

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.

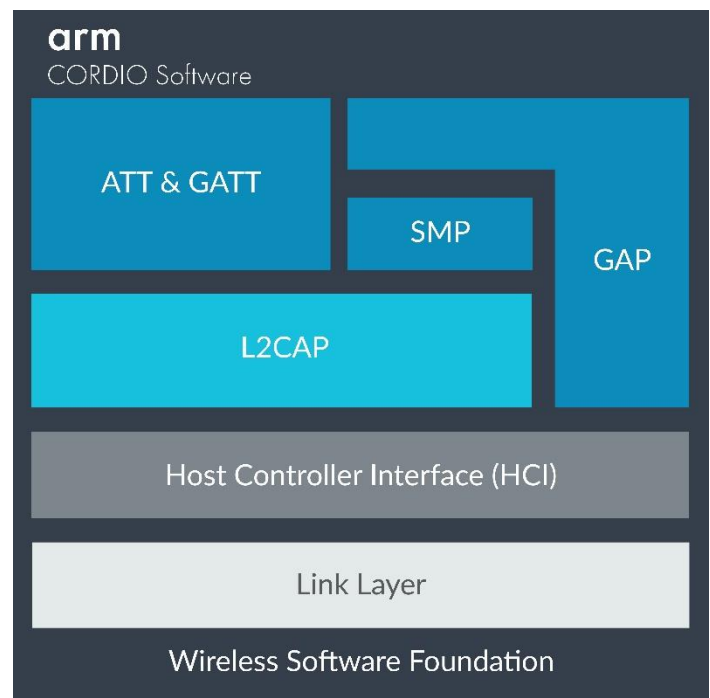
Cordio-B50 profiles provide a production-ready solution for creating interoperable Bluetooth® low energy products. This unique approach to profiles provides our customers with sample applications built on a software framework that simplifies development and porting.

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.
- “Thin” software HCI layer for single-chip. Standard transport-based HCI for dual-chip.



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

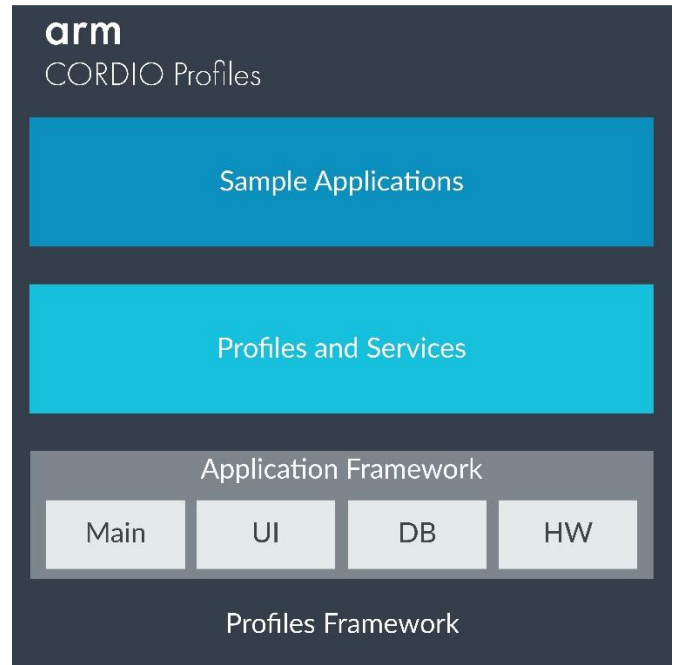
Sample applications:

- 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



Profile & Services	Specification Name	Profile & Services	Specification Name
ANP/ANS	Alert Notification Profile & Service	HRP/HRS	Heart Rate Profile & Profile
BAS	Battery Service	HTP/HTS	Health Thermometer Profile & Service
BLP/BLS	Blood Pressure Profile & Service	IAS	Immediate Alert Service
CPP/CPS	Cycling Power Profile & Service	IPSP/IPSS	Internet Protocol Support Profile & Service
CSCP/CSCS	Cycling Speed and Cadence Profile & Service	LLS	Link Loss Service
CTS	Current Time Service	PASP	Phone Alert Status Profile
DIS	Device Information Service	PLXP/PLXS	Pulse Oximeter Profile & Service
FMP	Find Me profile	PXP	Proximity Profile
GAP	Generic Access Profile	RSCP/RSCS	Running Speed and Cadence Profile & Service
GATT	Generic Attribute Profile	SCPP/SCPS	Scan Parameter Profile & Service
GLP/GLS	Glucose Profile & Service	TIP/TPS	Time Profile & Service
HIDS	Human Interface Device Service	TPS	Tx Power Service
HOGP	HID Over GATT Profile	WSP/WSS	Weight Scale Profile & Service

The URL is <http://www.arm.com/Cordio>



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