

DESCRIPTION

Compatible with Arduino UNO R3, Onboard MCU ATMEGA328P-AU

Overview

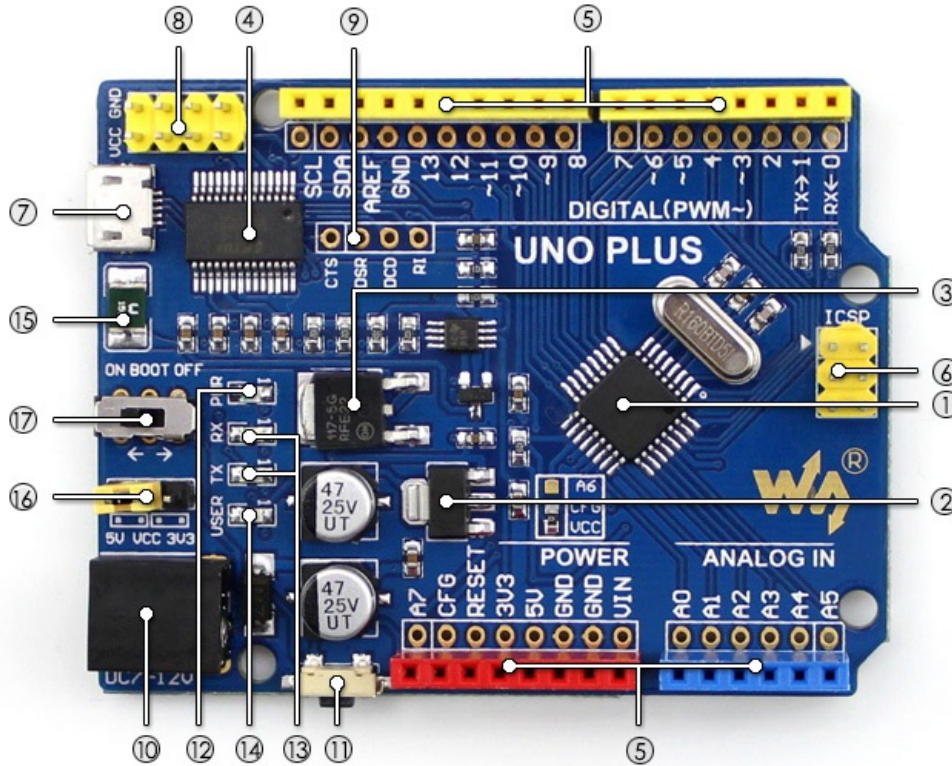
UNO PLUS is a development board compatible with the Arduino UNO R3, an improved & enhanced alternative solution for Arduino UNO R3.

Advantages

| | UNO PLUS | UNO R3 | Remarks |
|--------------------------------------|----------------------------------|---|--|
| Operating voltage | 5V/3.3V | 5V | Dual voltage level to support more shields |
| Reset | Lateral | Vertical | Lateral button is easier to use when connecting with shield |
| Bootloader switch | Yes | None | The board can be configured to run program immediately when power-up by the switch |
| USB connector | Micro USB | USB Type B | Micro connector is more commonly used, and shields won't be blocked anymore while connecting |
| DC jack | Low profile | Normal height | Shields won't be blocked anymore while connecting |
| Power output header | Yes | None | Providing 5V/3.3V power output OR common-grounding with other boards |
| 3.3V power output | 800mA Max | 150mA Max | UNO PLUS features higher driving capability |
| Oscillator | Crystal oscillator | Ceramic resonator | Crystal oscillator is suit for applications where accurate clock reference is required |
| ADC channel | 8 | 6 | CFG used as ADC6 by configuration, and ADC7 from the Reserved PIN |
| Connecting with prototype breadboard | Supported | Not supported | Solder pads is provided for DIY interfaces to connecting with prototype breadboard |
| USB driver | Compatible with all main systems | Doesn't compatible with WIN7/WIN8 Express Edition | Driver will never failed to install thanks to the onboard FT232 |

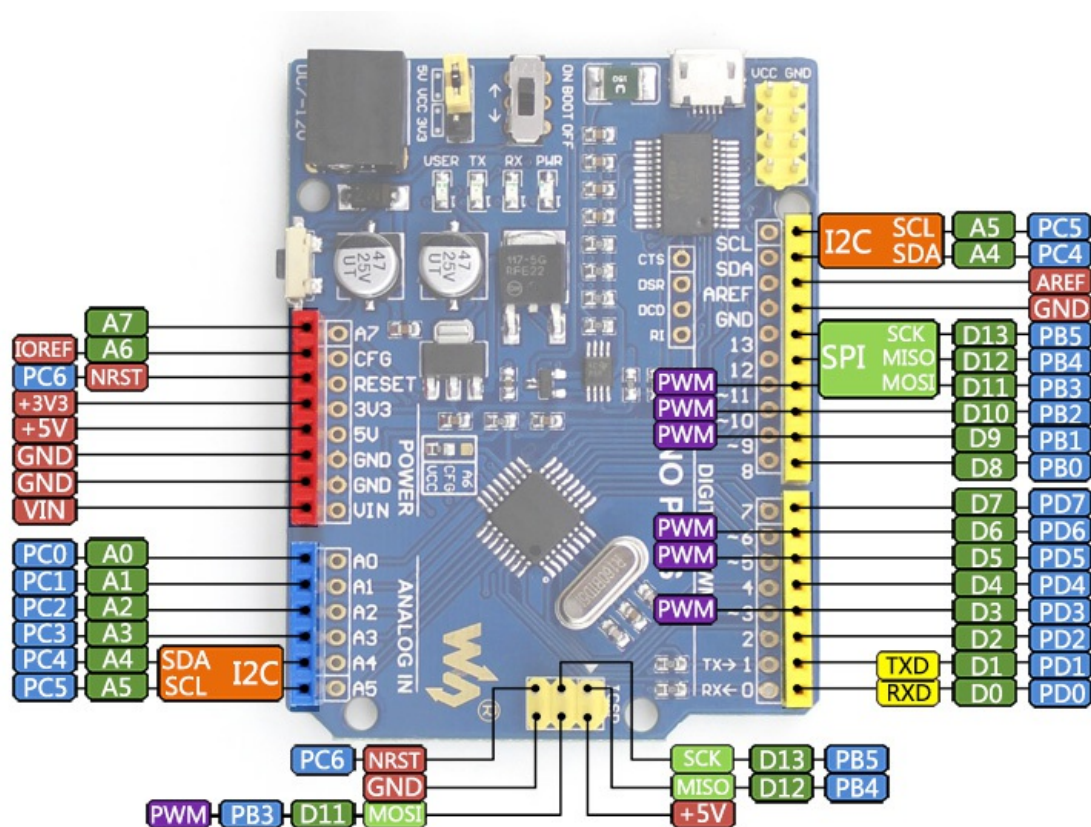
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|-----------------|-----------|---------------|---|
| Firmware fixing | Supported | Not supported | Firmware can be fixed by using the onboard FT232, no extra programmer is needed |
|-----------------|-----------|---------------|---|

What's on the UNO PLUS

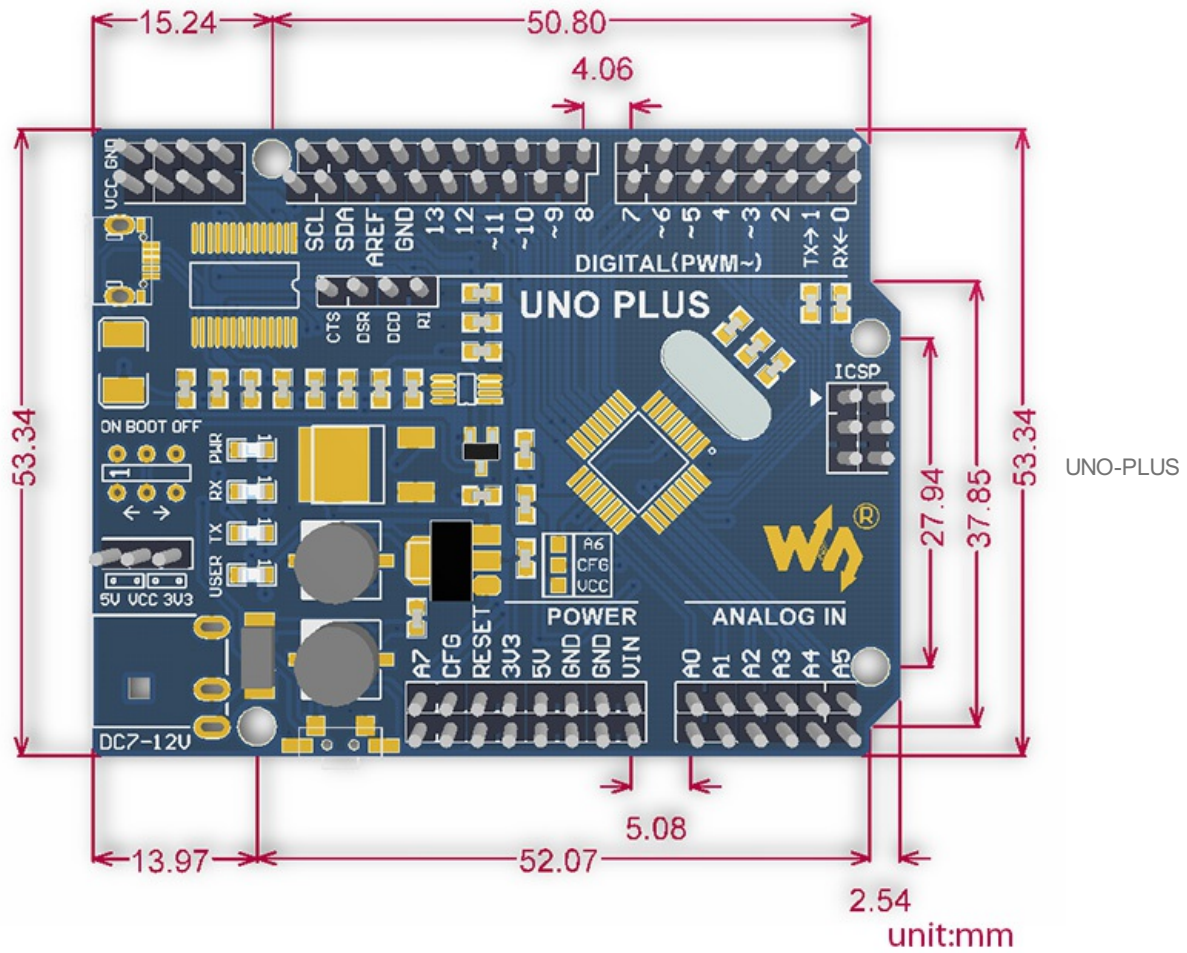


1. ATMEGA328P-AU
2. AMS1117-3.3 : 3.3V voltage regulator
3. NCP1117ST50T3G : 5V voltage regulator
4. FT232RL : USB to UART convertor
5. Arduino interface
 - compatible with standard Arduino interface with two additional analog inputs A6 (config the CFG), A7
 - solder pads provided, supports prototype breadboard
6. ICSP interface
7. MICRO USB connector : for uploading program OR serial port debugging
8. Power output header : 3.3V OR 5V, voltage level configured by the onboard power configuration switch, used as power output OR common-grounding with other boards
9. FT232 pins : for burning Bootloader into the microcontroller
10. DC input : 7V ~ 12V
11. Reset button
12. Power indicator
13. Serial port Rx/Tx indicator
14. User LED
15. Power configuration switch : for configuring the operating voltage
16. Bootloader selection switch
 - turn ON : the board will reset when power-up OR other USB devices were detected connecting to the PC
 - turn OFF : the onboard program runs immediately when power-up, and the board will not reset when other USB devices were detected connecting to the PC

UNO PLUS Expansion Headers



UNO PLUS Dimension



Downloads

Development resources: demo codes, schematic, datasheets, etc.

www.waveshare.com/wiki/UNO_PLUS