

**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.

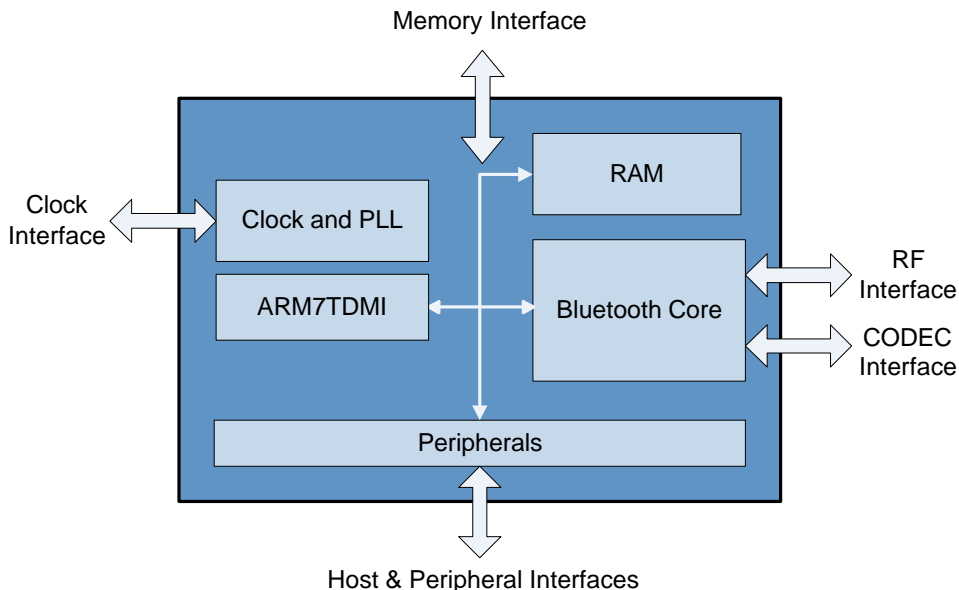
These features together with low power consumption, small package size, and additional features, enable the implementation of a wide variety of low cost Bluetooth products.

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**

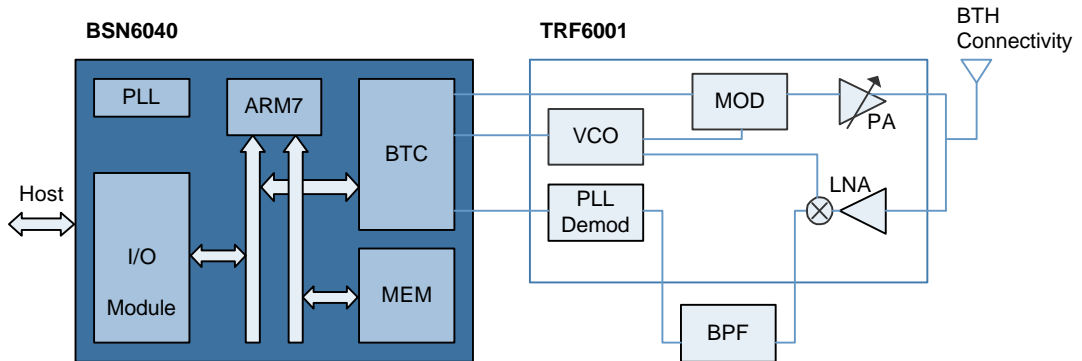
- Full Point-To-Multipoint Functionality (7 Slaves)
- Bluetooth Rev 1.1 Certified
- Low Power Consumption
- Proprietary Low Power Mode for Ultra Low Current Consumption
- HCI USB & UART Interfaces
- USB 1.1 Compliant (12M bps)
- Full Bluetooth Throughput (723.2K bps in DH5)
- 3 Voice Links Support
- 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



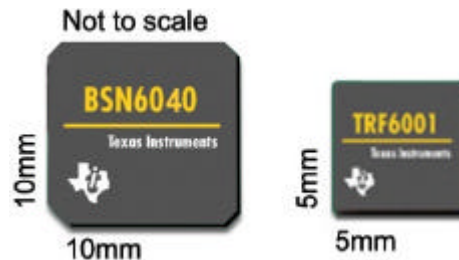
Operating in the 2.4-GHz range worldwide, the Bluetooth chipset from Texas Instruments supports simultaneous point-to-multipoint transmission of voice and data, with rates up to 1 Megabit per second.

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



The red/black bar is a trademark of Texas Instruments.  
Bluetooth is a trademark owned by the Bluetooth SIG, Inc., USA and licensed to Texas Instruments

**Important Notice:** The products and services of Texas Instruments and its subsidiaries described herein are sold subject to TI's standard terms and conditions of sale. Customers are advised to obtain the most current and complete information about TI products and services before placing orders. TI assumes no liability for applications assistance, customer's applications or product designs, software performance, or infringement of patents. The publication of information regarding any other company's products or services does not constitute TI's approval, warranty or endorsement thereof.