OPENSYNERGY

Supports ANY Linux Distribution

GENIVI

AUTOMOTIVE GRADE LINUX

OpenSynergy's Blue SDK RapidLaunch for Linux is a Linux-based framework for powerful and efficient Bluetooth development on any Linux distribution. It is based on OpenSynergy's Blue SDK Bluetooth protocol stack and suite of automotive-based profiles. Blue SDK RapidLaunch reduces the complexity of developing a Bluetooth solution on Linux by consolidating the rich number of APIs associated with the native stack and profile sets into a condensed set of powerful, yet simple to use APIs. RapidLaunch easily handles complex use cases such as concurrent multi-profile use as well as multiple device connections. RapidLaunch takes care of the heavy lifting when it comes to Bluetooth development.

Benefits

- Simple to use
- Decreases development costs
- Accelerates time to market
- Based on the highly respected Blue SDK core stack and Blue SDK profiles which are used on hundreds of millions of devices in the market
- Source code based product provides customer control and flexibility
- Keeps Bluetooth implementation isolated from the kernel to avoid kernel compatibility issues
- Supported by a mature and longstanding Bluetooth development team

Specifications

- Supports the Bluetooth 5.0 Core Specification
- Supports all the latest Bluetooth profiles:
  - A2DP 1.3.2
  - AVRCP 1.6.2
  - HFP 1.7.2
  - MAP 1.4.2
  - PBAP 1.2.3
  - SPP 1.2

Features

- Bluetooth Linux Integration with minimal development effort for any Linux distribution
- Simplified Bluetooth APIs over D-Bus allows for several applications to easily access the Bluetooth services
- D-Bus binding—Compatible with GenIVI™ and Automotive-Grade Linux

- Support for the key Bluetooth profiles used in automotive infotainment
- Delivered in source code that can be modified and configured to the customer's needs
- Can be easily adapted for any IPC or Operating System

Bluetooth Applications	Legacy Serial Port Application
GDBUS Proxies	/dev/pty/x
D-Bus	Linux Kernel

GDBUS Impl	GDBUS Impl	GDBUS Impl	GDBUS Impl	GDBUS Impl	GDBUS Impl	GDBUS Impl	spp_pty
Telephony Service	Media Playback Service	Phonebook Service	Messaging Service	Object Push Server	GATT Service	Device Management Service	Serial Port Service

BlueSDK and Profiles

Integration API

Audio Manager API				GOEP Object Store API			BlueSDK Integration API			Persistence API
SBC Audio	LDAC Audio	PCM Audio	PCM Volume	PB Store	MSG Store	OB Store	HCI Transport	OS Services	Logging, Device DB	Persistence Manager

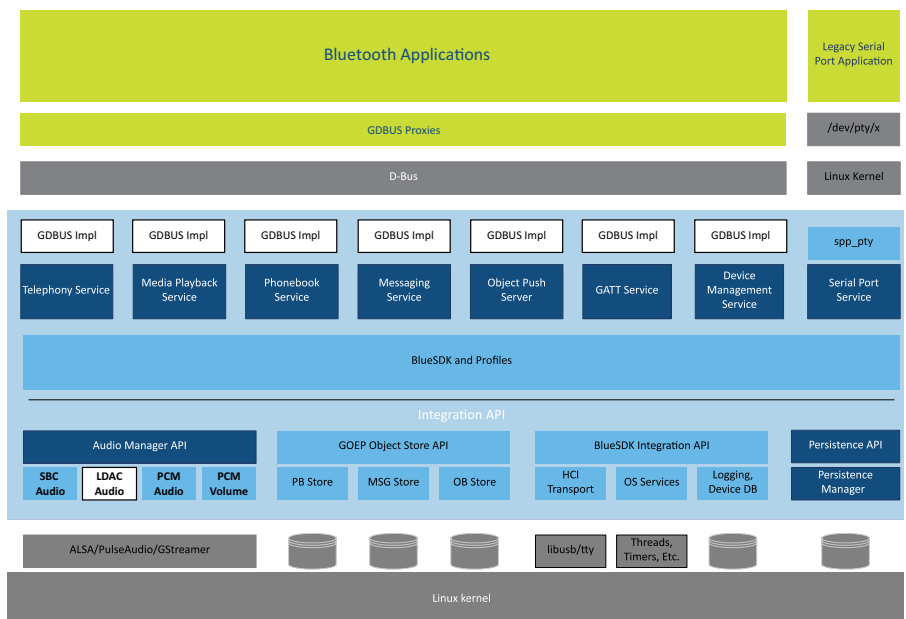| ALSA/PulseAudio/GStreamer | | | | libusb/tty | Threads, Timers, Etc. | | |

Linux kernel

Fig.: Represents the daemon architecture with all core stack components and profiles running in the context of a user space Linux daemon.

- Blue SDK RapidLaunch components
- Blue SDK core stack and profile components
- **Blue SDK RapidLaunch 2.0 NEW**

OPEN**SYNERGY**

Additional software components to be used with Blue SDK Rapid-Launch for Linux

- Blue SDK core stack
- Blue SDK Handsfree Profile
- Blue SDK A/V Profiles
- Blue SDK Phonebook Access Profile
- Blue SDK Messaging Access Profile
- OpenSynergy's Voice SDK (optional echo cancellation and noise reduction solution)

Linux Bluetooth Integration complexity is easily managed

Blue SDK RapidLaunch incorporates code that significantly reduces the number of APIs that are required in terms of controlling both the Bluetooth profile and stack operation. Building on the Linux Quickstart features (transport interfaces, audio integration, PTY integration for serial port, and logging services) found in Blue SDK, RapidLaunch also provides D-Bus objects that permit easy access to the Bluetooth API from various application contexts.

Interoperability with mobile devices

Dealing with mobile phone interoperability is one of the most challenging and costly aspects to account for when developing a Bluetooth automotive product. OpenSynergy's highly experienced Bluetooth development team has taken into account the challenge of interoperability, reducing the engineering risk significantly. This application framework can accelerate time to market by reducing issues related to inter-device operation.

Fully integrated with Blue SDK and automotive profiles

The Bluetooth stack (Blue SDK) and suite of automotive profiles (see list above) have been pre-integrated with RapidLaunch, reducing both development effort and cost, resulting in a decreased time to market. The Blue SDK and Profiles are individual SDKs that are purchased separately.

Latest version contains GDBUS

Blue SDK RapidLaunch 2.0, OpenSynergy's Linux integration package, is based on Blue SDK 6.1. This version of Blue SDK RapidLaunch adds support for AVRCP Cover Art and additional LE privacy features. This release also contains a GDBUS implementation layer for more flexibility for customers using D-Bus.

Telephony Service   Phonebook Service   Media Playback Service

Fig.: Multiple phone connections are easily managed by Blue SDK RapidLaunch