

## Key features

- Low power consumption
- Low processor load
- Ideal for integration of Bluetooth Baseband in custom circuits
- Supports 1 slave
- For one-processor applications
- Minimum solution for low requirement profiles

## Target Products

- Games and accessories
- Home control devices
- Cordless mouse and joystick
- Computer accessories
- Industrial automation

## Development

The Licensee will be able to install and run a complete working system. A generic Design Simulation Model (DSM) of the ARM7TDMI is also supplied, so the deliverables include a complete working simulation system.



## Qualification

The EBCP Application Data mini is considered to be a component and can therefore be pre-qualified. A reference design will be submitted to specific tests and a test report generated. In addition, there will be an Implementation Conformance Statement for the EBCP. This will therefore give seamless development and qualification for the SoC (System-on-Chip) developer.

## Hardware Design

- Processor: ARM 7TDMI
- Bus: AMBA

## Additional Required Modules

- FLASH memory
- RAM
- Bluetooth radio
- Oscillator and PLL

## Hardware Architecture

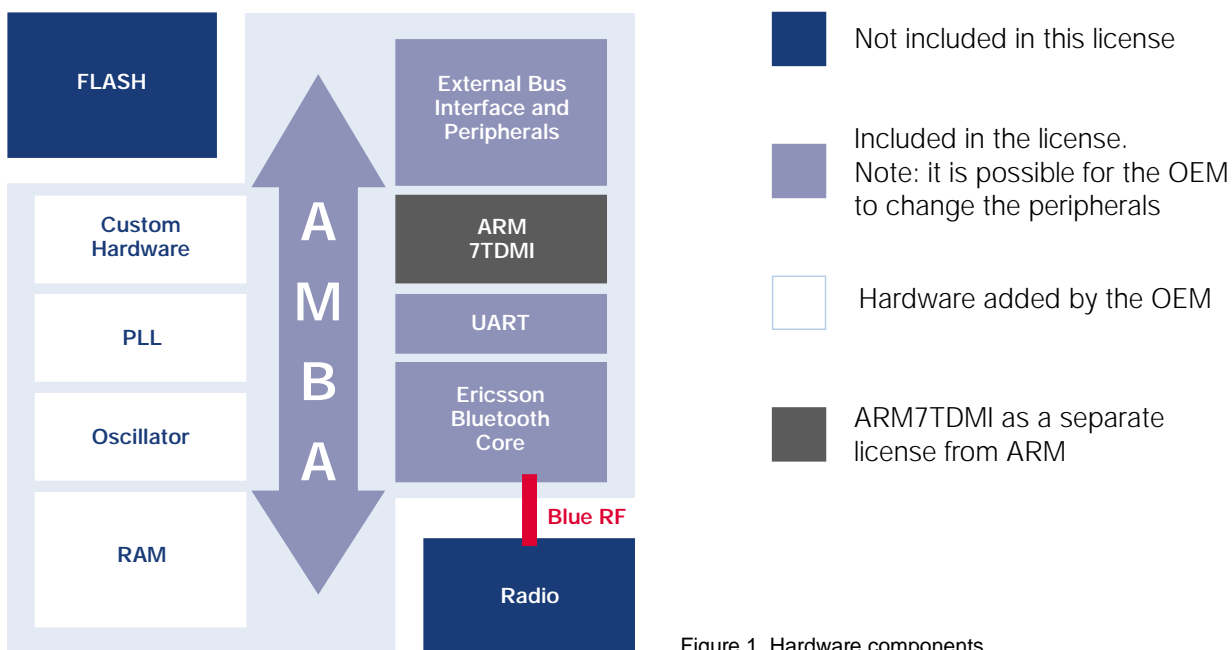


Figure 1. Hardware components



## Deliverables

The licensable product (EBCP) complies with the Bluetooth Specification v 1.0 and consists of the following hardware and software components combined to implement a Bluetooth system:

### Hardware comprises these two System-on-Chip components:

The Ericsson Bluetooth Core (EBC). This is a System-on-Chip communication peripheral macrocell which performs the baseband function.

A peripheral subsystem, which provides the hardware resources for the software. It allows a silicon vendor to realize a working micro controller (with the addition of their custom cells such as RAM, PLL, etc., and CPU).

### Development boards:

Three boards are supplied.

### Low-level software (or firmware):

Bluetooth real-time software which performs the Link Manager function. It includes a Real-Time Operating System (RTOS) as linkable libraries.

### High-level software package for:

L2CAP, SDP and RFCOMM as linkable libraries.

### Bluetooth test software (PC-Hosted)

Provides various test functions to test and exercise the Bluetooth link.

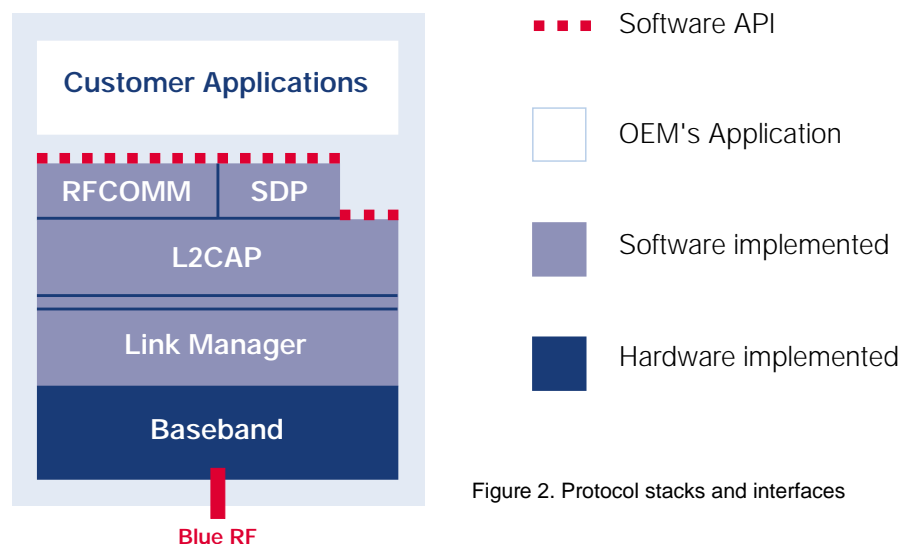
## API

- Supports multi applications
- ARM BIOS for adding own drivers
- Provides access towards:
  - RFCOMM
  - L2CAP (for adding new layers)
  - SDP

## Interface

- Blue RF

## Software Architecture



## Data

Hardware delivered as: \_\_\_\_\_ HDL code  
Software delivered as: \_\_\_\_\_ Object code  
Bluetooth Specification: \_\_\_\_\_ Release 1.0b  
RTOS: \_\_\_\_\_ OSE  
Code size: \_\_\_\_\_ < 200 Kbyte  
RAM requirement: \_\_\_\_\_ 30 Kbyte  
Gate count Bluetooth Baseband Core: \_\_\_\_\_ 50 K Gates  
Silicon size Bluetooth Baseband Core: \_\_\_\_\_ 0.5 mm<sup>2</sup>\*  
Silicon size complete Baseband solution\*\*: \_\_\_\_\_ ~2.5 mm<sup>2</sup>\*  
Current consumption Bluetooth Baseband: \_\_\_\_\_ TBD  
Processor load: \_\_\_\_\_ below 50%  
Protocol stacks and interfaces: \_\_\_\_\_ see figures

\*) Silicon size in typical 0.18 mm process

\*\*\*) With RAM, CPU and Baseband peripherals



## Complementary Products

- Bluetooth PC reference stack. A Windows porting of the higher layers in the Bluetooth specification for lab/demo purposes only.

## Shared Features

All members of the product family share the identical:

- API & Test Application

For more info see <http://bluetooth.ericsson.se>

Bluetooth Core IP is distributed by:

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