| UNO R3 | | | UNO R4 | |
|---|---|---|---|---|
| **Interface** | **#** | **Description** | **#** | **Description** |
| | | | 8 | PWM Timers (2 * 32bits / 6 * 16bits) |
| Timer 16 bits | 3 | Timers (2 * 8bits / 1 * 16bits) | 2 | |
| RealTime counter | 1 | | 1 | |
| PWM channel | 6 | | 8 | |
| ADC channels | 6 | ADC 10 bit. PDIP package | 1 | ADC 14 Bits |
| Serial USART | 1 | | 4 | |
| SPI Interface | 1 | | 2 | |
| WD Timer | 1 | | 1 | |
| Analog comparator | 1 | On chip | 2 | Analog Comparator 8 bits |
| Interrupt and Wake Up on pin change | 1 | | 1 | |
| I2C | 1 | | 2 | |
| | | | 1 | DAC 12 bits |
| | | | | |
| | | | | |
| | | | | |

**JANALOG**

| UNO R3 | | | | | | UNO R4 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pin | Function | Type | Description | CPU Channel | Bit | Pin | Function | Type | Description | CPU Pin (Pxx) |
| 1 | NC | NC | Not connected | | | 1 | BOOT | NC | MD | 201 |
| 2 | IOREF | IOREF | Reference for digital logic V - connected to 5V | | | 2 | IOREF | IOREF | Reference for digital logic V - connected to 5 V | |
| 3 | Reset | Reset | Reset | C | 6 | 3 | Reset | Reset | Reset | |
| 4 | +3V3 | Power | +3V3 Power Rail | | | 4 | +3V3 | Power | +3V3 Power Rail | |
| 5 | +5V | Power | +5V Power Rail | | | 5 | +5V | Power | +5V Power Rail | |
| 6 | GND | Power | Ground | | | 6 | GND | Power | Ground | |
| 7 | GND | Power | Ground | | | 7 | GND | Power | Ground | |
| 8 | VIN | Power | Voltage Input | | | 8 | VIN | Power | Voltage Input | |
| 9 | A0 | Analog / GPIO | Analog input 0  / GPIO | C | 0 | 9 | A0 | Analog | Analog input 0  /  DAC | 14 |
| 10 | A1 | Analog / GPIO | Analog input 1  / GPIO | C | 1 | 10 | A1 | Analog | Analog input 1  /  OPAMP+ | 0 |
| 11 | A2 | Analog / GPIO | Analog input 2  / GPIO | C | 2 | 11 | A2 | Analog | Analog input 2  /  OPAMP- | 1 |
| 12 | A3 | Analog / GPIO | Analog input 3  / GPIO | C | 3 | 12 | A3 | Analog | Analog input 3  /  OPAMPOut | 2 |
| 13 | A4 / SDA | Analog | input / I2C Analog input 4 / I2C Data line | C | 4 | 13 | A4 | Analog | Analog input 4  /  I2C Serial Datal (SDA) | 101 |
| 14 | A5 / SCL | Analog | input / I2C Analog input 5 / I2C Clock line | C | 5 | 14 | A5 | Analog | Analog input 5  /  I2C Serial Clock (SCL) | 100 |

**JDIGITAL**

| | | UNO R3 | | | | | | | UNO R4 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pin | Function | Type | PWM | Description Special | CPU Channel | Bit | Pin | Function | Type | PWM | Description Special | CPU Pin (Pxx) |
| 1 | D0 | Digital / GPIO | | | D | 0 | 1 | D0 | Digital | | Serial 0 Receiver (RX) | 301 |
| 2 | D1 | Digital / GPIO | | | D | 1 | 2 | D1 | Digital | | Serial 0 Transmitter (TX) | 302 |
| 3 | D2 | Digital / GPIO | | | D | 2 | 3 | D2 | Digital | | Interrupt Pin | 104 |
| 4 | D3 | Digital / GPIO | yes | | D | 3 | 4 | D3 | Digital | yes | Interrupt Pin | 105 |
| 5 | D4 | Digital / GPIO | | | D | 4 | 5 | D4 | Digital | | | 106 |
| 6 | D5 | Digital / GPIO | yes | | D | 5 | 6 | D5 | Digital | yes | | 107 |
| 7 | D6 | Digital / GPIO | yes | | D | 6 | 7 | D6 | Digital | yes | | 111 |
| 8 | D7 | Digital / GPIO | | | D | 7 | 8 | D7 | Digital | | | 112 |
| 9 | D8 | Digital / GPIO | | | B | 0 | 9 | D8 | Digital | | | 304 |
| 10 | D9 | Digital / GPIO | yes | | B | 1 | 10 | D9 | Digital | yes | | 303 |
| 11 | D10 | Digital / GPIO | yes | SPI SS Chip Select | B | 2 | 11 | D10 | Digital | yes | SPI SS Chip Select / CAN Transmitter (TX) | 103 |
| 12 | D11 | Digital / GPIO | yes | SPI MOSI Controller Out Peripheral In | B | 3 | 12 | D11 | Digital | yes | SPI MOSI Controller Out Peripheral In | 411 |
| 13 | D12 | Digital / GPIO | | SPI MISO Controller In Peripheral Out | B | 4 | 13 | D12 | Digital | | SPI MISO Controller In Peripheral Out | 410 |
| 14 | D13 | Digital / GPIO | | SPI CLK Clock | B | 5 | 14 | D13 | Digital | | SPI CLK Clock / CAN Receiver (RX) | 102 |
| 15 | GND | Power | | | | | 15 | GND | Power | | | |
| 16 | AREF | Analog reference | | | | | 16 | AREF | Analog Reference | | | 10 |
| 17 | A4 / SD4 | Digital / Analog | | I2C Data line (duplicated) | C | 4 | 17 | SDA | Digital | | I2C Serial Datal (SDA) | 101 |
| 18 | A5 / SD5 | Digital / Analog | | I2C Clock line (duplicated) | C | 5 | 18 | SCL | Digital | | I2C Serial Clock (SCL) | 100 |

**LEDs**

| UNO R3 | | | UNO R4 | |
|---|---|---|---|---|
| **Function** | **CPU Channel** | **Bit** | **Function** | **CPU Pin (Pxx)** |
| Built In | B | 5 | Built In | 102 |
| TX | ATMEGA16U2-MU(R) D | 5 | TX | 109 |
| RX | ATMEGA16U2-MU(R) D | 4 | RX | GPIO 43 (ESP32-S3) |