**Overview**

**Cordio-B50 stack** is designed specifically for Bluetooth low energy single-mode products catering to the power sensitive Internet of Things (IoT) market. With its small code size, easy-to-use APIs, and portable architecture, the Cordio stack is a superior solution for companies looking to develop Bluetooth low energy semiconductors while reducing time-to-market.

**Cordio-B50 profiles** provide a production-ready solution for creating interoperable Bluetooth® low energy products. This unique approach to profiles provides our customers with sample applications built on a software framework that simplifies development and porting.

**Cordio stack consists of:**
- Generic Attribute Protocol (GATT) and Attribute Protocol (ATT): efficient data transactions
- Generic Access Profile (GAP): Connection and device management
- Security Manager Protocol (SMP): Pairing and authentication
- L2CAP: Streamlined data transport
- HCI: “Thin” HCI or full transport-based HCI
- Wireless Software Foundation (WSF): Portable OS services and wrappers.

**Key features:**
- Ease of use: APIs designed with applications in mind – optimized for battery powered resource constrained devices
- Efficient memory usage: Designed for minimum RAM and code size (as small as 10KB)
- Full featured: Supports master and slave operation (central and peripheral), client and server, multiple simultaneous connections
- Modular: Include or exclude features as needed
- Bluetooth qualified subsystem
- Portable: Unique Wireless Software Foundation (WSF) layer enables easy porting to any microcontroller or operating system. Proven on embedded processors like the ARM Cortex®-M processor series.

**Cordio-B50 profiles consists of:**
- Profiles and services: Interoperable components designed to Bluetooth specification requirements
- App framework: Unique service layer for simplified application development and porting
- Sample applications: Example implementations for products such as a proximity key fob, health sensor, and watch
- Sample applications are designed with real products in mind. Source code examples accelerate product development and reduce time-to-market
- Bluetooth qualified host and profile subsystem

**Sample applications:**
- Fitness: Heart rate monitor and running speed/cadence sensor
- Proximity: Proximity and “find me” keyfob
- Health sensor: Blood pressure, oximeter, health thermometer, or glucose sensor
- Health collector: Heart rate, blood pressure, oximeter, health thermometer, or glucose data collector
- Watch: Bluetooth low energy watch with message alerts and phone ringer control
- Cycling: Cycling power and speed measurement
- HID: Wireless keyboard, mouse, and remote control

Cordio application framework
- The Cordio application framework is a unique service layer designed to simplify application development and porting.
- It takes features which are common to many applications – such as a connection manager, a button-press handler, or a device database – and turns them into reusable services with simple APIs.
- Main: Management for device, connections, and security
- UI: Buttons, LED, sounds, and user interface abstraction
- DB: Device database abstraction
- HW: Hardware sensor interface abstraction

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The URL is [http://www.arm.com/Cordio](http://www.arm.com/Cordio)