NXP Bluetooth 2.0 SiP BGB203/H1/S06 with embedded protocol stack and serial port profile

Embedded Bluetooth for cable replacement

This Bluetooth product, which has the protocol stack and serial port profile embedded on the BGB203/H1/S06, minimizes the resources needed on the host processor.

Key features
▸ Supports Bluetooth 2.0 features of BGB203
▸ Fast connection
▸ Adaptive Frequency Hopping (AFH)
▸ Entirely embedded Bluetooth stack
▸ Link Controller (LC)
▸ Link Manager (LM)
▸ Logical Link and Adaptation Protocol (L2CAP)
▸ Service Discover Protocol (SDP)
▸ RFCOMM Protocol
▸ Serial Port Profile (SPP)
▸ Generic Access Profile (GAP)
▸ Tested and qualified by Bluetooth SIG
▸ Configuration can be stored in Flash
▸ Automatic re-connect mode
▸ Low-power sleep mode
▸ Physical Interface: Universal Asynchronous Receive Transmit (UART)

1SPP Application kit
▸ Two 1SPP evaluation boards
▸ Two USB cables included
▸ PIFA antenna included on PCB
▸ DB9 Serial Port connection to PC
▸ Available via local NXP Account Managers or from our distributors.

Combining the NXP Bluetooth 2.0 SiP BGB203/H1/S06 with 1SPP firmware, this innovative solution implements a Bluetooth Serial Port Profile (SPP) and can be used to wirelessly transfer data between systems.

The Bluetooth protocol stack runs on the BGB203 processor, and not on the host processor, so it minimizes host-processor overhead and can be implemented in a variety of environments.

The firmware provides complete Bluetooth functionality and uses a command set that follows standard AT-command syntax. The command interface makes it simple to configure the command set, and there is a configurable escape sequence.
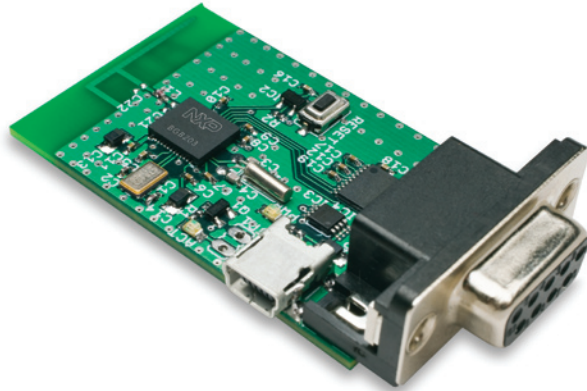
The host accesses the firmware via a physical UART interface that can be configured for a variety of characteristics, including baud rate, word length, parity, stop bits, RTS/CTS flow control, and DTR/DSR flow control.

The firmware supports RS-232 signals, working with CD, RI, and DTR/DSR (including pass-through). It also supports DCE or DTE device.

founded by Philips

The entire Bluetooth protocol is included: Bluetooth RF, Baseband / Link Controller (LC), Link Manager (LM), Logical Link and Adaptation Protocol (L2CAP), Service Discover Protocol (SDP), RFCOMM Protocol, Serial Port Profile (SPP), and the Generic Access Profile (GAP).

The firmware has been tested and qualified by the Bluetooth SIG, so designers can be confident that the Bluetooth functions will operate as specified. (Additional Bluetooth SIG testing will be required if the end product uses modified 1SPP firmware or integrates the firmware into the application software.)

To support production, the firmware is programmed into the BGB203/H1/S06 device. The result is a 1SPP-validated silicon chip ready for shipment to end customers.

1SPP BT Evaluation Board

BGB203

The BGB203 is a second-generation System-in-Package (SiP) solution for Bluetooth 2.0 wireless connectivity. It provides complete, plug-and-play Bluetooth 2.0 operation in a low-cost package that measures only 49 mm^2. Optimized for short-range hosted and embedded applications, it reduces board space, lowers overall cost, and speeds time-to-market for a range of applications that use serial data transfer, including industrial, point-of-sale, and medical systems.
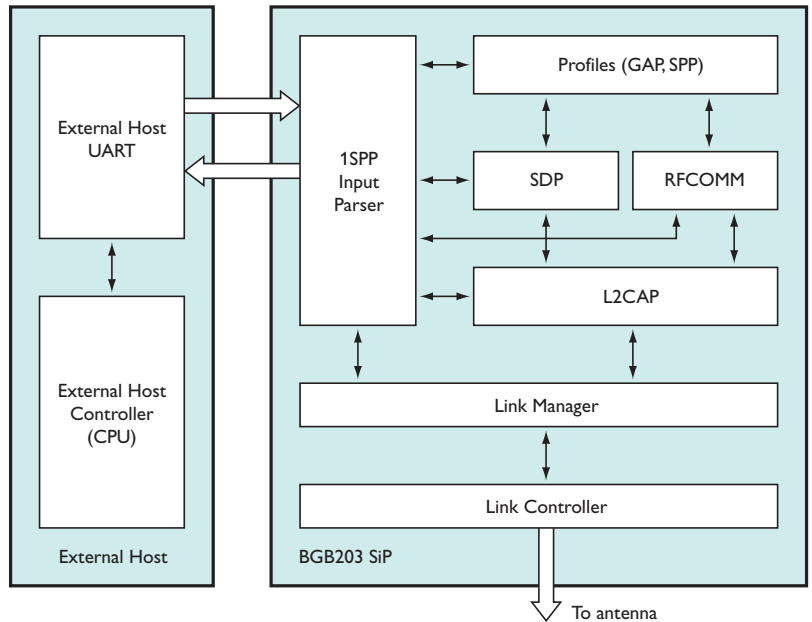
1SPP firmware as embedded in the Bluetooth 2.0 SiP BGB203/H1/S06