

Renesas RA Family

FPB-RA0E1 Fast Prototyping Board

1. Introduction

The FPB-RA0E1 Fast Prototyping Board provides an entry point for evaluation, prototyping and development with the RA0E1 MCU. Moreover, since this board incorporates an emulator circuit, you can use it for designing your own applications without the need to make further investments in tools. This product includes through-holes for pin headers that allow access to all MCU signal pins, allowing easy prototyping with the use of a breadboard.

2. Package Contents

- FPB-RA0E1 Fast Prototyping Board (RTK7FPA0E1S00001BJ)
- Quick Start Guide (this document)
- USB 2.0 Type-C™ cable (Type-C male to Type-C male)
- Information on China RoHS

3. Board Specifications

Item	Specification
Evaluation MCU	Part No: R7FA0E1073CFJ; package: 32-pin LQFP
	On-chip memory: 64-KB ROM, 12-KB SRAM, 1-KB data flash memory
Board size	Size: 53 mm × 85 mm; thickness: 11.5 mm
Power-supply voltage	Board supply: 5 V, VCC: 3.3 V, MCU operating-voltage range: 1.6 V to 5.5 V
Power-supply circuit	USB connector: VBUS (5-V input); VBUS is converted to 3.3 V by LDO
	2-pin external power-supply header*1
Push switches	Reset switch x 1; user switch x 1
LEDs	Power indicator: green x 1, user: green x 2, on-board debugger ACT LED: yellow x 1
USB connector	Connector: USB 2.0 Type-C™
Pmod™ connectors	Connectors: angle type, 12 pins x 2
Arduino® connectors	Connectors: 6 pins x 1, 8 pins x 2, 10 pins x 1 The interfaces are compatible with Arduino UNO R3.
Breakout Pin Headers*1	Headers: 16 pins x 2
Debugger	J-Link OB, Connector: 10 pins Cortex® Debug connector

*1 This part is not mounted.

4. Board Layout

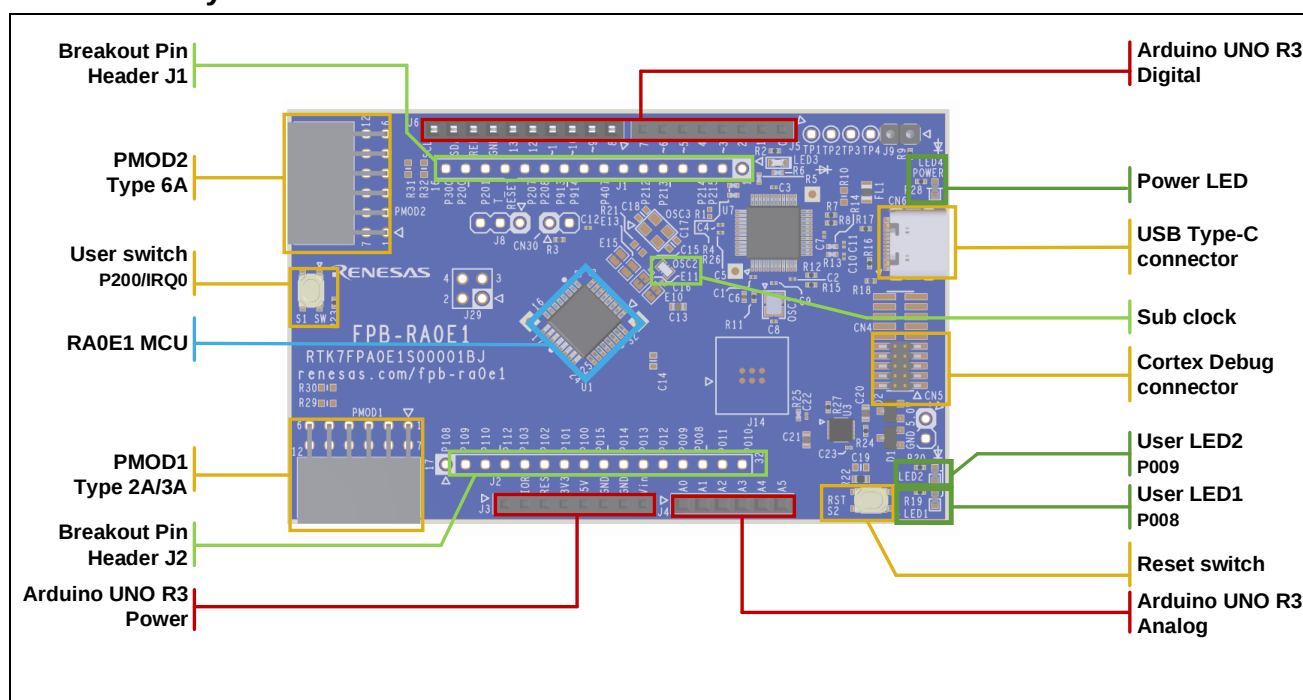


Figure 1. FPB-RA0E1 Board Layout

5. Arduino Interface

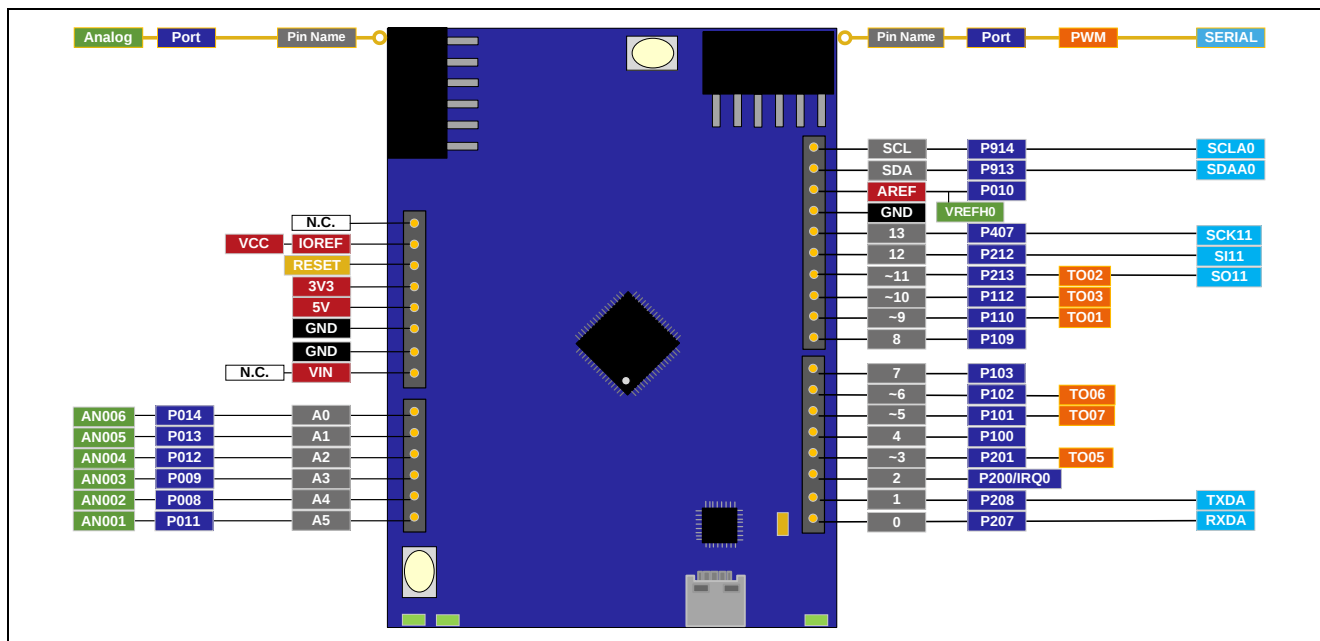


Figure 2. FPB-RA0E1 Arduino Interface

6. Pmod Interface

The FPB-RA0E1 Fast Prototyping Board has two Pmod connectors. PMOD1 supports Type 2A or 3A and can also be configured for Type 6A interfaces. PMOD2 supports Type 6A and can also be configured for Type 2A or 3A.

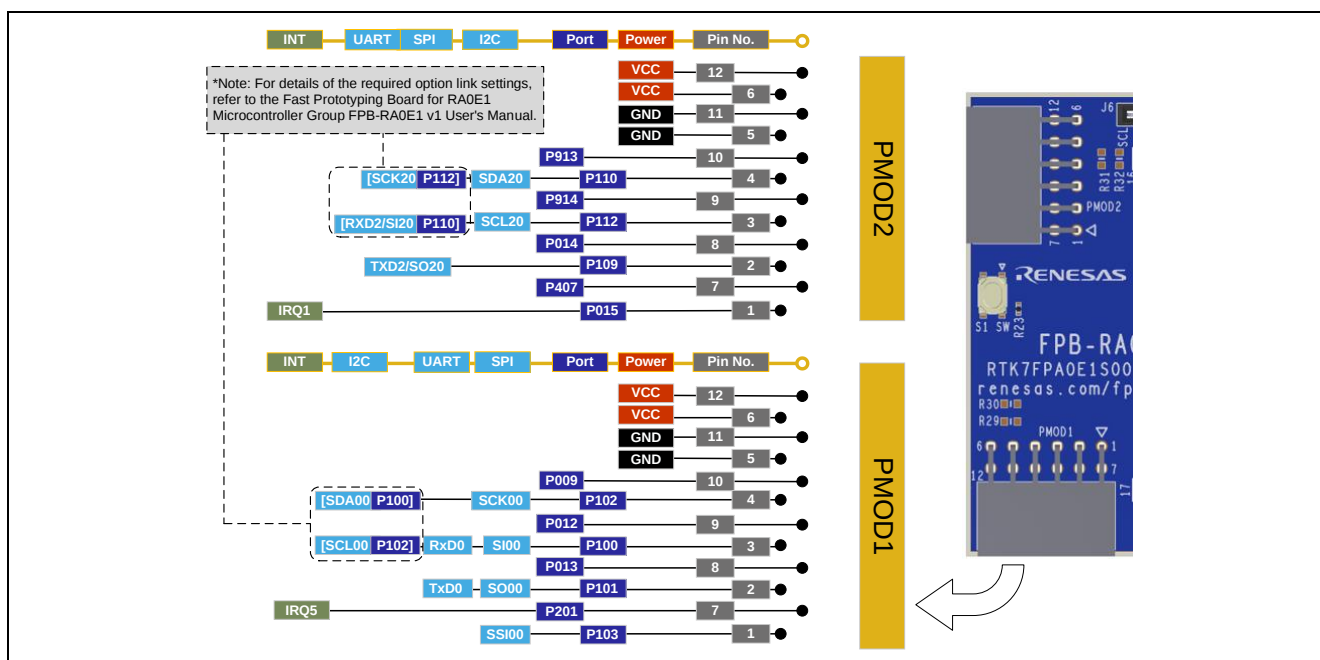


Figure 3. FPB-RA0E1 Pmod Interface

7. 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 each time S1 is pressed.

8. Note on Using the Board

Before using this board, download the user's manual from the website at renesas.com/fpb-ra0e1, and check the full specifications.

Tutorial for Blinky: renesas.com/ra/fsp/getting-started

Getting Started Video: renesas.com/gs-fpb-ra



FPB-RA0E1



Tutorial for Blinky



Getting Started
Video