

Features

- V1.1 Bluetooth Baseband Controller
- 32b StrongARM™ Bus Interface
- Interfaces to SiliconWave Radio devices
- CVSD Transcoder with PCM and 16b linear Codec Interfaces
- Dedicated *BlueBand* logic implements FEC, whitening, encryption, HEC and CRC
- Supports all packet types: control, voice, mixed voice/data, single and multi-slot
- 79 and 23 channel hopping modes
- Piconet and Scatternet support
- Sniff, Park and Hold modes
- Mandatory and optional paging schemes
- Supplied with *BlueBand* Firmware (object), implementing the Bluetooth protocol stack and a full set of Bluetooth profiles
- 1.8V, 40mA Power Consumption (typical)
- 128 pin LQFP (14mm x 14mm)

Applications

- Notebook Computers
- Set-Top Boxes
- PDAs
- Network Access Gateways

General Description

The VB8810 is a Bluetooth Baseband Controller designed to interface directly to an external 32 bit StrongARM™ RISC microprocessor. It maps into main system memory where the Bluetooth protocol stack is integrated with the other system software, thereby saving the cost of dedicated Flash, SRAM, I/O and other system functions required with other solutions. StrongARM clock speeds up to 260MHz are supported, and bus accesses use the StrongARM variable-latency I/O device mode. Separate Interrupts are provided for the Bluetooth controller, PCM interface and the UART.

An on-chip controller for an external frequency-hopping spread-spectrum radio is designed to control a Bluetooth radio device from Vaishali Semiconductor or SiliconWave. Bluetooth radio modules from Taiyo-Yuden and ALPS are also supported. A CVSD Transcoder supports Bluetooth voice applications.

Block Diagram

