

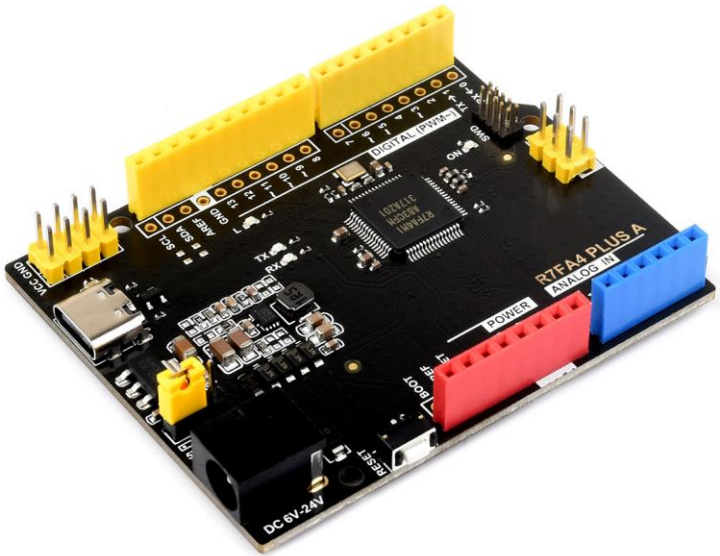
Uno R4 Minima

Overview

The R7FA4 Plus development platform provides users with an economical, flexible and convenient way to realize more creative ideas. On the hardware, it features Renesas Electronics' powerful 32-bit microcontroller R7FA4M1AB3CFM, which has expanded memory, peripherals, and faster clocks, enabling it to easily handle complex projects.

Order Code

Order Code	Brand	Description
E00002-001	Waveshare	Uno R4 Minima



Features

- Based on R7FA4M1AB3CFM, and is compatible with Arduino UNO R4 Minima.
- Utilizes Renesas Electronics' RA4M1 (Arm® Cortex®-M4) microcontroller, with a main frequency of 48MHz.
- Equipped with 256 kB Flash and 32 kB RAM, the expanded memory can easily handle complex projects.
- The R7FA4 Plus development board adds a 12-bit DAC, CAN bus and operational amplifiers, providing expanded functionality and flexibility for designs.
- Onboard 5V/3.3V headers for easy voltage switching, allowing the use of more expansion modules.
- Flexible power options, supporting USB-C power supply or external input power VIN ($6V \leq VIN \leq 24V$).
- Onboard power indicator (PWR), USER LED, serial port receive indicator (RX) and transmit indicator (TX), making it easy to monitor the working status of the development board.
- Onboard ICSP interface, can be used as an SPI interface.
- Supports user soldering of corresponding interface insertion into the experimental board.

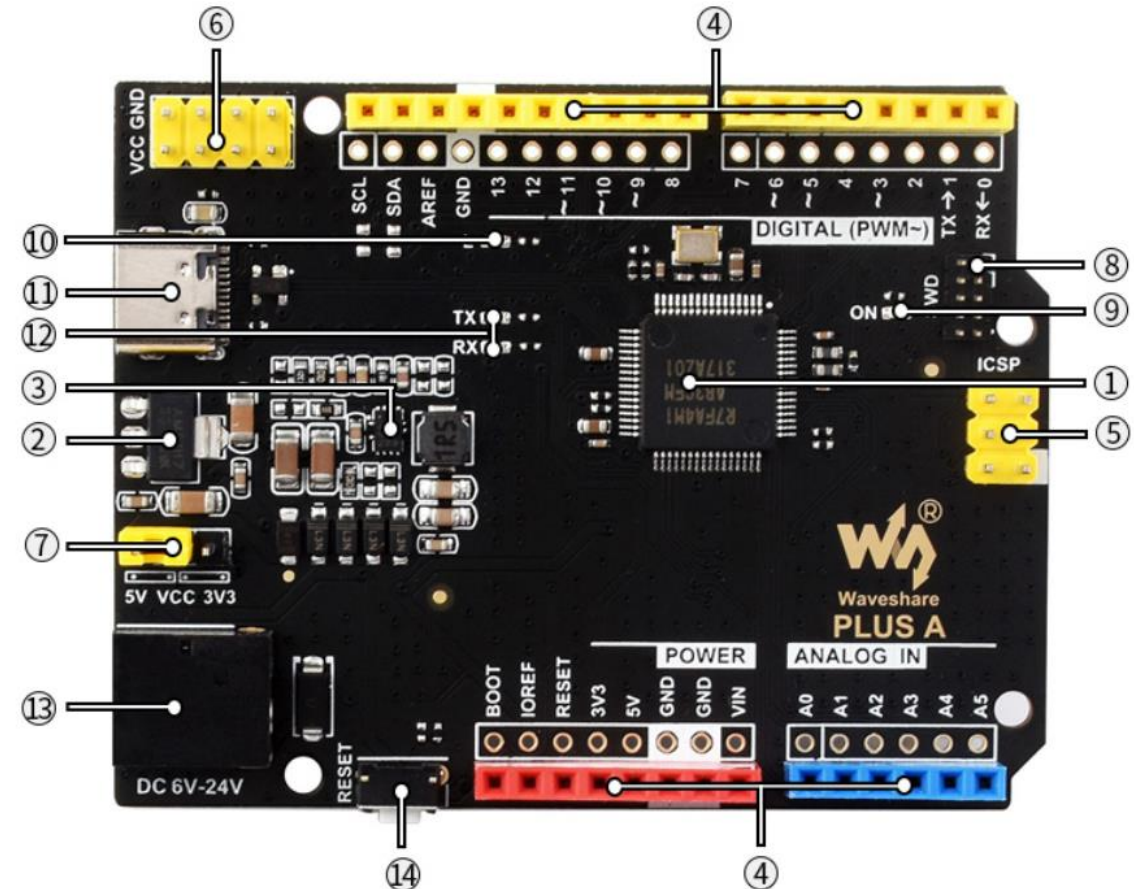
Product parameters

MICROCONTROLLER	R7FA4 (32-bit ARM Cortex-M4)
CLOCK FREQUENCY	R7FA4: 48MHz
STORAGE	R7FA4: 256kB Flash, 32kB RAM
WIRELESS COMMUNICATION	None
OPERATING VOLTAGE	Options for 5V/3.3V, support more shields
POWER INPUT	6~24V
RESET BUTTON	Lateral, easier to use when connecting with shield
IO PIN OUTPUT CURRENT	8mA
DIGITAL PINS	14
ANALOG PINS	6
DAC	2
PWM	6
UART	1
I2C	1
SPI	1
CAN	1
DC JACK	Low profile, shields won't be blocked anymore while connecting
POWER OUTPUT HEADER	Provides 5V OR 3.3V power output and common-grounding with other boards
5V POWER OUTPUT	Up to 2000mA Max, features higher driving capability
EXPERIMENTAL BOARD	Support, the solder pad is provided for DIY interfaces to connect with the experimental board

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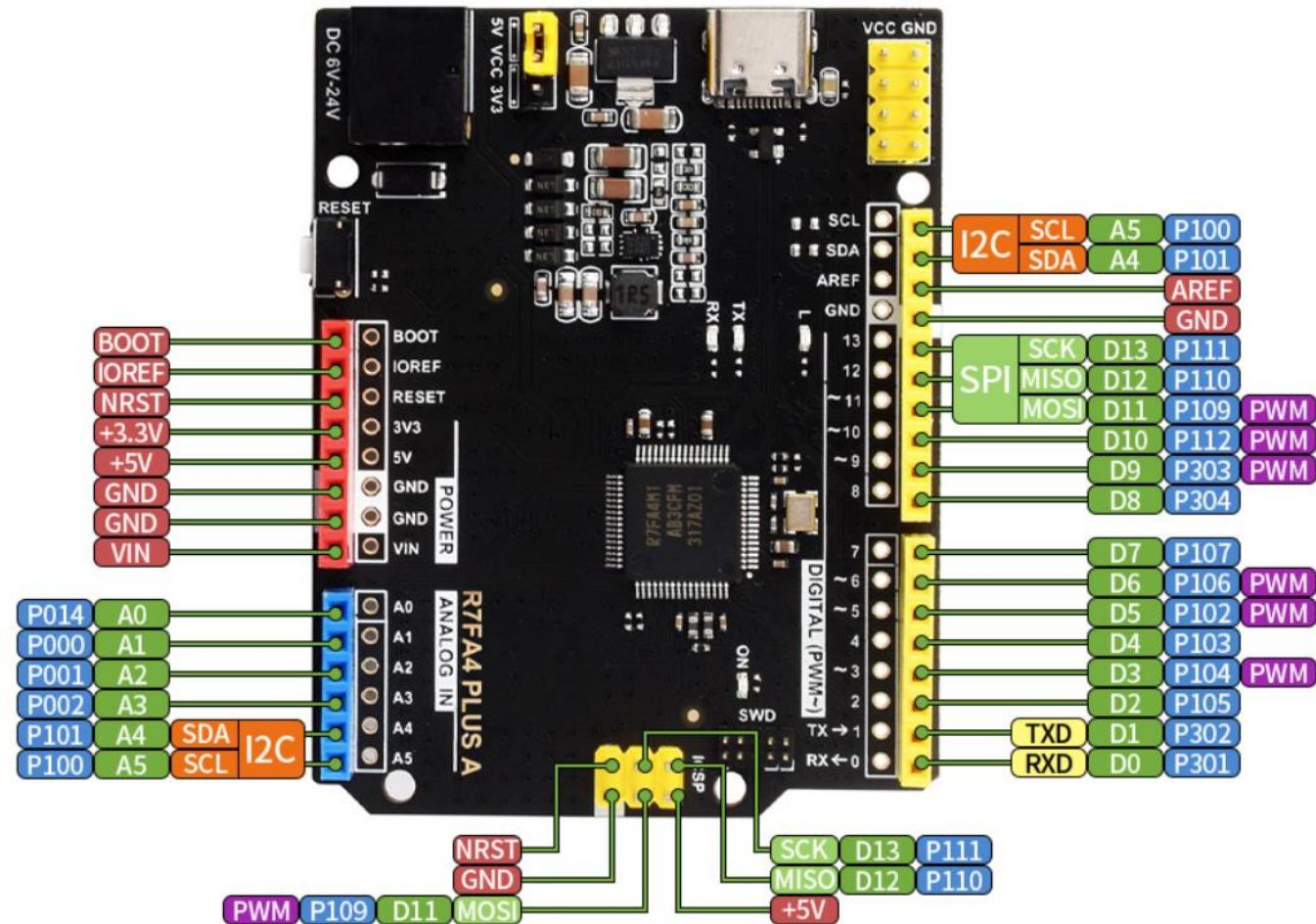
Onboard interface

1. **R7FA4M1AB3CFM**
2. **AMS1117-3.3**
3.3V voltage regulator
3. **MP8759**
5V voltage regulator
4. **Arduino interface**
compatible with standard Arduino interface, adapting 2.54 pitch solder pad, can be directly connected to experimental board
5. **ICSP interface**
6. **Power output header**
3.3V OR 5V, voltage level configured by the onboard power configuration switch, used as power output and common-grounding with other boards
7. **Power configuration**
for configuring R7FA4 PLUS A operating voltage
8. **SWD indicator**
9. **Power indicator**
10. **User LED**
11. **USB Type-C connector**
for uploading program OR serial port debugging
12. **Serial port RX/TX indicators**
13. **DC input**
6V ~ 24V
14. **Reset button**



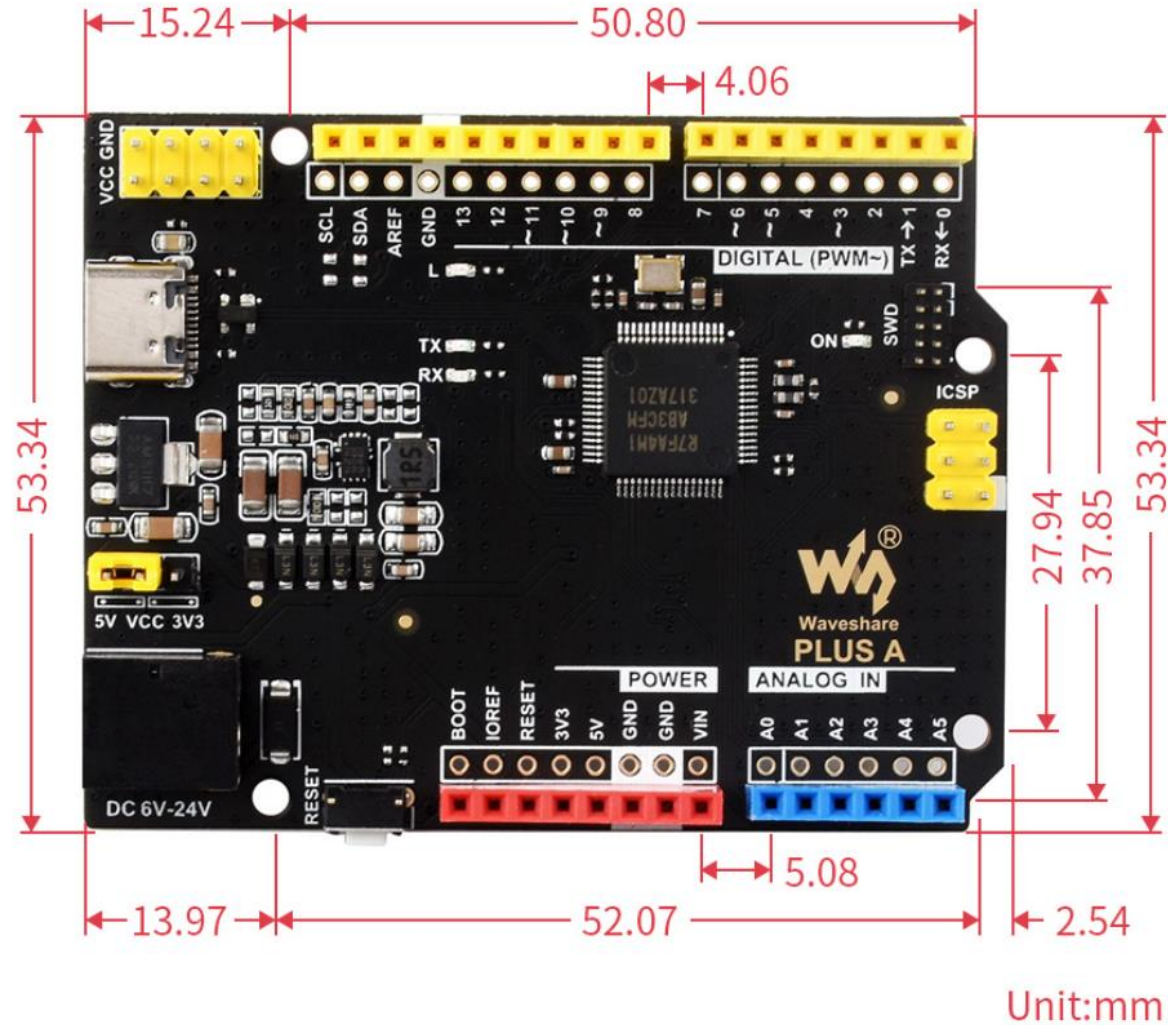
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Pin Out Definition



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Dimension



Revision History

Date	Revision	Change description
30/10/2025	1.0	Initial release