-wire threaded)
USB Communications Cable (included)	
Connectors	USB-A male (computer) and USB-B male (BE USB)
Length	
Standard	2 m (6')
Custom	up to 15 m (50')

BE|USB (Physical)

Overall Width	12.8 cm (1.1")
Overall Length	5 cm (2")
Overall Height	2.3 cm (0.9")

BE|USB (Environmental)

Operating Temperature	0 to 40 °C (30 to 100 °F)
Operating Environment	dry location use only