

Features

- V1.1 Bluetooth Baseband Controller + Radio
 - 2.4GHz Frequency-hopping Radio with +4dBm Power Amp and 20dB Tx Attenuator
 - ARC32 bit RISC processor with 2kB Cache
 - 64kB on-chip SRAM
 - CVSD Transcoder with PCM and 16b linear Codec Interfaces
 - USB 1.0 Engine with Host and Device modes
 - Two fast UARTs, 921kbps each
 - Dedicated *BlueBand* logic implements FEC, whitening, encryption, HEC and CRC
- Supports all packet types: control, voice, mixed voice/data, single and multi-slot
 - Piconet and Scatternet multipoint support
 - Sniff, Park and Hold modes
 - 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)

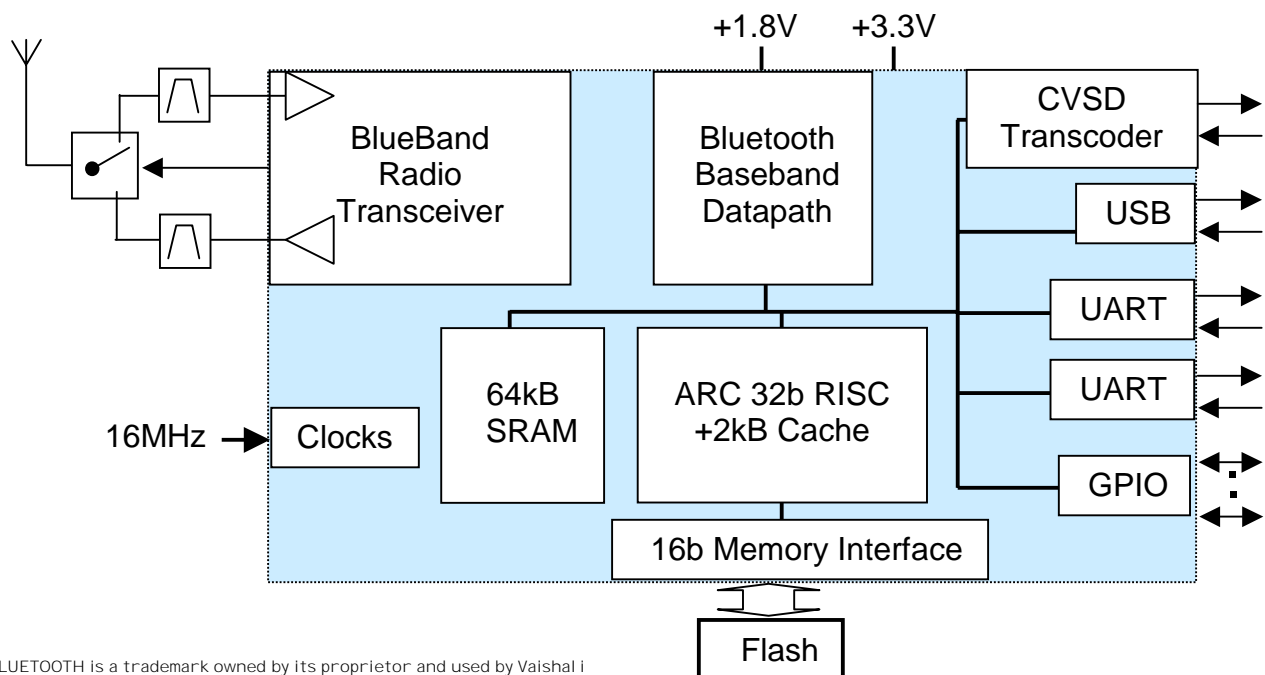
General Description

The VB8831 is a single-chip Bluetooth Radio Transceiver and Baseband Controller with an integrated 32 bit ARC RISC microprocessor and 64kB of embedded SRAM. BlueBand firmware for the Bluetooth protocol stack, together with other system code, is stored in external 16b wide Flash memory. Program code for the ARC processor uses standard development and debugging tools from Metaware Inc.

A fully integrated frequency-hopping RF transceiver, with integral filters, AGC and PLL/synthesizer, requires only an external matching network and antenna to build a power Class 2 or 3 radio. The programmable transmit power attenuator enables Class 1 operation with an external fixed gain Power Amp.

Host interfaces are provided via two fast (921kbps) serial ports and a USB 1.0 engine, which can be operated in either host or device mode with the appropriate firmware. A CVSD Transcoder supports Bluetooth voice applications.

Figure 1. Functional Block Diagram



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