Renesas RA Family

RA0L1 Fast Prototyping Board

Introduction:

The Fast Prototyping Board for RA0L1 comes equipped with an RA0L1 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.
With two capacitive touch buttons, you can also develop applications that use simple capacitive touch functions.

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. Checking the Full Specifications:

renesas.com/fpb-ra0l1

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).

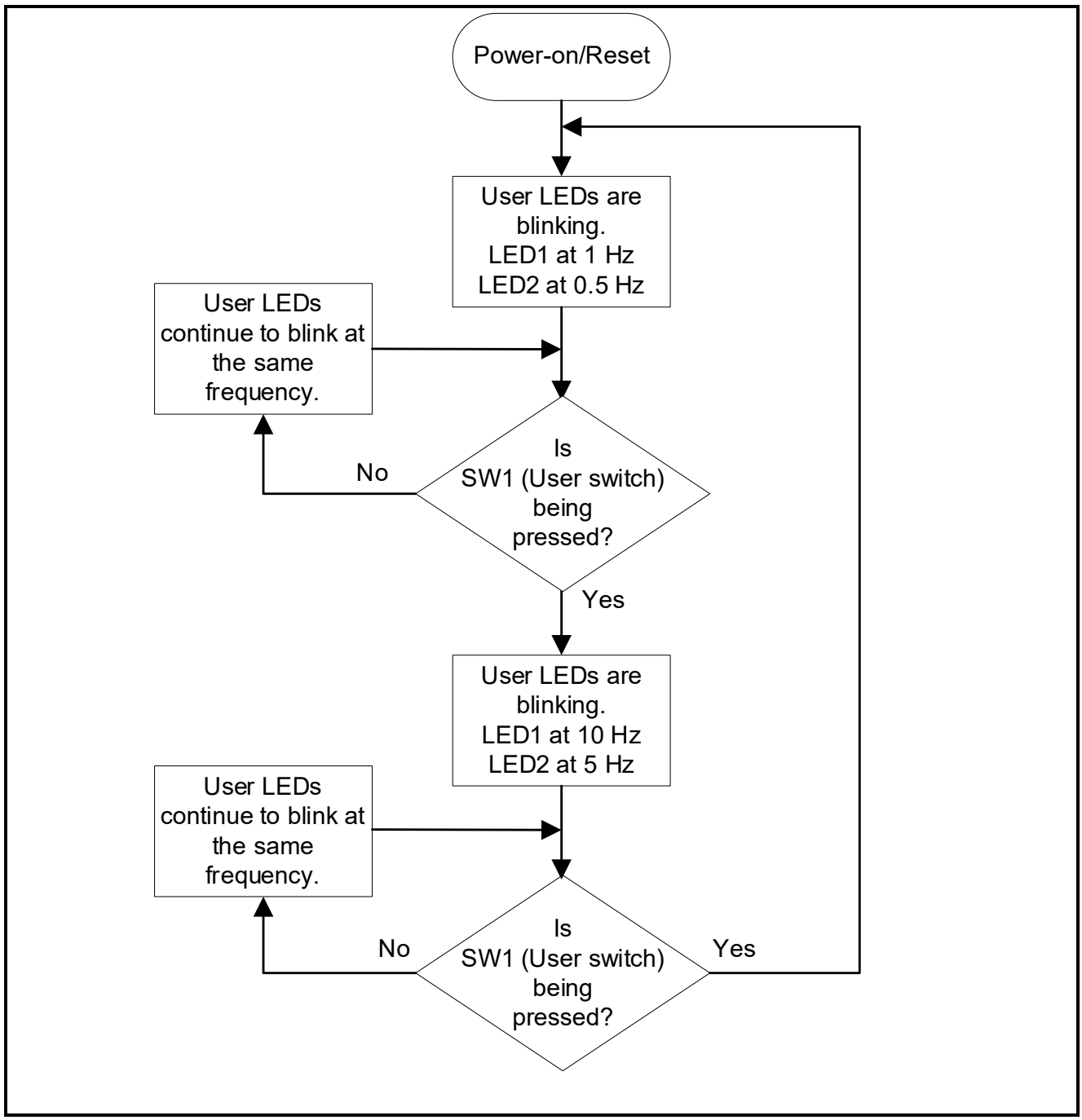
FPB-RA0L1

4. Package Contents

- FPB-RA0L1
  RA0L1 Fast Prototyping Board (RTK7FPA0L1S00001BJ)
- Quick Start Guide (this document)
- USB 2.0 Type-C™ cable (Type-C male to Type-C male)

5. Behavior When Power is Supplied

LED1 and LED2 respectively blink at 1 Hz and 0.5 Hz. When the user presses switch SW1, 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 SW1 is pressed.

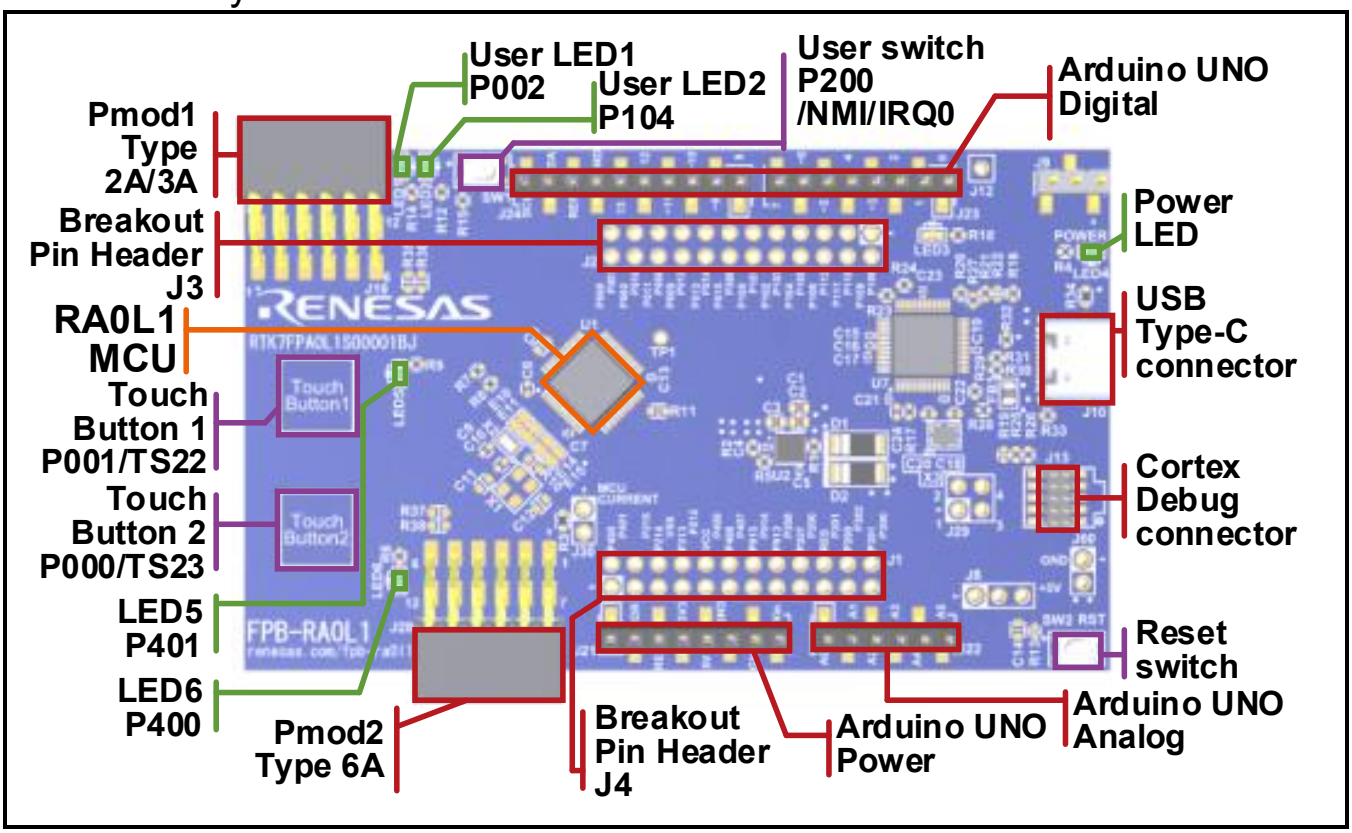


6. Board Specifications

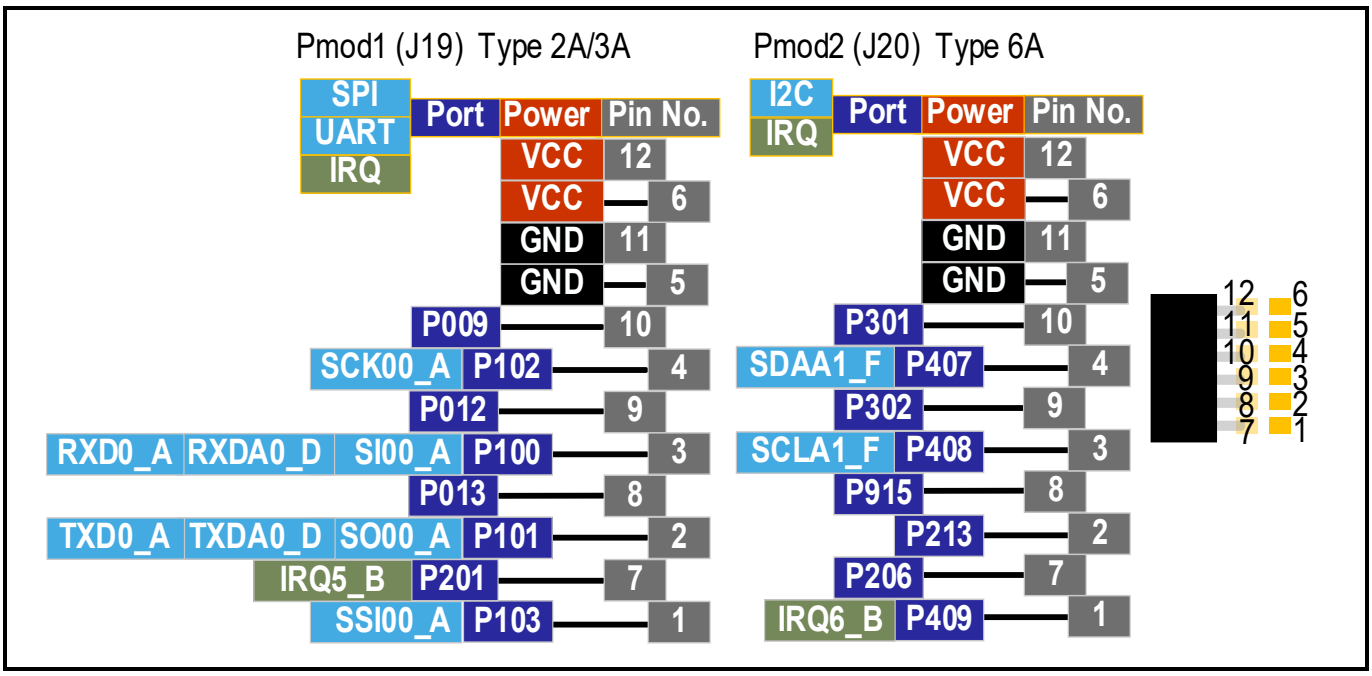
Item	Specification
Evaluation MCU	Part No.: R7FA0L1074CFL; package: 48-pin LFQFP
	64-KB ROM, 16-KB SRAM, 1-KB data flash memory
Board size	Size: 56.0 mm × 93.0 mm; thickness: 11.65 mm
Power-supply	VBUS: 5 V, VCC: 3.3 V, MCU operating-voltage range: 1.6 V to 5.5 V
Push switches	Reset switch x 1; User switch x 1
Capacitive touch	Button x 2
LEDs	Power indicator: green x 1, User: green x 2, OB ACT: yellow x 1, Touch Button LED: green x 2
USB connector	Connector: USB 2.0 Type-C™
Pmod™ connectors	Connectors: angle type, 12 pins x 2
Arduino® connectors	Arduino UNO R3: 6 pins x 1, 8 pins x 2, 10 pins x 1
Breakout Pin Header*1	Headers: (12 pins x 2) x 2
Debugger	J-Link OB, 10 pins Cortex® Debug connector

*1 Not mounted.

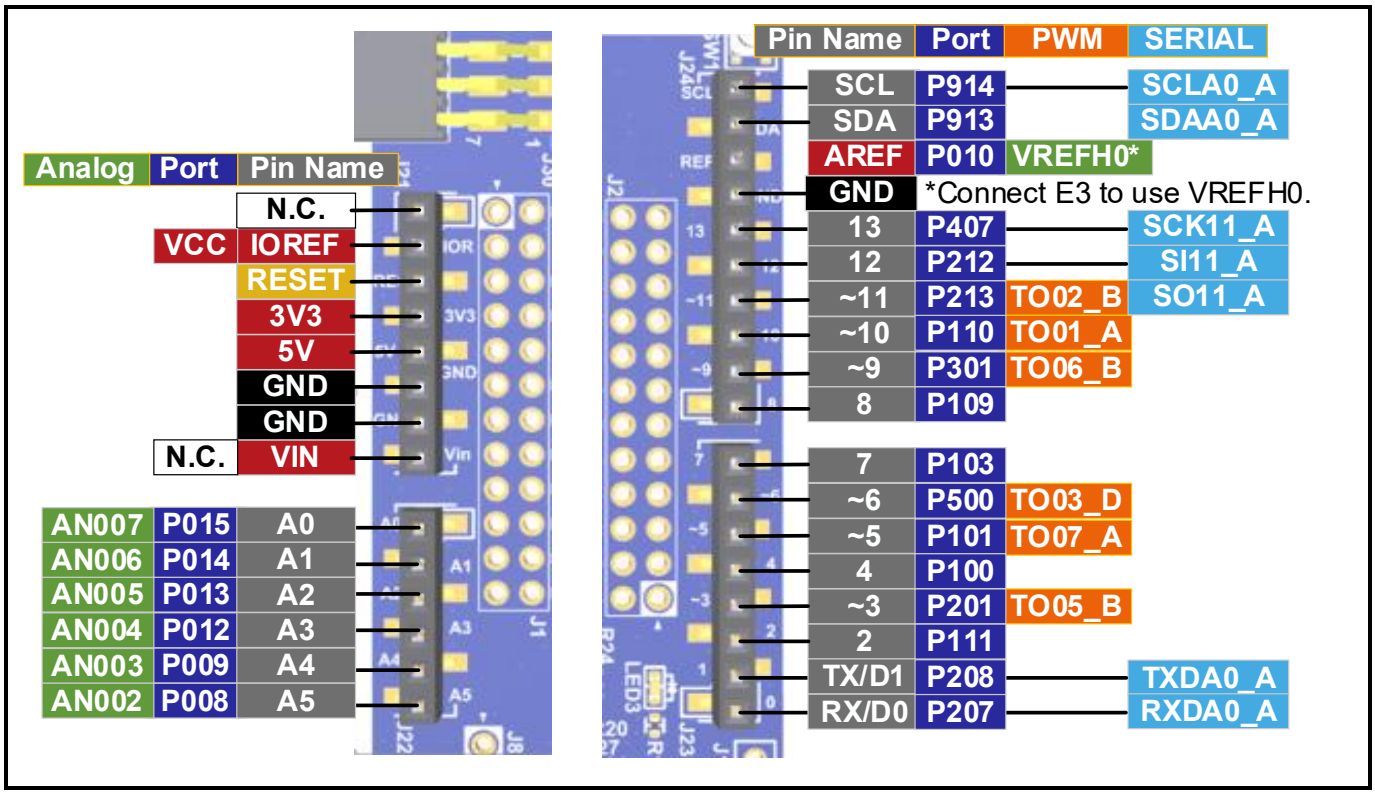
7. Parts Layout



8. Pmod



9. Arduino



Revision History

Rev.	Date	Description	
		Page	Summary
1.00	-	-	New.
1.01	Sep.12.25	-	Modified format.