Application Note

DA9070 SOCF Application

AN-SW-125

Abstract

Descriptions of how to incorporate the source code into the target, build and loading instructions and a list of features provided by this DA9070 SOCF Application.

DA9070 SOCF Application

Contents

List of Tables

1 Terms and Definitions

I2C	Inter-Integrated Circuit
IRQ	Interrupt Request
RTOS	Real Time Operating System
SDK	Software Development Kit
SOCF	State Of Charge Function
UART	Universal Asynchronous Receiver Transmitter

2 References

[1] DA9070, Datasheet, Dialog Semiconductor.

[2] AN-SW-121, DA9070 Power Profile Manager and SOCF Application Note, Dialog Semiconductor.

3 Introduction

The purpose of this document is to give an overview of how to incorporate the DA9070 SOCF Application code into the target platform and system. It is expected that anyone reading this document should have a good understanding of embedded system.

4 Dependencies

This release depends upon a clean, correctly compiled and working STM32Cube MCU Packages. This external SDK is not provided by Dialog Semiconductor. The SDK is provided by www.st.com site. And this driver code has been tested under FreeRTOS.

5 System requirements

Dialog Semiconductor DA9070 chip and related target board

6 Installation

The code contained in the release package below is the driver code for DA9070 SOCF. A clean copy of the release into the customer target platform is required before installation. Also please see below configuration information section and related header files which is provided in the release file to complete installation. Here are the files in the zip. More detain information are in the associated Application Note AN-SW-121, reference [2].

File	Descriptions
socf_profile_data.h	Contains battery profiling data.
socfi.h	Contains Internal function definition used in socf_client.c
socf_hal.h	Contains function definition of socf_hal.c
socf_client.h	Contains function definition of socf_client.c
socf_hal.c	Contains hardware abstract function must be implemented according to target system.
socf_client.c	Contains functions used in socf_hal.c and system.
libsocf_da9070.a	Library of socf

Table 1 DA9070 SOCF Application files

7 Interfaces

No external hardware interface is required for SOCF.

Revision History

Revision	Date	Description
1.1	22-Feb-2022	Document rebranded to Renesas.
1.0	28-Feb-2019	Rearrange external APIs
0.4	18-May-2018	Fix an overflow at over 2C current
0.3	17-May-2018	Update SOC process.
0.2	11-Apr-2018	Update algorithm for more accuracy.
0.1	9-Mar-2018	Initial version.

Status Definitions

Status	Definition
DRAFT	The content of this document is under review and subject to formal approval, which may result in modifications or additions.
APPROVED or unmarked	The content of this document has been approved for publication.

Important Notice and Disclaimer

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