Renesas RA Family

RA0E3 Fast Prototyping Board

Introduction:

The RA0E3 Fast Prototyping Board comes equipped with an RA0E3 MCU and is an evaluation board specialized for prototype development for a variety of applications. It has a built-in SEGGER J-Link™ emulator circuit so you can write/debug programs without additional tools. In addition, with Arduino Uno™ and Pmod™ interfaces included standard and through-hole access to all pins of the microcontroller, and so on, it has high expandability.

1. Getting Started Video:

renesas.com/gs-fpb-ra

This video guides first-time users of the Fast Prototyping Board through the steps of installing a development environment, generating a project, and checking the operations for developing software.

Getting Started Video

2. Tutorial for Blinky:

renesas.com/ra/fsp/getting-started

This tutorial is to help users quickly get acquainted with the Flexible Software Package by moving through the steps of using e² studio to create a simple application and running the application on an RA MCU board.

Tutorial for Blinky

3. Check the full specification:

renesas.com/fpb-ra0e3

From the page at the above link, you can download the user's manual, an example project and Design Package(schematic, BOM, 3D view and CAD data).

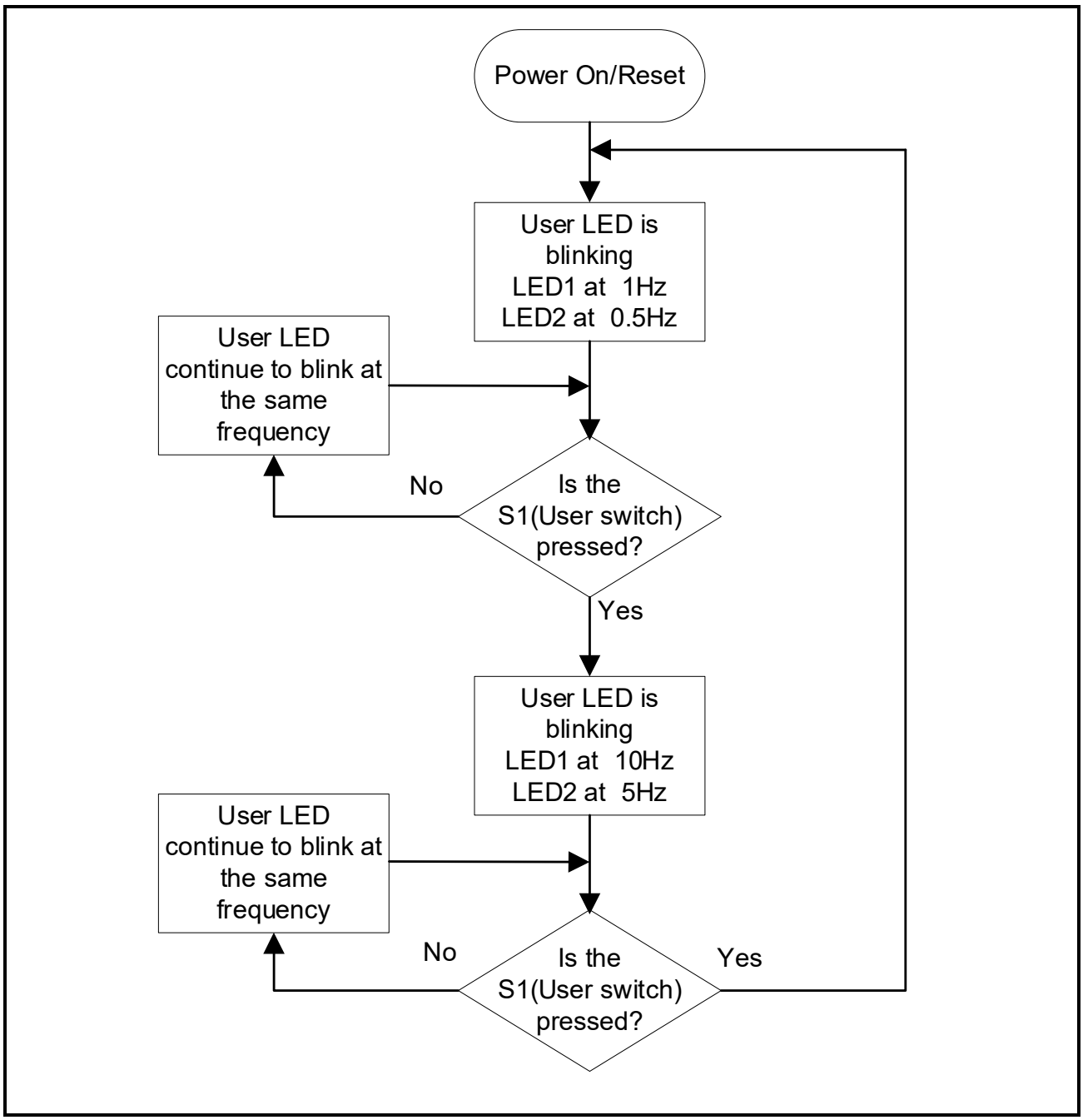
4. Package Contents:

- FPB-RA0E3
  RA0E3 Fast Prototyping Board (RTK7FPA0E3S00001BJ)
- Quick Start Guide (this document)

FPB-RA0E3

5. Behavior When Power is Supplied

LED1 and LED2 respectively blink at 1 Hz and 0.5 Hz. When the user presses switch S1, the frequencies of blinking by LED1 and LED2 respectively change to 10 Hz and 5 Hz. From that point, the frequencies alternate between two pairs each time S1 is pressed.

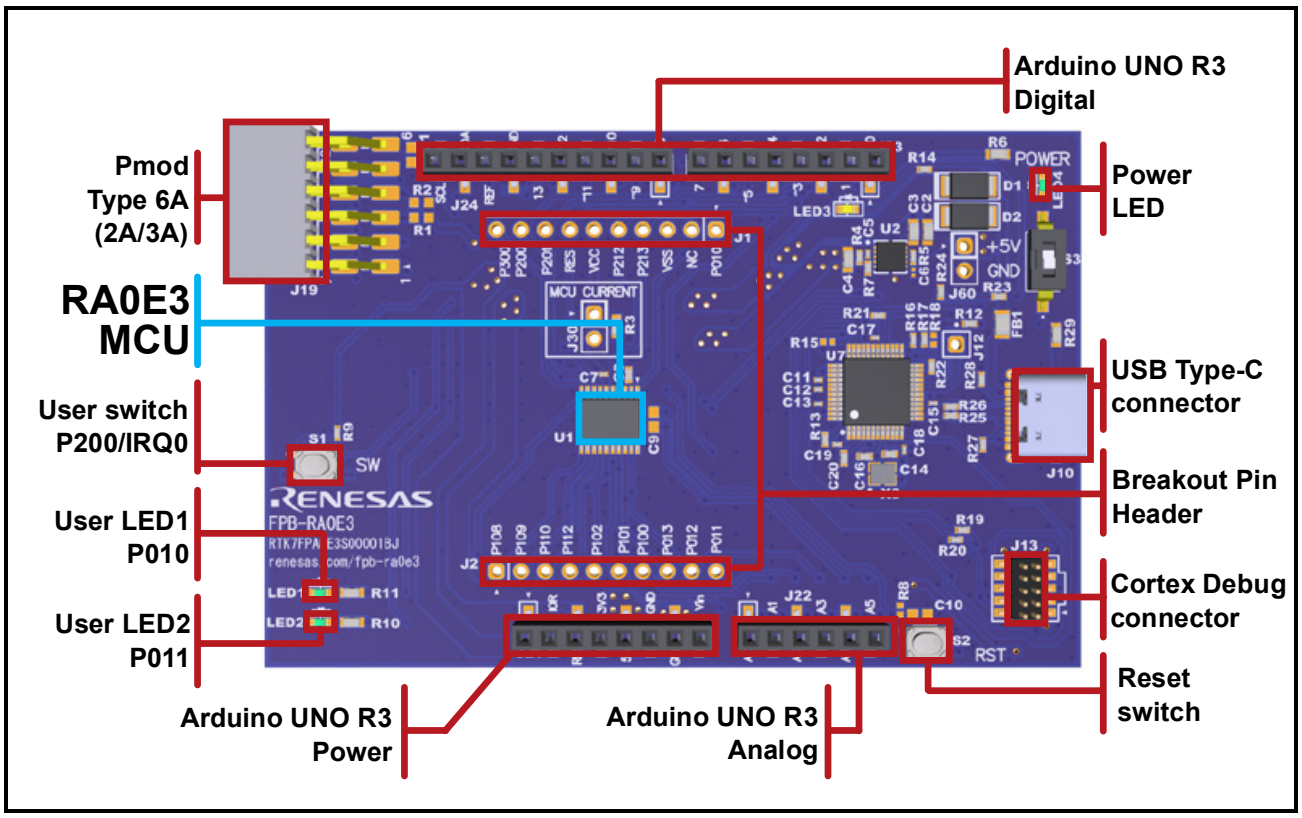


6. Board Specifications

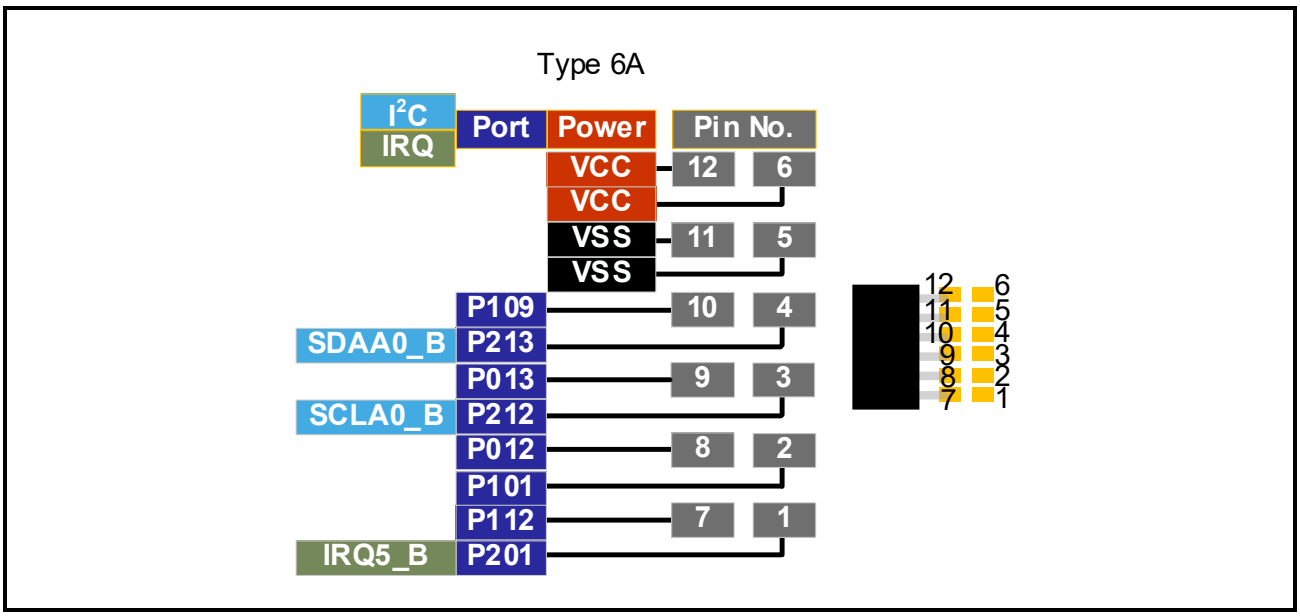
Item	Specification
Evaluation MCU	Part No: R7FA0E3034ZSD; package: 20-pin TSSOP
	16-KB Code flash, 2-KB SRAM
Board size	Size: 55.88 mm × 85.0 mm*2; thickness: 10.52 mm
Power-supply	VBUS: 5 V, VCC: 3.3 V, MCU range: 1.6 V to 5.5 V
Push switches	Reset switch x 1; User switch x 1
LEDs	Power: green x 1, User: green x 2, OB ACT: yellow x 1
USB connector	Connector: USB 2.0 Type-C™
Pmod™ connectors	Connectors: angle type, 12 pins x 1
Arduino® connectors	Arduino UNO R3: 6 pins x 1, 8 pins x 2, 10 pins x 1
Breakout Pin Header*1	Headers: 10 pins x 2
Debugger	J-Link OB, 10 pins Cortex® Debug connector

*1 Not mounted *2 Not included the Pmod connector protrusion

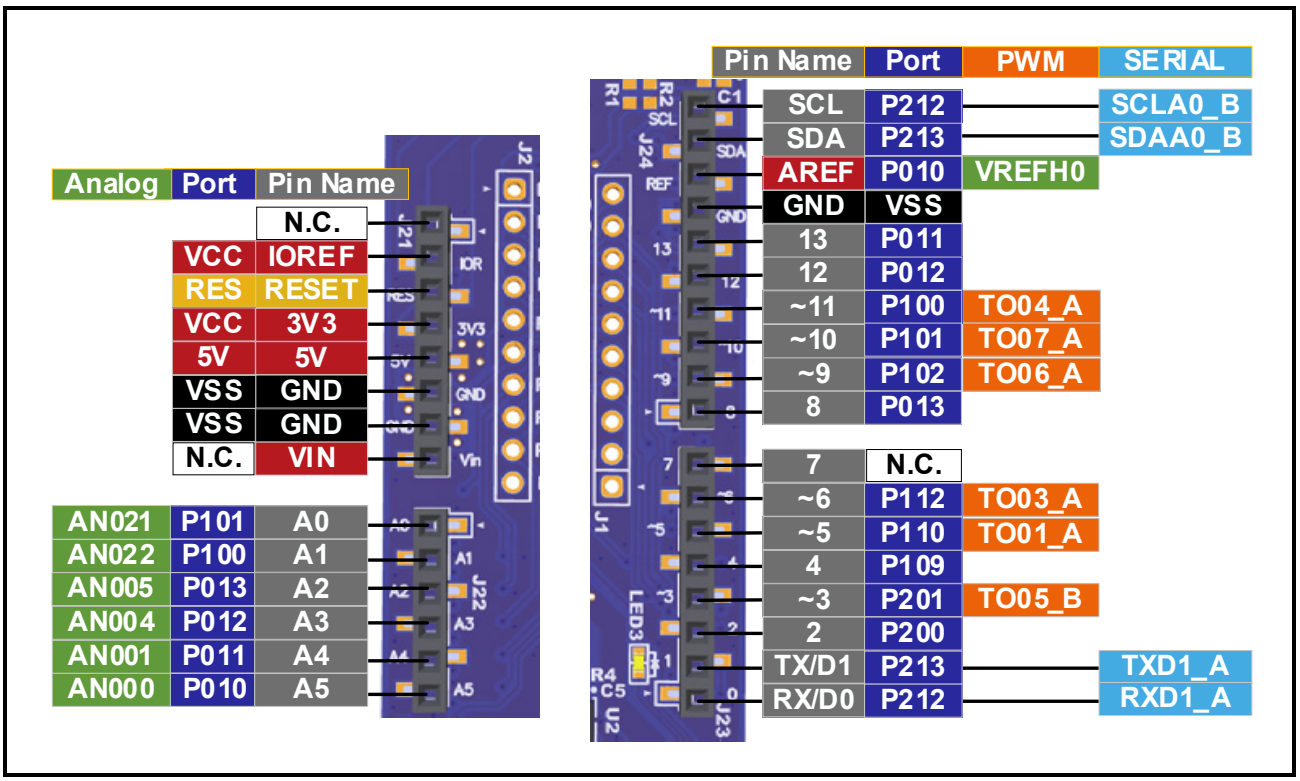
7. Parts Layout



8. Pmod



9. Board Specifications



Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Sep.26.25	-	New.