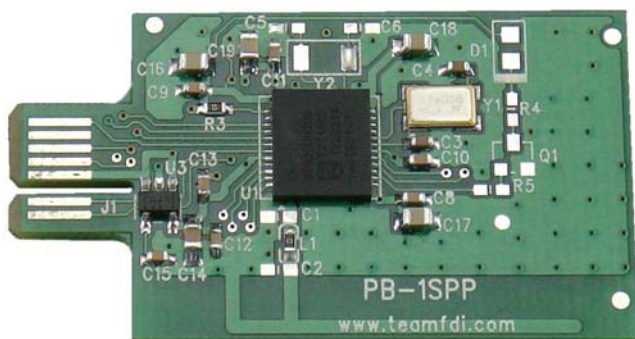


# PB-1SPP

## Bluetooth 1SPP Peripheral Board



## USB-Dongle and Peripheral Boards



The **PB-1SPP** is a Bluetooth 2.0 Serial Port Profile (SPP) device that allows for a quick and easy wireless connection to transfer data between Bluetooth capable systems. An NXP BGB203/H1/S06 processor provides complete Bluetooth 2.0 functionality as the embedded protocol stack runs on the PB-1SPP rather than on the host processor. The **PB-1SPP** requires the use of the USB-Dongle for power and the virtual COM port interface to the PC via the USB connection.

The USB-Dongle and **PB-1SPP** can be used as a wireless serial port replacement to easily transfer data between two PC's or for industrial control applications like M2M. A pair of USB-Dongle and **PB-1SPP** boards along with simple serial port communications software like HyperTerminal is all that you need to transfer wireless data. The USB-Dongle and **PB-1SPP** may also be used to communicate with other devices that are compatible with the Bluetooth 2.0 Serial Port profile (SPP). The USB-Dongle provides all power and interface signals required by the **PB-1SPP** to interface to the PC.

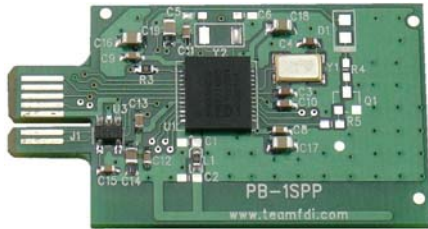
Many other low cost Peripheral Boards are available for various functions and can also be used with the same USB-Dongle. Please consult the FDI website for details at [www.teamfdi.com](http://www.teamfdi.com)

### Highlights

- Low cost tool for prototyping, testing, and evaluation
- USB port powered so no external Power Supply required
- Supports USB 2.0
- Plugs directly into standard USB Port via USB-Dongle – great for laptops
- BGB203 is preprogrammed for SPP
- PIFA antenna designed into PCB
- PB-1SPP uses BGB203/H1/S06 which provides
  - ◆ Adaptive Frequency Hopping (AFH)
  - ◆ Link Controller LC / Link Manager LM
  - ◆ Logical Link and Adaptation Protocol (L2CAP)
  - ◆ Service Discover Protocol (SDP)
  - ◆ RFCOMM Protocol
  - ◆ Generic Access Profile (GAP)
  - ◆ Tested and qualified by Bluetooth SIG
  - ◆ Flash-based configuration
  - ◆ Automatic Re-connect Mode
  - ◆ Low-power sleep mode

# Technical Details

The **PB-1SPP** uses a PCB edge finger connector to interface to the USB-Dongle.



Board Dimensions 1.743" x 0.98"

## Target Interface

The USB-Dongle includes a 14 pin connector to the Peripheral Board that uses the following signals. Not all signals are used on all Peripheral Boards:

|   |  |
|---|--|
| ISP/ICPn  | 5V (USB power, unswitched)               |
| Switched Power (3V for ICP) or Reset (High True for 8051 ISP) | Reset (Low True) (for ICP & LPC2000 ARM) |
| Ground  | 3V (unswitched)                          |
| PCL/SCL (ICP/I2C)   | PDA/SDA (ICP/I2C)                        |
| TXD (UART)  | RXD (UART)                               |
| MSIO (SPI)  | PSEN/P0.14 (ISP entry)                   |
| SCLK (SPI)  | MOSI (SPI)                               |

## Example of USB-Dongle and PB-1SPP Wireless Serial Ports



**Power** – The USB-Dongle provides the regulated 3.3V power required by the **PB-1SPP**.

**Connectivity** - Wireless connectivity on the **PB-1SPP** is controlled by the NXP BGB203 and supports 802.15.1/Bluetooth, and 802.11b/Wi-Fi, WLAN.

**Crystal or Clock Frequency** - The **PB-1SPP** is clocked by an external 13 MHz crystal oscillator located at position Y1 on the PB.

**Typical Configuration** – The typical configuration shown above uses the **PB-1SPP** in conjunction with the USB-Dongle to provide the physical interface to the PC via the USB port. Software on the USB-Dongle provides a Virtual COM port interface to the PC and allows RS-232 serial data to be transmitted wirelessly using the **PB-1SPP**. A second set of boards may be used as the other side of the wireless connection or the **PB-1SPP** may also communicate with other compatible devices using the Bluetooth 2.0 Serial Port profile (SPP).

## Ordering Information

Order Online at [www.digikey.com](http://www.digikey.com)  
Digi-Key Part #: 622-xxxx-ND  
Price: \$25.00 (USD)  
Availability: Stock  
Digi-Key Contact Info:  
1-800-DIGI-KEY Phone  
(218) 681-3380 FAX

FDI Contact Info:  
(800) 278-0293 Phone  
(256) 883-1241 FAX  
E-mail: [sales@teamfdi.com](mailto:sales@teamfdi.com)  
[www.teamfdi.com](http://www.teamfdi.com)

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