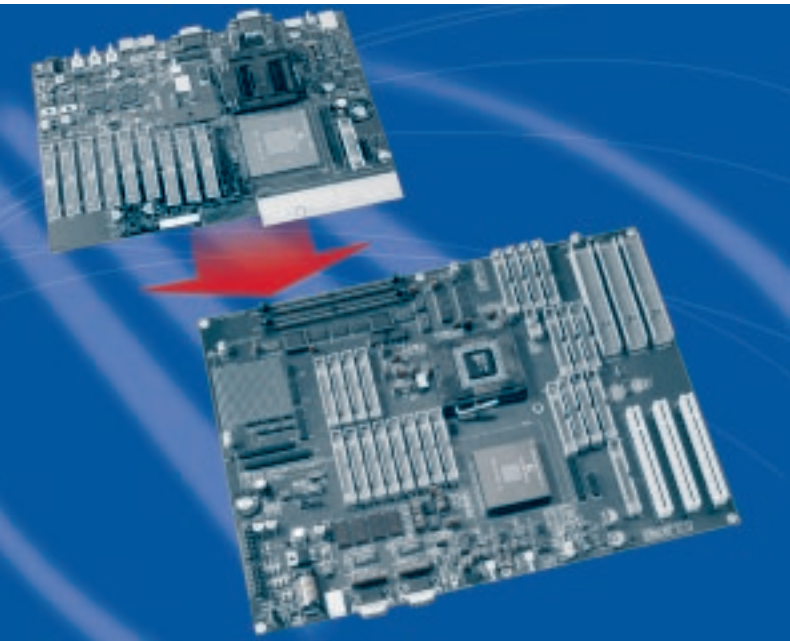


Bluetooth Developer's Kit

Velocity-compatible Solution for Rapid Development of Bluetooth Hardware and Software Applications



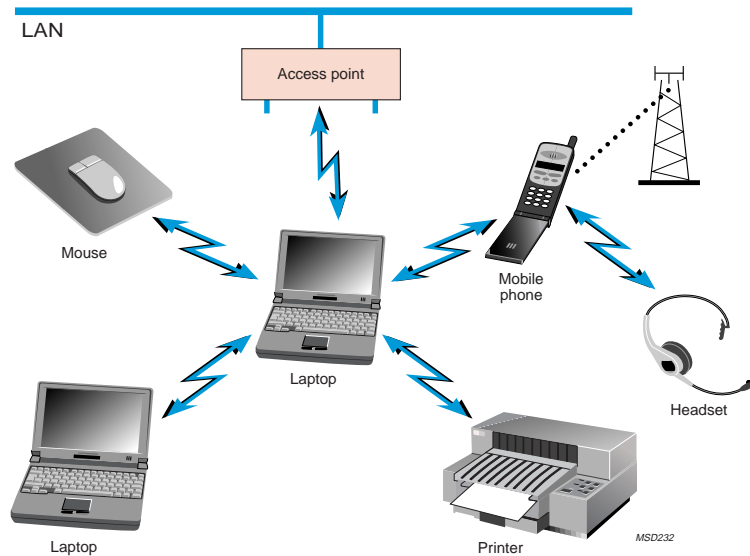
Overview

Philips Semiconductors is committed to wireless, with worldwide design, manufacturing, test and assembly resources and unmatched integration capabilities. We offer the most integrated and highest performance single-chip baseband solutions for all major digital wireless standards such as GSM and CDMA for cellular, converging towards 3rd Generation (3G); DECT for Cordless; plus multi-mode and proprietary systems. And Bluetooth is now part of this capability portfolio. Our Bluetooth Developer's Kit (BTDK) speeds hardware and software design of products supporting the worldwide Bluetooth standard. The BTDK2 integrates Velocity Rapid Silicon Prototyping systems to enable fast, low-risk design of Bluetooth end-products incorporating Bluetooth standard products or customer-specific ICs and associated system and application software.

Bluetooth Background

Bluetooth is a low-cost, radio-based cable replacement technology sponsored by a Special Interest Group of leading computing and communications companies which include Ericsson, IBM, Intel, Nokia and Toshiba. VLSI and Philips Semiconductors have joined as members of the technology Adopters supporting the effort. Bluetooth enables ubiquitous "ad hoc" communication between small, portable devices through short-range wireless links, eliminating the need for cables connecting computers, peripherals and other communications devices.

Bluetooth Cable Replacement



VELOCITY-COMPATIBLE SOLUTION FOR RAPID DEVELOPMENT OF BLUETOOTH HARDWARE AND SOFTWARE APPLICATIONS

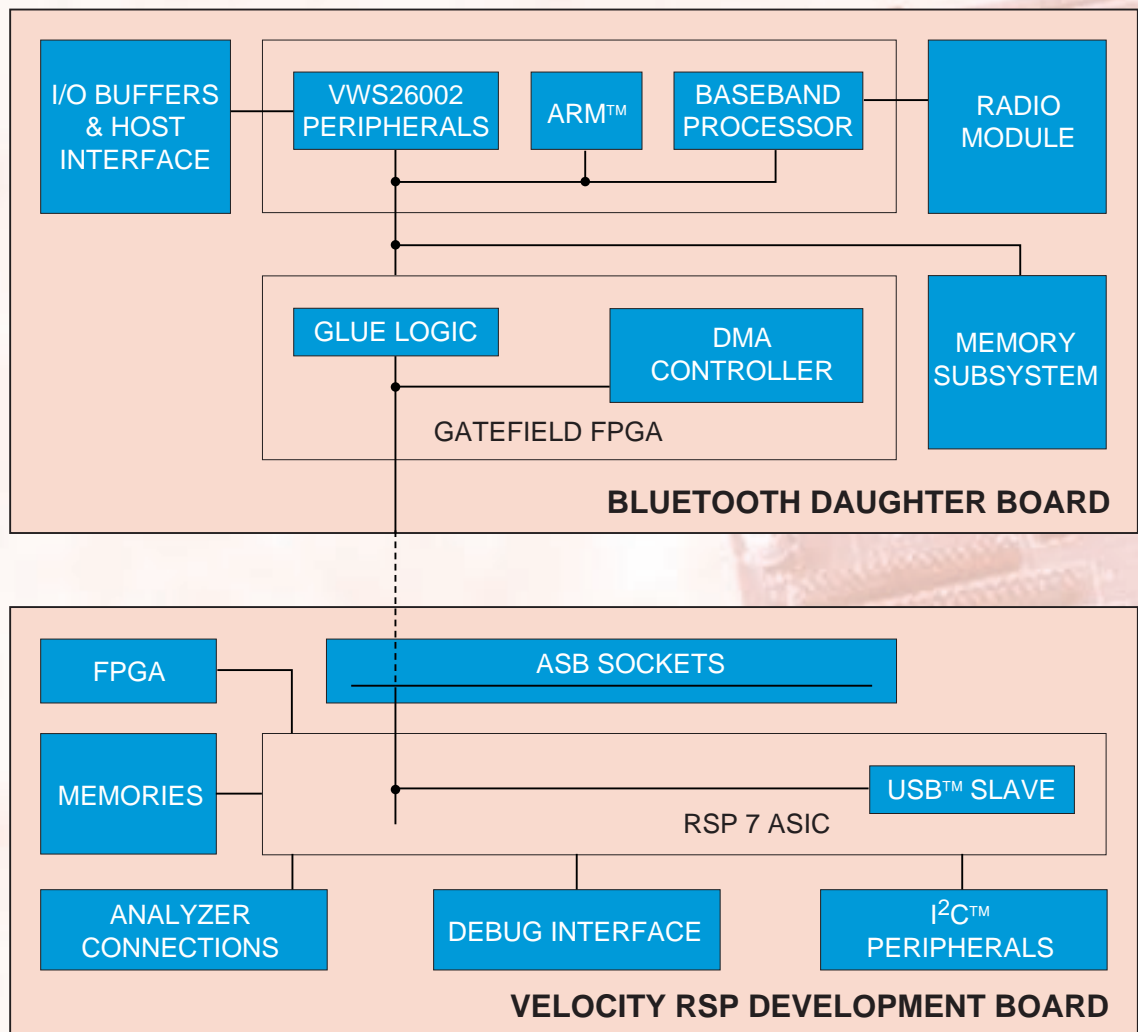
Bluetooth Developer's Kit V 2.0 (BTDK)

The BTDK2 is a platform for the development of Bluetooth applications and contains 2 Bluetooth daughter cards (BTDC's). The two BTDC's each work as a stand-alone platform allowing a Bluetooth wireless link controlled only by a host Computer to be established.

Each Bluetooth daughter card comprises a single-chip baseband device, embedded software (protocol stack), radio module, and FPGA and other discrete components.

Each BTDC is also designed for direct connection to the Velocity Rapid Silicon Prototyping methodology, enabling customers to quickly create and test complete product concepts, thus shortening time-to-market, reducing risk and projects costs.

Bluetooth Development Environment



BTDK Features Overview

The system includes:

- 2 Bluetooth daughter cards and plug-on RF boards
- Virtual Radio (RF link simulation) for system tests
- Embedded Bluetooth protocol stack software, v1.0 compliant
- FPGA socket for simulation of additional peripheral blocks
- JTAG port and logic analyzer connectors for debugging

BTDK Elements

VWS26002/3 Baseband device

Integrates all Bluetooth baseband functions on a single IC.

Baseband device provides:

- low level drivers
- Link Controller (LC)
- CVSD speech coding
- USB slave interface
- PCM interface
- Bluetooth Burst Mode Controller
- UART Interface

Protocol Stack

- Link Manager (LM)
- Host Controller Interface (HCI) for UART or USB

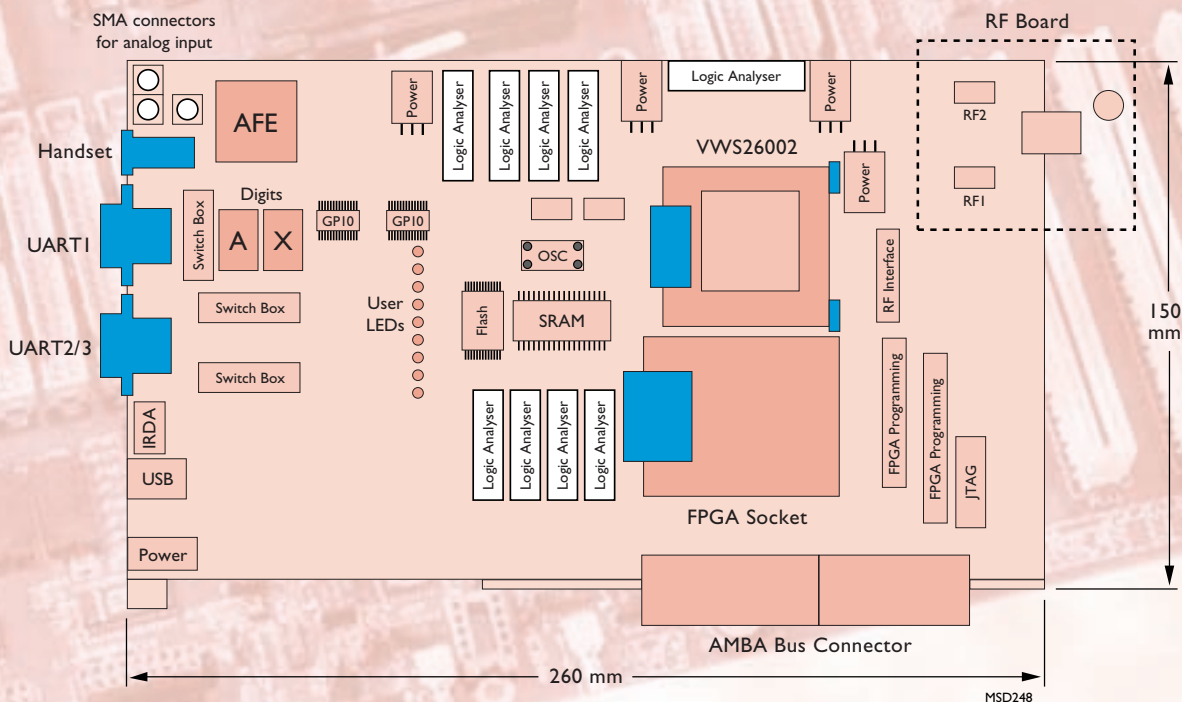
Radio

- Compliant with Bluetooth 1.0 Specification
- Operates in 2.4GHz ISM band (unlicensed)
- Frequency hopping, spread spectrum technology
- 79 "hop" channels (for US/Europe, Spain/France and Japan ISM bands)
- Bit rate of 1MB/s

Miscellaneous

- Cables and power supplies
- User Guide
- Software utilities

Bluetooth developer's kit daughter card layout



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