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BCM1200-BTE
PRODUCT Brief

BLUETOOTH™ V1.2 COMMUNICATIONS SOFTWARE FOR EMBEDDED SYSTEMS

FEATURES AND BENEFITS

- **Portability**
  - The BCM1200-BTE code is portable and scalable over a wide array of products and platform architectures. It can be adapted to all Bluetooth applications, ranging from simple, cost-driven products such as headsets to complex platforms with extensive feature sets.

- **OS Independence**
  - The BCM1200-BTE has been developed and validated with an ARM™ and many other common processors. Source code is provided for software ports to RTOS platforms such as Nucleus, pSOS, uTron, and VxWorks. A detailed porting guide explains how to modify the Generic Kernel Interface (GKI) for any OS.

- **BCM1200-BTE Insight - Application Development and Scripting Tool**
  - BCM1200-BTE Insight is a PC-based Bluetooth development environment for embedded applications. It provides Bluetooth emulation that allows execution of embedded applications without the need for target hardware. It uses USB, H4 UART connected or simulated radios. The scripting engine provides an extensive test environment and test scripts for standard HCI commands, upper-layer stack and many of the Bluetooth profiles. The easy to use graphic interface greatly simplifies application development and validation.
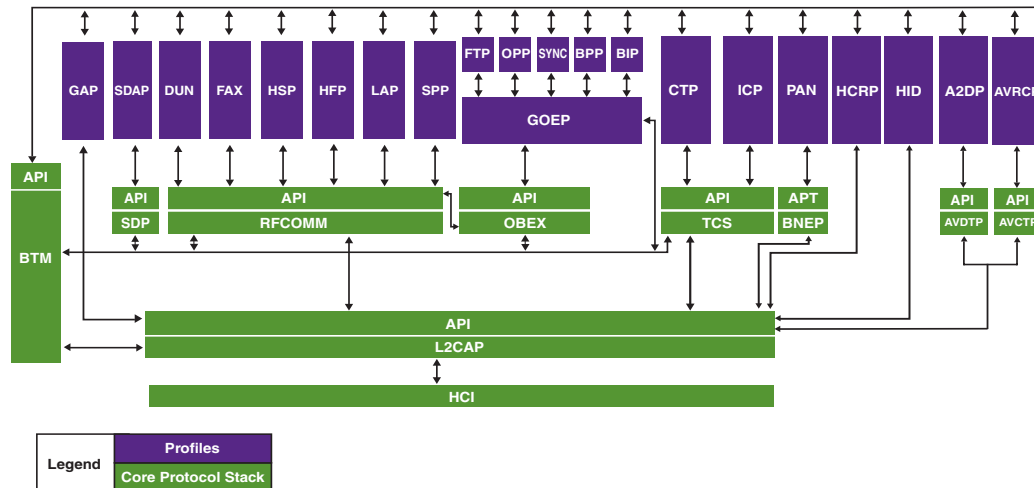
FEATURES AND BENEFITS

- **BCM1200-BTE Extensive Profile Offering**
  - The BCM1200-BTE offers an extensive set of Bluetooth Profiles, configurations and roles, including Generic Access, Serial Port, Service Discovery Application, Headset, Fax, LAN Access, Dial-up Network, Synchronization, Generic Object Exchange, Object Push, File Transfer, Intercom, Cordless Telephony, Hands Free Car Kit, Hardcopy Cable Replacement, Basic Printing, Personal Area Networking, Phone Access Profile, Basic Imaging Profile, HID and Audio Distribution and AV Remote Control. Broadcom is leading the market in new profile development and support of advanced v1.2 features such as eSCO.

- **BCM1200-BTE Advanced Protocol Stack**
  - The Bluetooth v1.2 upper protocol stack is composed of the Logical Link Control and Adaptation Protocol (L2CAP), RFCOMM, Telephony Control Specification (TCS), Service Discovery Protocol (SDP), Object Exchange Protocol (OBEX) and Broadcom's Bluetooth Manager. Advanced protocols including Bluetooth Network Encapsulation (BNEP), Audio/Video Distribution Transport (AVDTP) and Audio/Video Control Transport (AVCTP) Protocols can also be integrated into the stack. ANSI C source code is available for easy customization when required.

- **Support and Training**
  - Broadcom provides a wide array of services - from extensive technical support and product training to conformance assistance.

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BCM1200-BTE
Upper Stack
Architecture

Broadcom's popular Bluetooth™ Communications Software for Embedded Systems (BTE) is a complete Bluetooth protocol stack, profile and development solution. The BCM1200-BTE enables semiconductor companies, OEM product manufacturers, and embedded application developers to quickly and easily port Bluetooth Qualification Body (BQB) conformance tested and compliant with the Bluetooth 1.2 specification. The BCM1200-BTE offers the software stability and product experience developers have come to expect.

BCM1200-BTE is modular, robust, and maintainable across any embedded platform or Operating System (OS). It includes a generalized OS, or Generic Kernal Interface (GKI) and a variety of wrappers for common platforms and operating systems. The GKI can be configured to run as a simple OS or used as a software abstraction layer that resides between the Bluetooth protocol stack and platform OS. The GKI reduces time to market by enabling easy porting to any OS without requiring modifications to the stack.

Product deliverables:

- ANSI C source code fully compliant with the Bluetooth Core Protocol Specification v.1.2, including:
  - Logical Link Control and Adaptation Protocol (L2CAP)
  - Serial Port Emulation (RFCOMM)
  - Telephony Control Specification (TCS)
  - Service Discovery Protocol (SDP)
  - Object Exchange Profile (OBEX)
  - Bluetooth Network Encapsulation Protocol (BNEP)
  - Audio/Video Distribution Transport Protocol (AVDTP)
  - Audio/Video Control Transport Protocol (AVCTP)
- ANSI C source code for the GKI, a software abstraction layer that can optionally be used as a standalone OS. A comprehensive library

of wrappers for common operating systems is also included.
- An extensive porting guide for embedded systems and documentation that exposes and details Bluetooth wireless technology application program interfaces (API) for the protocols and profiles. APIs allow custom Bluetooth-enabled applications to be created.
- Source code for standard HCI drivers for selected chipsets.
- BCM1200-BTE User Manual, Release Notes and Bluetooth conformance documentation.
- API and design documents for all software components.
- A sample Bluetooth application that demonstrates serial cable replacement.
- Sample applications that demonstrate how to write applications using the profile APIs.

ANSI C source code fully compliant with the Bluetooth v1.2 supports the following profiles:

Mandatory Profiles:	
• Generic Access Profile (GAP)	• Serial Port Profile (SPP)

Optional Profiles:	
• Fax Profile (FAX)	• Intercom Profile (ICP)
• Dial-up Network Profile (DUN)	• Headset Profile (HSP)
• LAN Access Profile (LAP)	• Hands-free Profile (HFP)
• Object Push Profile (OPP)	• Basic Printing Profile (BPP)
• File Transfer Profile (FTP)	• Human Interface Device (HID)
• Basic Imaging Profile (BIP)	• Audio/Video Remote Control
• Advanced Audio Distribution Profile (A2DP)	• Personal Area Networking Profile (PAN)
• Synchronization Profile (SYNC)	• Cordless Telephony Profile (CTP)
• Hardcopy Cable Replacement Profile (HCRP)	• Generic Object Exchange Profile (GOEP)
• Service Discovery Application Profile (SDAP)	

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