Product Brief

BSN6040 Baseband Controller for Bluetooth™ From Texas Instruments

The BSN6040 device is a highly integrated Bluetooth baseband controller. The device incorporates a hardware core for highly optimized execution of the Bluetooth protocol, RAM, ARM7 processor, and peripheral interfaces. The BSN6040 baseband controller allows achieving the full Bluetooth throughput via both UART host controller interface (HCI) and USB HCI.

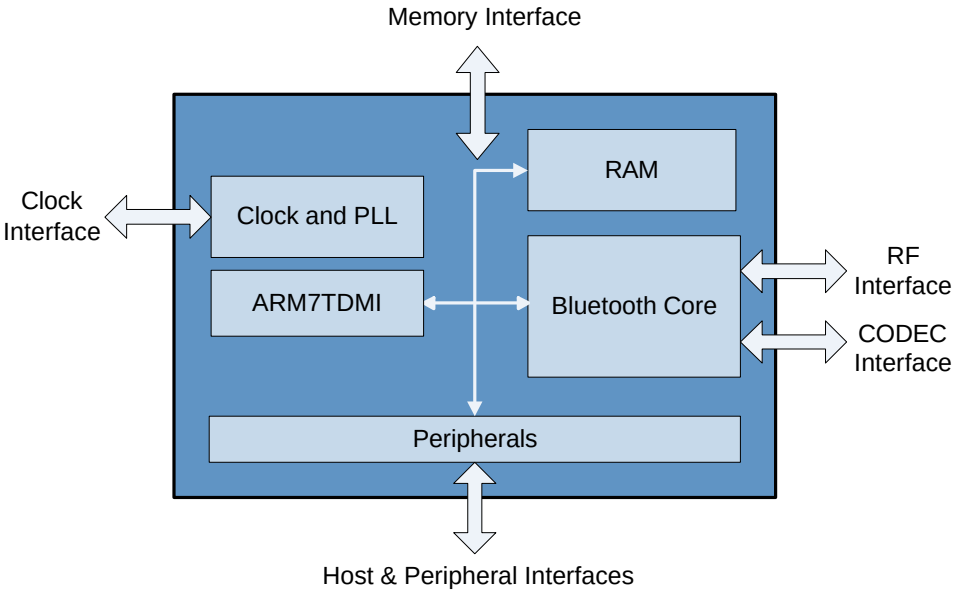
These features together with low power consumption, small package size, and additional features, enable the implementation of a wide variety of low cost Bluetooth products.

The BSN6040 baseband controller together with the TRF6001 RF transceiver from Texas Instruments, form a complete, high performance, low cost Bluetooth point-to-multipoint wireless communications system.

BSN6040 Baseband Controller

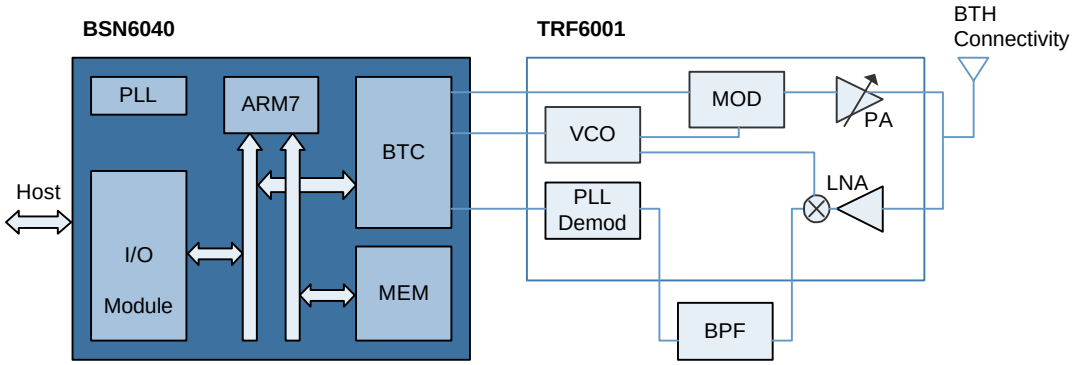
- Full Point-To-Multipoint Functionality (7 Slaves)
- Bluetooth Rev 1.1 Certified
- Low Power Consumption
- Proprietary Low Power Mode for Ultra Low Current Consumption
- HCI USB & UART Interfaces
- USB 1.1 Compliant (12M bps)
- Full Bluetooth Throughput (723.2K bps in DH5)
- 3 Voice Links Support
- Multi-Rate System Clock Support
- Host Based/Hostless Applications
- BGA (Ball Grid Array) Package (10x10 mm)
- **Process:** 0.15-Micron CMOS

Functional Block Diagram:



Consisting of the BSN6040 baseband controller and the TRF6001 RF transceiver, the Bluetooth™ chipset from Texas Instruments provides an integrated two-chip solution that supports the latest Bluetooth specification for short-distance wireless communications. The BSN6040 baseband controller can support both host-based applications and hostless applications (running both the Bluetooth protocol stack and the application), eliminating the need for external host.

Complete Bluetooth Solution



Operating in the 2.4-GHz range worldwide, the Bluetooth chipset from Texas Instruments supports simultaneous point-to-multipoint transmission of voice and data, with rates up to 1 Megabit per second.

With TI proprietary low power mode, the chipset (BSN6040+TRF6001) total average current consumption is extremely low, enabling longer battery life in portable and battery operated devices.

The chipset not only reduces the required space and power consumption, but also allows developers to implement Bluetooth solutions in a wide variety of applications, due to its low cost, high performance, and multi-rate system clock support (fast clock: 10 to 20 MHz in 1-MHz steps; slow clock: 32.0 kHz / 32.768 kHz).

Bluetooth Applications:

- Access Points and Dongles
- Cellular Phones
- HID Devices
- Handheld Devices
- Laptop Computers
- Printers