Package Features Include:

- **Example circuit diagrams**
- **Bill of materials**
- **Circuit description**
- **No additional operating software required**
- **Virtually Class 1 performance with no external power amplifier**

BlueCore™ RS232 Cable Replacement

Single Chip Bluetooth System

Example Design Data Sheet

October 2002

General Description

The **BlueCore** RS232 dongle is the first design to provide a ready-engineered example for a point-to-point Bluetooth™ Cable Replacement.
By eliminating the need for a host microcontroller and running the cable replacement firmware directly on the Bluetooth chip itself, cost is kept to a minimum.

The design exploits the availability of the on-chip microcontroller inside BlueCore2-External. Costs are further minimised by the ability of the design to provide near Class 1 performance without the need for the power amplifier.
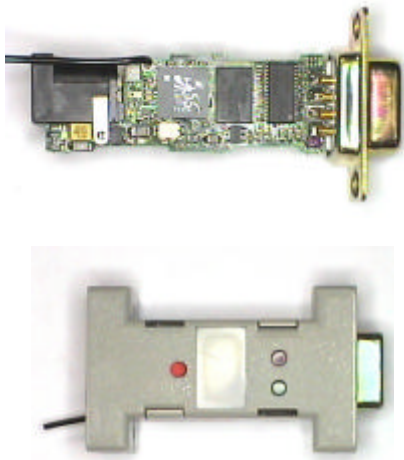
Applications

- **Basic point-to-point RS232 cable replacement**
- **Scientific equipment**
- **Industrial measurements**

The example design includes circuit diagrams, bill of materials and an application note. A photograph of the fully working example PCB is shown in Figure 1.1.

Source code for the RS232 cable replacement application is available separately from CSR in the BlueLab™ Software Development Kit.

For flexibility, the cable replacement profile required for this Bluetooth application as well as all other relevant Bluetooth profiles run from external flash memory. This circuit design can easily be converted to a ROM-based single-chip solution whenever the OEM is happy with market acceptance.

Figure 1.1: BlueCore RS232 Dongle

Software Architecture

The software for the cable replacement has been designed and written by CSR. A complete Bluetooth software stack and application profiles all execute from the external flash connected to BlueCore2-External.

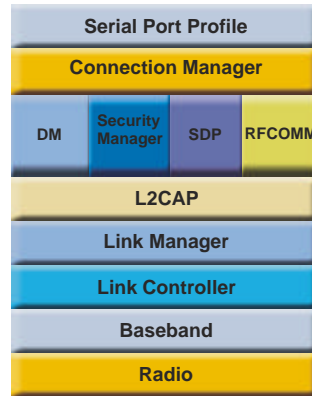The block diagram below shows the layered architecture of the software.

Figure 1.2: Cable Replacement Software Architecture

Ordering Information

Interface Version	Package		Order Number
	Size	Shipment Method	
BlueCore2-External	8x8x1mm	2 kpcs Taped and Reeled	BC212015B-DN-E4
BlueLab Software Development Kit	-	CD-ROM	BLAB002

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