



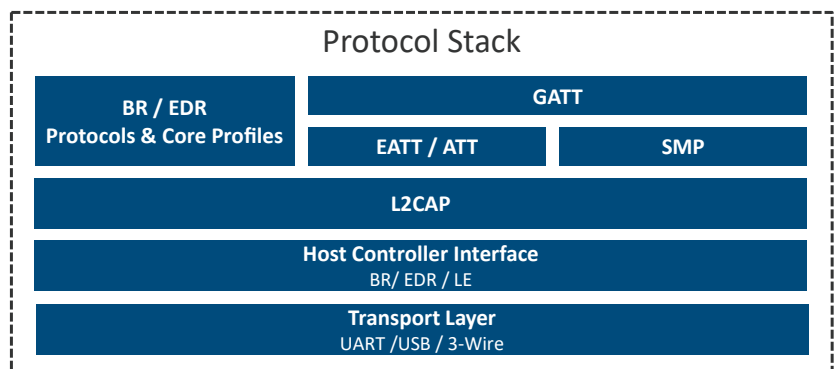
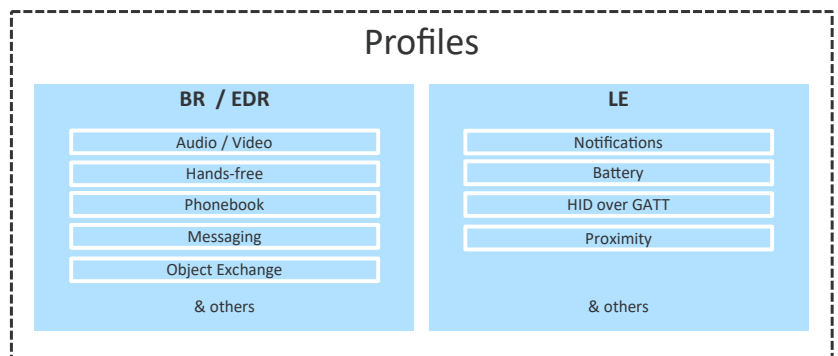
The software development kit Blue SDK provides an efficient way of adding reliable Bluetooth radio communication to any embedded device. This "battle proven" technology addresses the most challenging market for software systems: the automotive industry. It is designed to meet the highest standards in safety and security. Additionally, millions of mobile phones have been shipped with the Blue SDK supporting a full range of profiles that rely on this short range wireless communications medium. These devices benefit from the exceptional quality of our automotive grade products.

Benefits

- Compliant to Bluetooth Specification version v5.1 as well as all earlier specification versions including v2.1+EDR, v3.0+High Speed and v4.0, v4.1, v4.2. and v5.0
- Shortens time-to-market
- Reduces development costs and testing cycles
- Designed for ease of use
- Enables fast and easy integration into any operating system
- Reduces engineering risk and total project cost
- Fully customizable
- "Battle proven" quality over a 20 year period
- Low cost of on-going ownership
- Registered as a qualified component with the Blue SIG: Member of the Core Specification Working Group and of the Automotive Working Groups
- Integrates with all "Bluetooth compliant" radio hardware
- Designed for embedded systems with restricted memory and MIPs.

Features

- Supports dual operational modes with classic BR/EDR and low energy
- Includes Debug Protocol Sniffer capable of extracting HCI traffic
- 3rd party sniffer tool can be integrated
- Pre-integrated application profiles
- Enables profiles to be compiled with the stack into a single self-contained task
- Provides access to the stack application programming interface (APIs)
- Linux audio integration file.



Blue SDK contains all core components as identified in the Bluetooth Core Specification v5.0:

- RFCOMM
- L2CAP
- SDP
- Security Manager
- SCO Manager
- HCI
- Connection Manager
- Device ID Profile

Profiles

A full set of profiles that specifically address the automotive markets are offered separately. They are:

- compatible with the Blue SDK
- available to select only those applications required
- pre-integrated and tested with the Blue SDK

Documentation and Visual Studio project files are included to shorten development time and achieve a quick time to market.

Included Profiles, Sample Apps

Included with the Blue SDK are additional modules that can assist developers in understanding stack operation:

- Serial Port and Service Discovery Application Profiles; they provide insight into the basics of connection management, link security and service discovery.
- Visual Studio projects allowing demos to be built and executed almost immediately on a Windows platform.
- The Device ID Profile, that is ready for use in applications requiring this feature.

Low Energy Profiles

Blue SDK is designed for Low Energy operation in addition to Classic Bluetooth.

The Blue SDK for Low Energy is offered separately. It provides upper layer protocols and profiles necessary in support of the many Low Energy profiles that are specified by the Bluetooth SIG.

Included in the Blue SDK for Low Energy are sample profiles such as health thermometer, heart rate and alert notification that serve as a starting point for the development.

A dual mode Low Energy solution augments the Classic Bluetooth stack with being able to communicate with remote Low Energy devices such as sensors and keyfobs.

Quickstart on Linux

Blue SDK now contains Linux Quickstart: a bundle of features that make it much easier and faster to get going with Blue SDK on Linux. In Blue SDK and in each of its profiles, are integrated:

- Linux-specific transport drivers,
- sample audio integration files (for ALSA, PulseAudio, and gStreamer)
- makefiles for building a shared library.

Linux Quickstart comprises sample applications, including multi-profile examples, and Linux-specific documentation.

Comprehensive Documentation

- Over 500 pages of comprehensive documentation
- including an implementer's guide, a porting guide and a complete API guide
- full source code (developers have complete control over all aspects of stack operation prior to compilation through the use of a configuration file and during run time since a majority of stack APIs are exposed for greater user control.)
- high flexibility of the stack software.

Multi-Profile Operation

Concurrent profile operation can be managed using the Bluetooth System Manager. This is a framework that can be expanded to manage and control several profiles over multiple connections.

Transport Layer

The transport layer is responsible for correctly identifying and tagging HCI packets. It is provided in source code and has been integrated with underlying hardware drivers. These are provided as sample software modules targeting the Windows operating system. UART (3 and "5-wire" implementations) and USB driver act to support demos that are built for Windows and allow either a "UART-based" Bluetooth controller, or a readily available USB Bluetooth dongle to be used.

- UART code developed for the PC provides an example that can be followed when creating the hardware interface for an embedded system.
- A USB driver provided as an executable that is installed in to the Windows OS and can communicate with most USB Bluetooth dongles
- A 3 Wire UART example provided for embedded systems that make use of hardware flow control signaling; with simple modification, this driver can be adapted to any embedded system
- Official SDIO support for Marvell controllers.

LDAC™ Audio Codec

LDAC audio codec enables the transmissions of unprecedented sound quality over Bluetooth. It includes High-Resolution (Hi-Res) Audio flexible to bit rates up to 990kbps. The LDAC™ codec together with Blue SDK can be used with any Bluetooth HCI Radio.

Technical Support

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