

RA4W1 Group

Bluetooth LE Profile API Document User's Manual

RA Family / RA4 Series

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(Rev.4.0-1 November 2017)

Corporate Headquarters

TOYOSU FORESIA, 3-2-24 Toyosu,
Koto-ku, Tokyo 135-0061, Japan
www.renesas.com

Contact information

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How to Use This Manual

1. Purpose and Target Readers

This manual is for users to understand how to use the Bluetooth LE Profile API document. It is intended for users who design application systems using QE for BLE. To use this manual, you must have a basic knowledge of the programming language and microcomputer.

Particular attention should be paid to the precautionary notes when using the manual. These notes occur within the body of the text, at the end of each section, and in the Usage Notes section.

The revision history summarizes the locations of revisions and additions. It does not list all revisions. Refer to the text of the manual for details.

The following documents apply to the RA4W1 Group for Bluetooth® Low Energy (LE) application development. Make sure to refer to the latest versions of these documents. The newest versions of the documents listed may be obtained from the Renesas Electronics Web site.

| Document Title | Document No. | Description |
|--|-----------------|---|
| Renesas RA4W1 Group User's Manual: Hardware | R01UH0883EU0100 | Hardware specifications (pin assignments, memory maps, peripheral function specifications, electrical characteristics, timing charts) and operation description |
| Renesas Flexible Software Package (FSP) v1.2.0 User's Manual | R11UM0146EU0120 | Software library specifications for RA family |
| Bluetooth Low Energy Profile Developer's Guide for RA | R01AN5428EJ0100 | Guide for using QE for BLE |

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1. Overview

User can add service APIs to their project using QE for BLE, a tool to assist in the development of Bluetooth LE application development. There are two types of services used in QE for BLE: standard services defined by standardization organization and custom services defined by user. Bluetooth LE Profile API document describes the APIs for standard services. For Custom Services, refer to “Bluetooth Low Energy Profile Developer’s Guide for RA”.

Bluetooth LE Profile Document is released in in single file with many html files compressed in it. Therefore, this document describes how to properly reference the Bluetooth LE Profile API document.

1.1 Environment

The operating environment in this document is shown below.

- Windows 8.1 (32/64 bit OS)
- Windows 10 (32/64 bit OS)

2. Usage

This chapter describes how to use the Bluetooth LE Profile API document.

2.1 Extract compressed files

This section describes how to extract “RA_API_document.zip”, a compressed file of Bluetooth LE Profile API document. We will show two ways to extract: use 7-zip and use Windows Utility.

Using 7-zip to extract:

1. Select “7-zip” > “Extract” in menu shown by right clicking “RA_API_document.zip”
2. Click “OK” in the window that appears
3. Extracted folder is redirected as “RA_API_document”

Using Windows Utility to extract:

1. Select “Extract all” in menu shown by right clicking “RA_API_document.zip”
2. Click “Extract” in the window that appears
3. Extracted folder is redirected as “RA_API_document”

2.2 View document

This section describes how to browse Bluetooth LE Profile API document extracted in the previous section.

In folder “RA_API_document”, there is shortcut “index.html”. You can open Bluetooth LE Profile API document with your browser by opening this shortcut. The HTML files can be found by double-clicking “RA_API_document” > “doxygen”. Figure 2.1 shows the window which opened “index.html” with Internet Explorer.

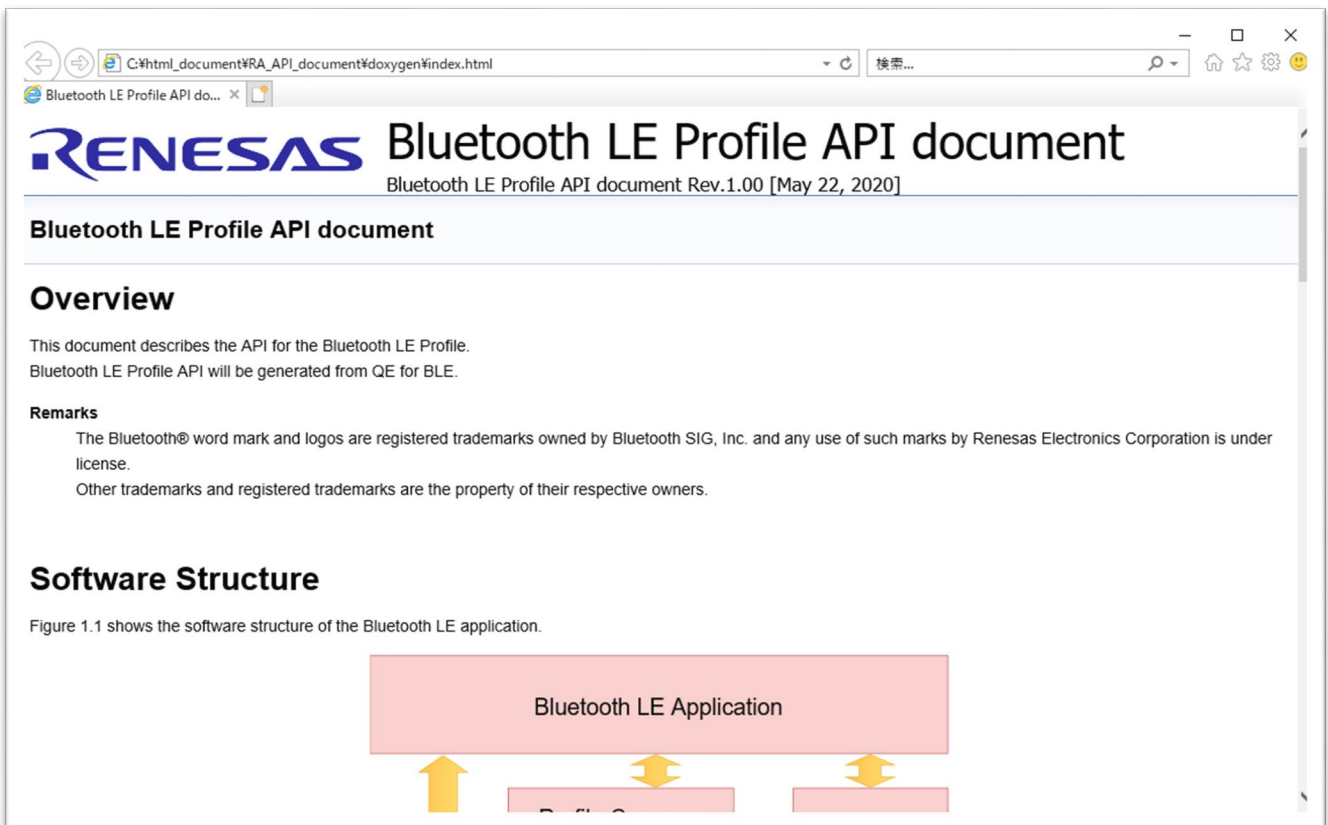


Figure 2.1 Viewing Bluetooth LE API document using Internet Explorer

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| Revision History | RA4W1 Group Bluetooth LE Profile document User's Manual |
|------------------|---|

| Rev. | Date | Description | |
|------|-----------|-------------|----------------------|
| | | Page | Summary |
| 1.00 | Jul.10.20 | — | First Edition issued |
| | | | |

RA4W1 Group Bluetooth LE Profile document User's Manual

Publication Date: Rev.1.00 Jul.10.20

Published by: Renesas Electronics Corporation

RA4W1 Group