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Reference Integration Note For

QDID B019307 BTL-A v5.0

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Abstract: This document provides a conceptual description of the BTL-A Bluetooth Solution, and summarizes the integration requirements as a guide for others integrating this design.

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1 PREFACE

This document forms the Reference Integration Note for BTL-A 5.0.

Design RIN Information	
Product Name:	BTL-A
Bluetooth Qualified Design ID (QD ID):	B019307
Bluetooth Product Type:	Component (Tested)
Product Name:	BTL-A v5.0
Hardware Version:	n/a
Software Version:	5.0

2 PRODUCT OVERVIEW

The BTL-A software product consists of driver and application software, and documentation necessary to add Broadcom's *Bluetooth* software solution to replace the BlueZ offering provided in Google's Android operating system. The standard BTL-A software product includes the core Bluetooth 4.0 protocol stack and profiles (object code only).

2.1 SOFTWARE FEATURES

This section identifies the top level software features of this design.

2.1.1 Product Type Declaration

This product is listed as a Bluetooth Component Product. If you use this product to implement *Bluetooth* in your product's design further qualification and listing is required in accordance with the Bluetooth Qualification Process (ref. PRD 2.0). To start the process for a new qualification, please visit [https://bluetooth.org/TPG/.](https://bluetooth.org/TPG/)

2.1.2 Software Overview

The BTL-A 5.0 software is a Bluetooth protocol stack with profiles and enhanced features beyond the default Google stack offering. BTL-A 5.0 is designed for implementation on smart phones and tablets using the Android OS. The BTL-A 5.0 software is Bluetooth 4.0 compliant.

2.1.3 Application

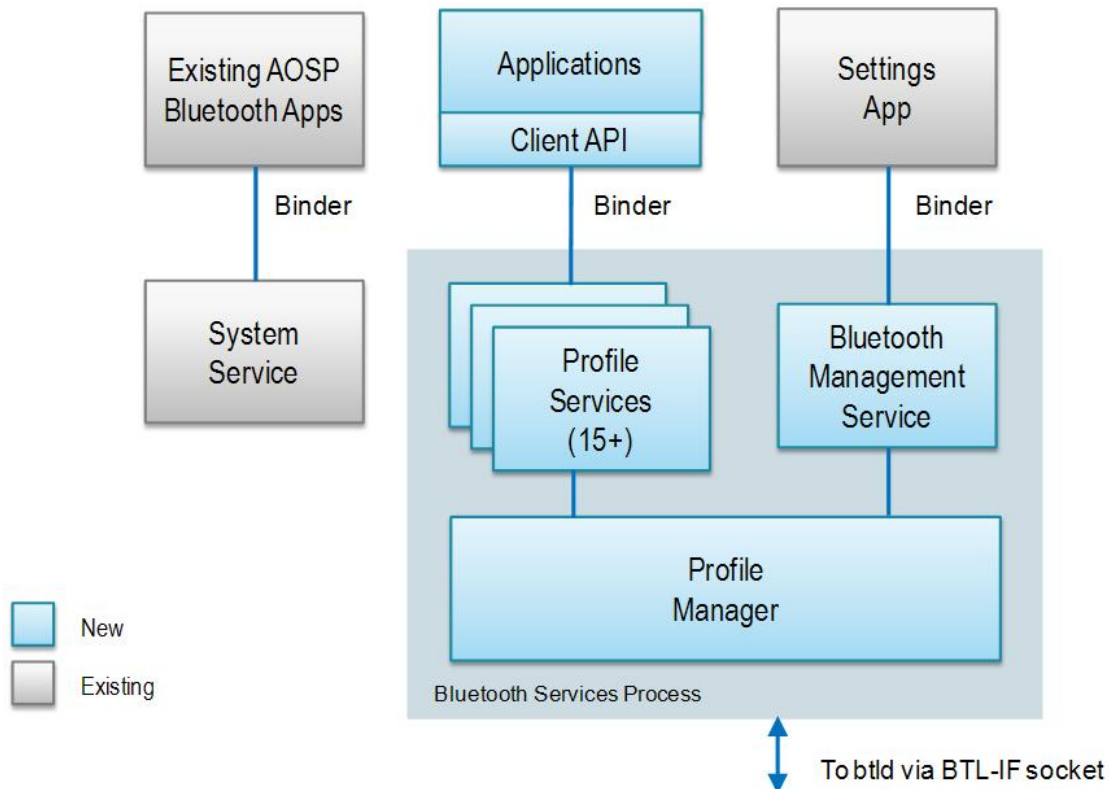
The BTL-A 5.0 product includes a professional, integrated user interface for Google Android devices that will make the user experience and user applications consistent with the current Android interface. BTL-A package has been developed to seamlessly add *Bluetooth* functionality into the existing Android offering. Existing Android *Phone*, *Settings*, and *Contacts* applications have been modified to take advantage of Broadcom's *Bluetooth* offering.

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In addition, Broadcom offers a FM Tuner application to take advantage of the FM receiver capabilities of Broadcom's multi-function, combination silicon offering.

2.1.4 Block Diagram

This section shows the block diagram of the design.



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Figure 1: BTL-A Software Block Diagram

2.1.5 Software Features

The BTL-A 5.0 software package includes the core Bluetooth upper layer protocol stack and is based upon the Bluetooth Specification 4.0. This package also supports the following Bluetooth profiles:

- A2DP 1.2(advanced audio distribution profile)
- AVRCP 1.3 (audio/visual remote control profile)
- GAVDP 1.2 (generic audio/visual distribution profile)
- SPP (serial port profile)
- HSP (headset profile)
- HFP 1.6 (hands free profile)
- SAP (SIM access profile)
- FTP 1.2 (file transfer profile)

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- OPP 1.2 (object push profile)
- GOEP 2.0 (generic object exchange profile)
- BPP 1.2 (basic printing profile)
- BIP (basic imaging profile)
- DUN (dial-up networking profile)
- PAN (personal area networking profile)
- DID (device id profile)
- HID (human interface device profile)
- PBAP (phone book access profile)
- MAP (message access profile)
- MCAP (Multi-Channel Adaptation Protocol)
- GATT (Generic Attribute Profile)

2.1.6 Software Architecture

The BTL-A software product consists of driver and application software, and documentation necessary to add Broadcom's Bluetooth software solution to replace the BlueZ offering provided in Google's Android operating system.

2.1.7 Interfaces

The BTL-A Bluetooth software solution provides an interface between the user applications consistent with the current Android interface and Broadcom's Bluetooth offering.

2.1.8 Application Requirements

For detailed application requirements please contact your Broadcom sales representative. If changes are made to the application's user interface the final application's Bluetooth Profiles should be re-tested using the revised application's UI to verify that the system was integrated successfully.

2.1.9 Sample Portings

The BTL-A software is intended to act as Broadcom's Bluetooth software solution to replace the BlueZ offering provided in Google's Android operating system.

2.1.10 Hardware / Software Reference Platforms

The environment which was utilized in qualifying this design included mobile phone platforms utilizing Google's Android Operating System. The BTL-A Bluetooth software solution is integrated into the mobile phone or tablet interface to take advantage of the core Bluetooth upper layer stack functionality and the supported Bluetooth profiles.

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