Renesas RA Family

EK-RA6M1 Example Project Bundle

Introduction

This document describes the contents of the Example Project Bundle for the EK-RA6M1 kit. The Example Projects contained within the bundle show how to write code for the various Renesas Flexible Software Package (FSP) modules supported by the EK-RA6M1 kit.

Flexible Software Package is an optimized software package designed to provide easy to use, scalable, high quality software for embedded system design. The primary goal is to provide lightweight, efficient drivers that meet common use cases in embedded systems. FSP code quality is enforced by peer reviews, automated requirements-based testing, and automated static analysis. FSP provides uniform and intuitive APIs that are well documented. Each module is supported with detailed user documentation including example code. FSP modules can be used on any MCU in the RA family, provided the MCU has any peripherals required by the module. FSP modules can be configured at build-time to optimize the size of the module for the feature set required by the application.

Supported Kit

EK-RA6M1

Supported FSP Version

FSP v3.4.0 or later

Supported Toolchains

- e² studio Integrated Development Environment (IDE), default toolchain is GCC Arm Embedded
- Keil MDK with Arm compiler toolchain
- IAR EWARM with IAR toolchain for Arm

1. Using the Example Projects

To use EK-RA6M1 Example Projects follow the steps mentioned in the following documents:

- Example Project Usage Guide
  https://github.com/renesas/ra-fsp-examples/blob/master/example_projects/Example%20Project%20Usage%20Guide.pdf
- e² studio AC6 porting Guide
  https://en-support.renesas.com/knowledgeBase/19375553

Users that are new to the FSP are recommended to refer to the section **Starting Development** > **Tutorial: Your First RA MCU Project – Blinky** in the RA FSP Documentation prior to attempting to debug an example project.

2. List of Example Projects Supported on Different Toolchains in the Bundle

EK-RA6M1 Example Projects	e² studio/GCC	e² studio/AC6	Keil MDK	IAR
acmphs	Supported	Supported via port from GCC		
adc	Supported	Supported via port from GCC		
adc_gpt_periodic_sampling	Supported	Supported via port from GCC		
agt	Supported	Supported via port from GCC	Supported	Supported
cac	Supported	Supported via port from GCC		
can	Supported	Supported via port from GCC		

EK-RA6M1 Example Projects	e² studio/GCC	e² studio/AC6	Keil MDK	IAR
cpp	Supported	Supported via port from GCC		
crc	Supported	Supported via port from GCC		
dac	Supported	Supported via port from GCC		
dmac	Supported	Supported via port from GCC	Supported	Supported
doc	Supported	Supported via port from GCC		
elc	Supported	Supported via port from GCC		
flash_hp	Supported	Supported via port from GCC	Supported	Supported
freertos	Supported	Supported via port from GCC	Supported	Supported
gpt	Supported	Supported via port from GCC	Supported	Supported
gpt_input_capture	Supported	Supported via port from GCC		
icu	Supported	Supported via port from GCC	Supported	Supported
iic_master	Supported	Supported via port from GCC		
iic_slave	Supported	Supported via port from GCC	Supported	Supported
iwdt	Supported	Supported via port from GCC		
kint	Supported	Supported via port from GCC		
lpm	Supported	Supported via port from GCC		
lvd	Supported	Supported via port from GCC		
mbed_crypto	Supported	Supported via port from GCC		
_quickstart	Supported	Supported via port from GCC		
rtc	Supported	Supported via port from GCC	Supported	Supported
sci_i2c	Supported	Supported via port from GCC		
sci_spi	Supported	Supported via port from GCC		
sci_uart	Supported	Supported via port from GCC	Supported	Supported
sdhi	Supported	Supported via port from GCC		
spi	Supported	Supported via port from GCC	Supported	Supported
ssi	Supported	Supported via port from GCC		
usb_composite	Supported	Supported via port from GCC		
usb_pcdc	Supported	Supported via port from GCC		
usb_phid	Supported	Supported via port from GCC		
usb_pmsc	Supported	Supported via port from GCC		
usb_pvnd	Supported	Supported via port from GCC		
USBX_pcdc_acm	Supported	Supported via port from GCC		
vee_flash	Supported	Supported via port from GCC		
wdt	Supported	Supported via port from GCC	Supported	Supported

Note: Additional example projects other than those mentioned above, maybe available in the example project bundle. However, they are supported only with older versions of FSP due to technical issues found during regression testing with the latest version.

Website and Support

Visit the following URLs to learn about key elements of the RA family, download components and related documentation, and get support.

RA Product Information	www.renesas.com/ra
RA Product Support Forum	www.renesas.com/ra/forum
RA Flexible Software Package	www.renesas.com/FSP
Renesas Support	www.renesas.com/support

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Apr.23.20	—	First release document.
1.01	May.29.20	—	Examples updated for IAR support.
1.02	Jul.09.20	—	Updated for FSP v1.2.0.
1.03	Jul.24.20	—	Updated for new EPs supported on FSP v1.2.0.
1.04	Aug.12.20	NA	Package updated to include this document.
1.05	Sep.03.20	—	Updated for FSP v1.3.0.
1.06	Sep.14.20	—	This revision includes changes to the code files. There are no changes to this document.
1.07	Oct.12.20	—	Added support for FSP v2.0.0.
1.08	Oct.23.20	—	Updated support for IAR and Keil, added VEEPROM.
1.09	Nov.02.20	—	Added support for FSP v2.1.0.
1.10	Dec.01.20	—	Added support for FSP v2.2.0.
1.11	Feb.02.21	—	Added support for FSP v2.3.0.
1.12	Mar.10.21	—	Support for USB COMPOSITE and USB PVND.
1.13	Apr.06.21	—	Added support for FSP v2.4.0.
1.14	May.03.21	—	Added support for FSP v3.0.0.
1.15	May.13.21	—	Added support for FSP v3.0.0 (2).
1.16	Jun.16.21	—	Added support for FSP v3.0.0 (4).
1.17	Jul.12.21	—	Added support for FSP v3.1.0 (1).
1.18	Jul.26.21	—	Added support for FSP v3.1.0 (2).
1.19	Aug.30.21	—	Added support for FSP v3.1.0 (3).
1.20	Sep.10.21	—	Added support for FSP v3.2.0.
1.21	Sep.29.21	—	Added support for FSP v3.3.0 (2)
1.22	Oct.20.21	—	Added support for FSP v3.4.0 (2)

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