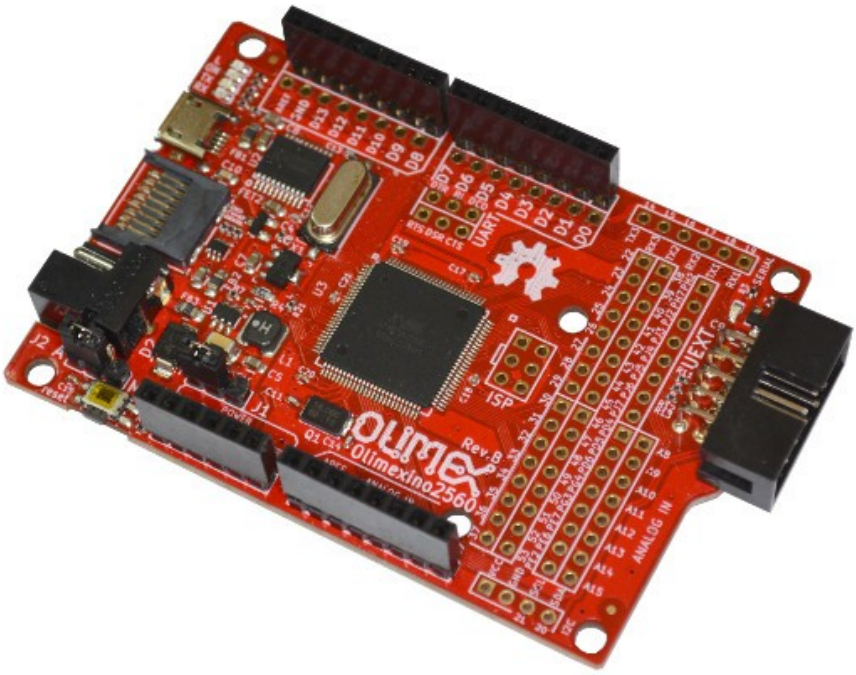


OLIMEXINO-2560

Users manual

Rev.1 June 2019

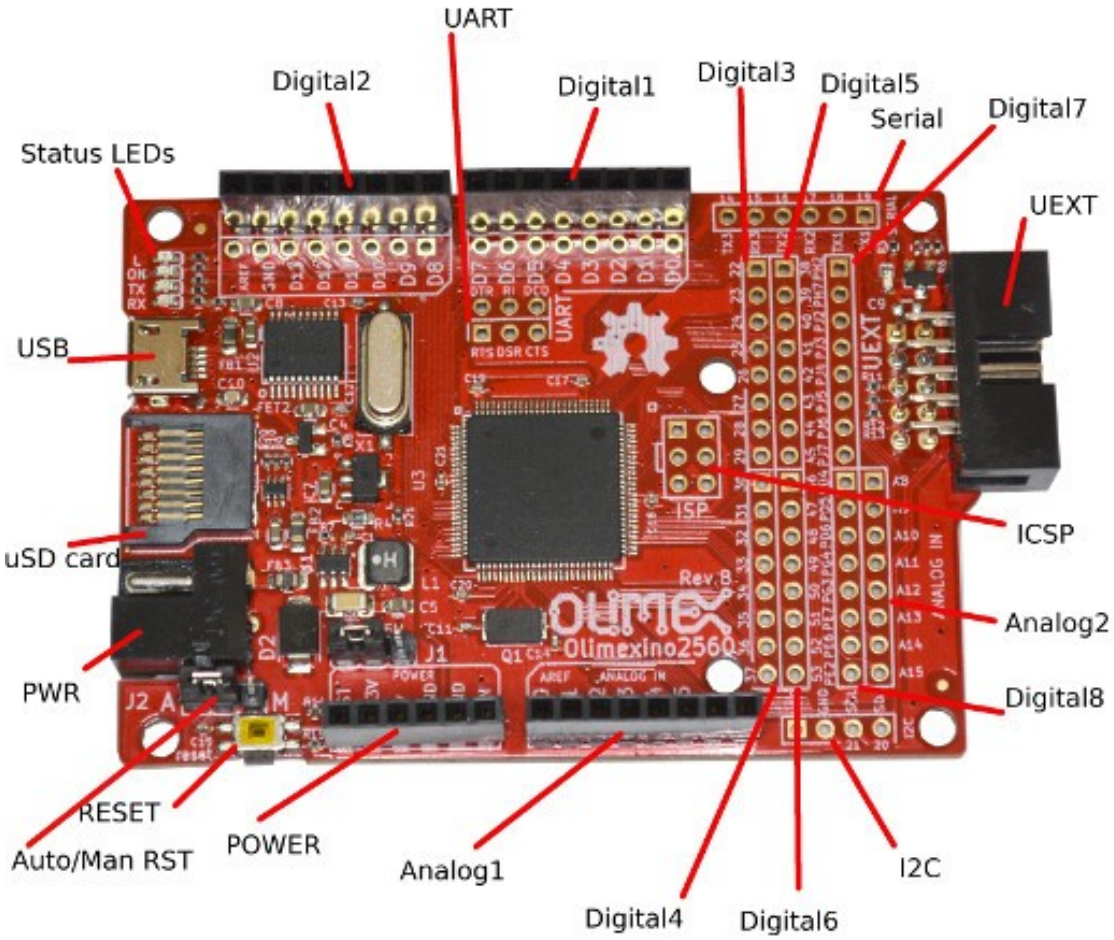
Table of Contents

OLIMEXINO-2560 features

OLIMEXINO-2560 is Arduino Mega 2560 like board with ATMega2560 processor and these features:

- ATMega2560 AVR processor
- 256 KB Flash, 8KB SRAM, 4KB EEPROM
- 88 GPIO
- micro USB connector
- USB-Serial converter with CH340T for Arduino IDE programming via USB
- 4 status LEDs – Power (green), Status (yellow), Tx (green), Rx (red)
- micro SD card for file storage
- Works on 5V and 3.3V (jumper selectable)
- Programmable with Arduino IDE (www.arduino.cc)
- Power supply is 6-15VDC for 5V operation
- Power supply is 5-15VDC for 3.3V operation
- Can be powered by USB connector power
- UEXT connector with power supply enable/disable
- Reset Button

OLIMEXINO-2560 component locations



GPIO Digital1

o	D0	PE0 / RXD0 / PCINT8
o	D1	PE1 / TXD0
o	D2	PE4 / OC3B / INT4
o	D3	PE5 / OC3C / INT5
o	D4	PG5 / OCOB
o	D5	PE3 / OC3A / AIN1
o	D6	PH3 / OC4A
o	D7	PH4 / OC4B

GPIO Digital2

o	D8	PH5 / OC4C
o	D9	PH6 / OC4C
o	D10	PB4 / PCINT4 / OC2A
o	D11	PB5 / PCINT5 / OC1A
o	D12	PB6 / PCINT6 / OC1B
o	D13	PB7 / PCINT7 / OC0A / OC1C
o	GND	Ground 0V
o	AREF	Analog Reference for ADC

GPIO Serial

o	D14	PJ1 / TXD3 / PCINT10
o	D15	PJ0 / RXD3 / PCINT9
o	D16	PH1 / TXD2
o	D17	PH0 / RXD2
o	D18	PD3 / TXD1 / INT3
o	D19	PD2 / RXD1 / INT2

GPIO I2C

o	D20	PD1 / SDA / INT1
o	D21	PD0 / SCL / INT0
o	GND	Ground 0V
o	VCC	VCC 3.3V or 5V (J1 selectable)

GPIO Digital3

o	D22	PA0 / AD0
o	D23	PA1 / AD1
o	D24	PA2 / AD2
o	D25	PA3 / AD3
o	D26	PA4 / AD4
o	D27	PA5 / AD5
o	D28	PA6 / AD6
o	D29	PA7 / AD7

GPIO Digital4

o	D30	PC7 / A15
o	D31	PC6 / A14
o	D32	PC5 / A13
o	D33	PC4 / A12
o	D34	PC3 / A11
o	D35	PC2 / A10
o	D36	PC1 / A9
o	D37	PC0 / A8

GPIO Digital5

o	D38	PD7 / T2
o	D39	PG2 / ALE
o	D40	PG1 / RD
o	D41	PG0 / WR
o	D42	PL7
o	D43	PL6
o	D44	PL5 / OC5C
o	D45	PL4 / OC5B

GPIO Digital6

o	D46	PL4 / OC5A
o	D47	PL2 / T5
o	D48	PL1 / ICP5
o	D49	PL0 / ICP4
o	D50	PB3 / PCINT3 / MISO
o	D51	PB2 / PCINT2 / MOSI
o	D52	PB1 / PCINT1 / SCK
o	D53	PB0 / PCINT0 / SS

GPIO Digital7

o	PH2	PH2 / XCK2
o	PH7	PH7 / T4
o	PJ2	PJ2 / XCK3 / PCINT11
o	PJ3	PJ3 / PCINT12
o	PJ4	PJ4 / PCINT13
o	PJ5	PJ5 / PCINT14
o	PJ6	PJ6 / PCINT15
o	PJ7	PJ7

GPIO Digital8

o	PD4	PD4 / ICP1
o	PD5	PD5 / XCK1
o	PD6	PD6 / T1
o	PG4	PG4 / TOSC1
o	PG3	PG3 / TOSC2
o	PE7	PE7 / CLK0 / ICP3 / INT7
o	PE6	PE6 / T3 / INT6
o	PE2	PE2 / XCK0 / AIN0

GPIO Analog 1

o	A0	PF0 / ADC0
o	A1	PF1 / ADC1
o	A2	PF2 / ADC2
o	A3	PF3 / ADC3
o	A4	PF4 / TCK / ADC4
o	A5	PF5 / TMS / ADC5
o	A6	PF6 / TDO / ADC6
o	A7	PF7 / TDI / ADC7

GPIO Analog 2

o	A8	PK0 / ADC8 / PCINT16
o	A9	PK1 / ADC9 / PCINT17
o	A10	PK2 / ADC10 / PCINT18
o	A11	PK3 / ADC11 / PCINT19
o	A12	PK4 / ADC12 / PCINT20
o	A13	PK5 / ADC13 / PCINT21
o	A14	PK6 / ADC14 / PCINT22
o	A15	PK7 / ADC15 / PCINT23

UEXT

3.3V	1	o o	2	GND
D18 / TXD1	3	o o	4	D19 / RXD1
D21 / SCL	5	o o	6	D20 / SDA
D50 / MISO	7	o o	8	D51 / MOSI
D52 / SCK	9	o o	10	D53 / CS

UART (CH340T USB-to-Serial signals)

RTS	1	o o	6	DTR
DSR	2	o o	5	RI
CTS	3	o o	4	DCD

ISP AVR programming connector

MISO	1	o o	2	VCC
SCK	3	o o	4	MOSI
RST	5	o o	6	GND

LEDs

L	D13 / STATUS LED
ON	VCC
TX	D0 / RXD0
A11	D1 / TXD0

Jumpers

J1

J1 selects at what voltage OLIMEXINO-2560 works 5V (1-2 pin) or 3.3V (2-3pin).

Note that if you attach UEXT board the power supply must be 3.3V or the UEXT board will be damaged.

o	+5.0V	5V power supply input
o	VCC	VCC output to AVR
o	+3.3V	3.3V power supply input

J2

J2 jumper selects if Arduino can Reset and program board automatically if pin 1-2 are shorted

o	DTR	AUTO RESET BY Arduino IDE
o	RST	RESET
o	GND	Manual RESET button only

Using Digital GPIOs

You can set any of the Digital GPIOs as input or output using their names:

```
pinMode(D33,INPUT);         //D0-D53, PH2..PE2
value = digitalRead(D33);
pinMode(D13,OUTPUT);
digitalWrite(D13,HIGH);
```

Using Analog GPIOs

```
value = analogRead(A7); //A0..A15
analogWrite(D44,128);         //PWM GPIOs D2..D13, D44..D46, value 0..255
```

Power supply requirements

OLIMEXINO-2560 can be powered by USB port or External Power supply, Jack inner pin 2 mm and external diameter 5.5mm. Switching between power supplies is automatically, i.e. if external power supply is applied USB power supply is not used.

Revision History

1.00 June 2019