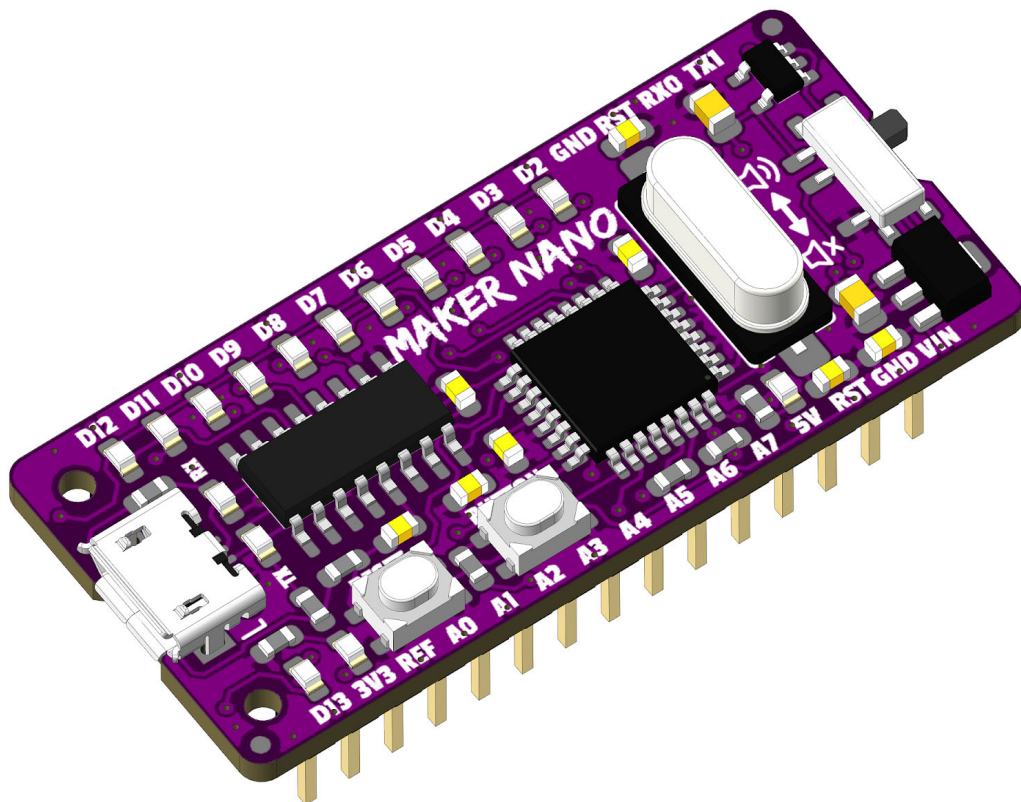




# **MAKER-NANO**

## **Simplifying Arduino for Projects**

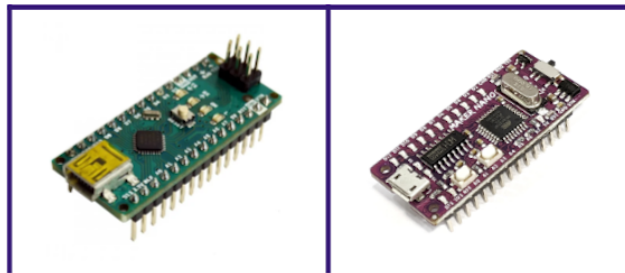


## **Datasheet**

Rev 1.0  
June 2020

Information in this publication regarding device applications and the like is intended through suggestion only and may be superseded by updates. It is your responsibility to ensure that your application meets with your specifications. No representation or warranty is given and no liability is assumed by Cytron Technologies Incorporated with respect to the accuracy or use of such information or infringement of patents or other intellectual property rights arising from such use or otherwise. Use of Cytron Technologies's products as critical components in life support system is not authorized except with express written approval by Cytron Technologies. No licenses are conveyed, implicitly or otherwise, under any intellectual property rights.

## 1. ARDUINO NANO 3.X vs MAKER NANO



FEATURES	ARDUINO NANO 3.X	MAKER NANO
Microcontroller	ATmega328P	ATmega328P
Programming IDE	Arduino IDE	Arduino IDE
Operating Voltage	5V	5V
Digital I/O Pins	20	20
PWM	6	6
Analog Input	8 (10-bit)	8 (10-bit)
UART	1	1
SPI	1	1
I2C	1	1
External Interrupt	2	2
Flash Memory	32KB	32KB
SRAM	2KB	2KB
EEPROM/Data Flash	1KB	1KB
Clock Speed	16MHz	16MHz
Power Supply	Vin or USB	Vin or USB
Vin Voltage	7 - 12V	7 - 30V
USB to Serial Chip	FTDI FT232RL	CH340C
Programmable LED	1x at Pin D13	12x at Pin D2 - D13
Programmable Push Button	No	1x at Pin D2
Piezo Buzzer	No	1x at Pin D8
Dimension	18 x 45mm	21 x 46mm

## 2. BOARD LAYOUT & FUNCTION

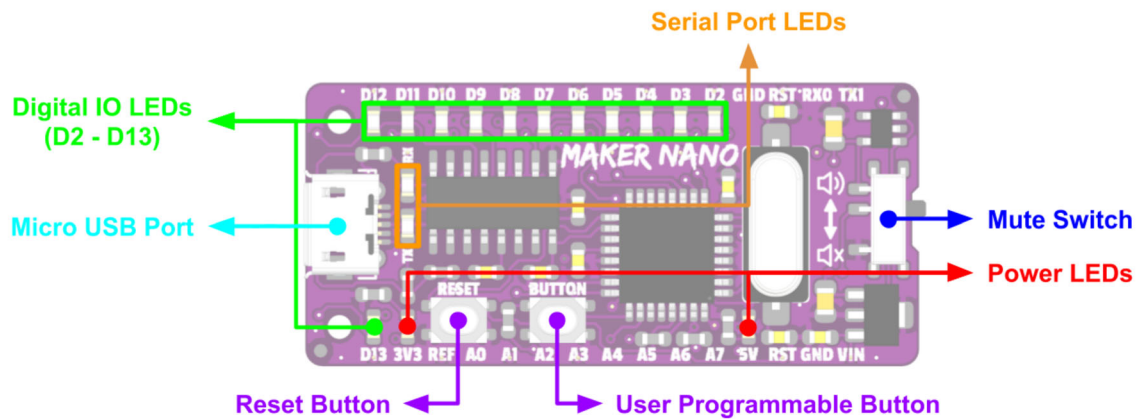


Figure 1: MAKER-NANO Board Functions (Top)

Function	Description
<b>Power LEDs</b>	LED indicator for 3V3 and 5V. Turn on when powered up.
<b>Digital IO LEDs (D2-D13)</b>	LED indicator for digital IO D2 - D13. Turn on when the IO state is high.
<b>Serial Port LEDs</b>	LED indicator for USB serial port activity. <ul style="list-style-type: none"> <li>TX : Turn on when data is transmitted from Maker Nano.</li> <li>RX : Turn on when data is received by Maker Nano.</li> </ul>
<b>Micro USB Port</b>	Used to upload Arduino program from PC. Can be used for debugging purpose too (Serial Monitor).
<b>Mute Switch</b>	Used to mute the piezo buzzer if pin D8 is used for other purposes.
<b>Reset Button</b>	Press to reset the Maker Nano.
<b>User Programmable Button</b>	Connected to pin D2 internally. Accessible from the user program.

Table 1: MAKER-NANO Board Functions (Top)

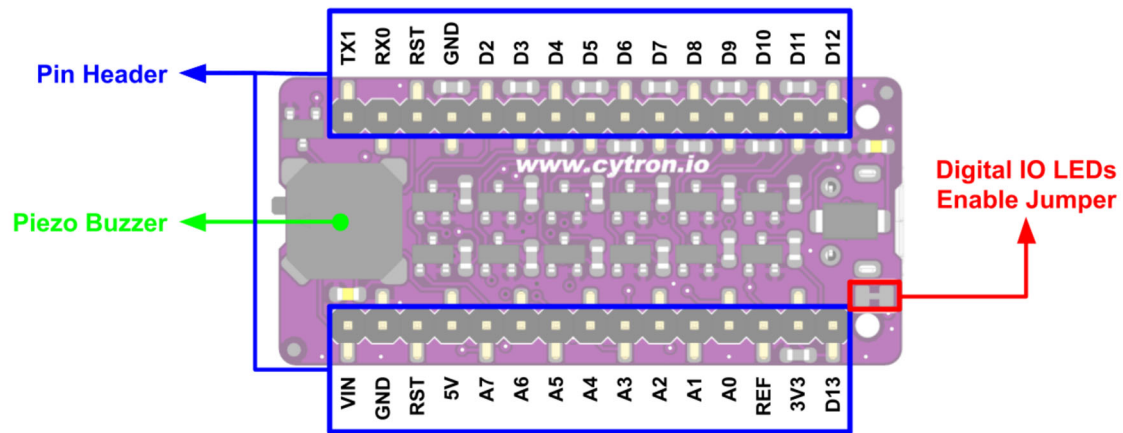


Figure 2: MAKER-NANO Board Functions (Bottom)

Function	Description
<b>Pin Header</b>	Used for external connection. Compatible with original Arduino Nano.
<b>Piezo Buzzer</b>	Programmable piezo buzzer. Can be used to play tone or melody.
<b>Digital IO LEDs Enable Jumper</b>	Cut the trace to disable the digital IO LEDs. This can be done to save power or reduce the distraction from digital IO LEDs.

Table 2: MAKER-NANO Board Functions (Bottom)

### 3. PINOUT DIAGRAM

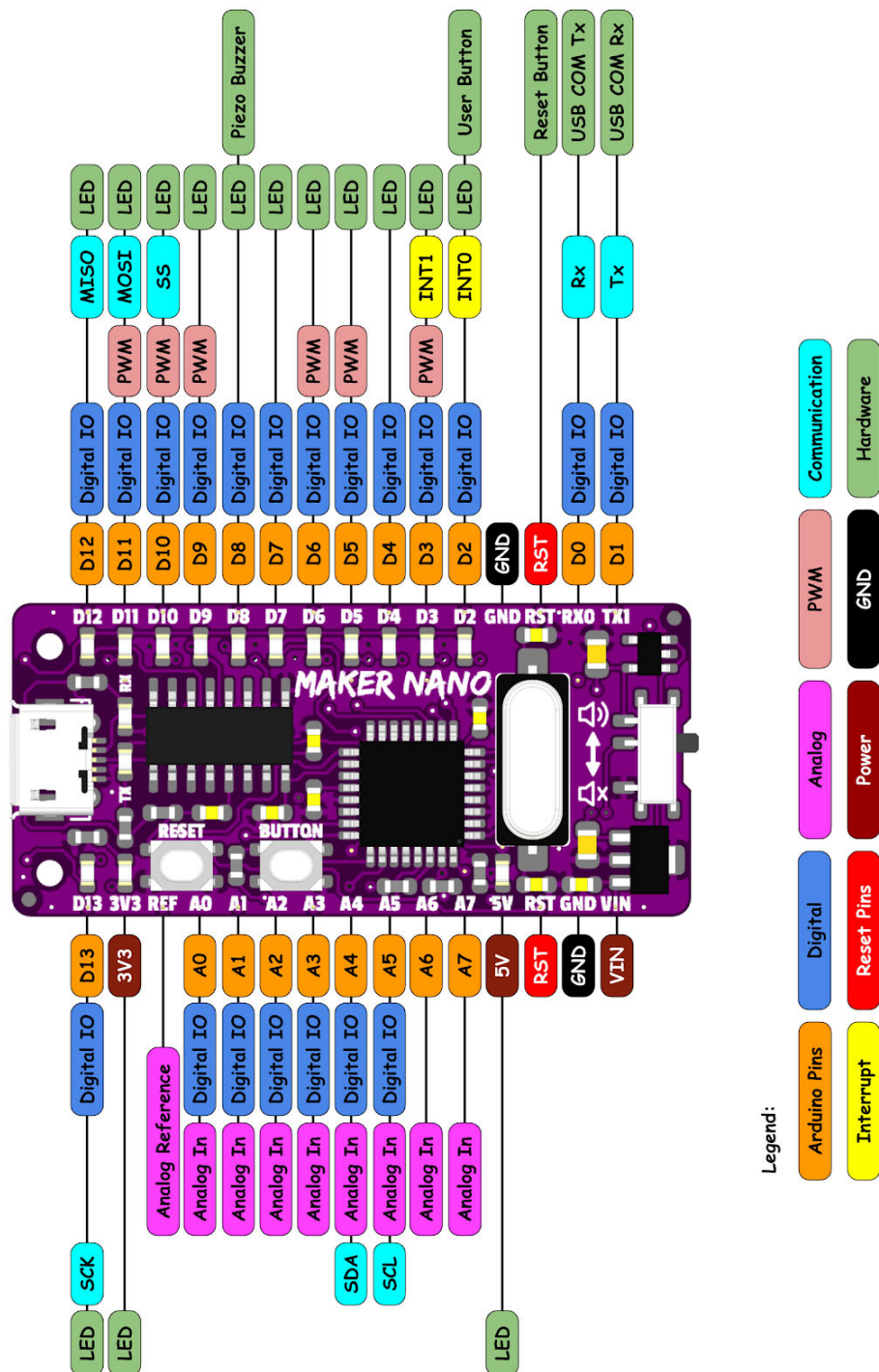


Figure 3: MAKER-NANO Pinout Diagram

## 4. SPECIFICATIONS

No	Parameters		Min	Max	Unit
1	Power Input Voltage (Vin)		7.0	30.0	VDC
2	Digital Input Voltage	Low Level	0	0.5	V
		High Level	1.7	5.0	V
3	Analog Input Voltage		0	5.0	V
4	DC +5V Maximum Current (Including Onboard Usage)		-	100	mA
5	DC +3V3 Maximum Current (Including Onboard Usage)		-	50	mA

Table 3: MAKER-NANO Absolute Maximum Ratings

## 5. DIMENSION

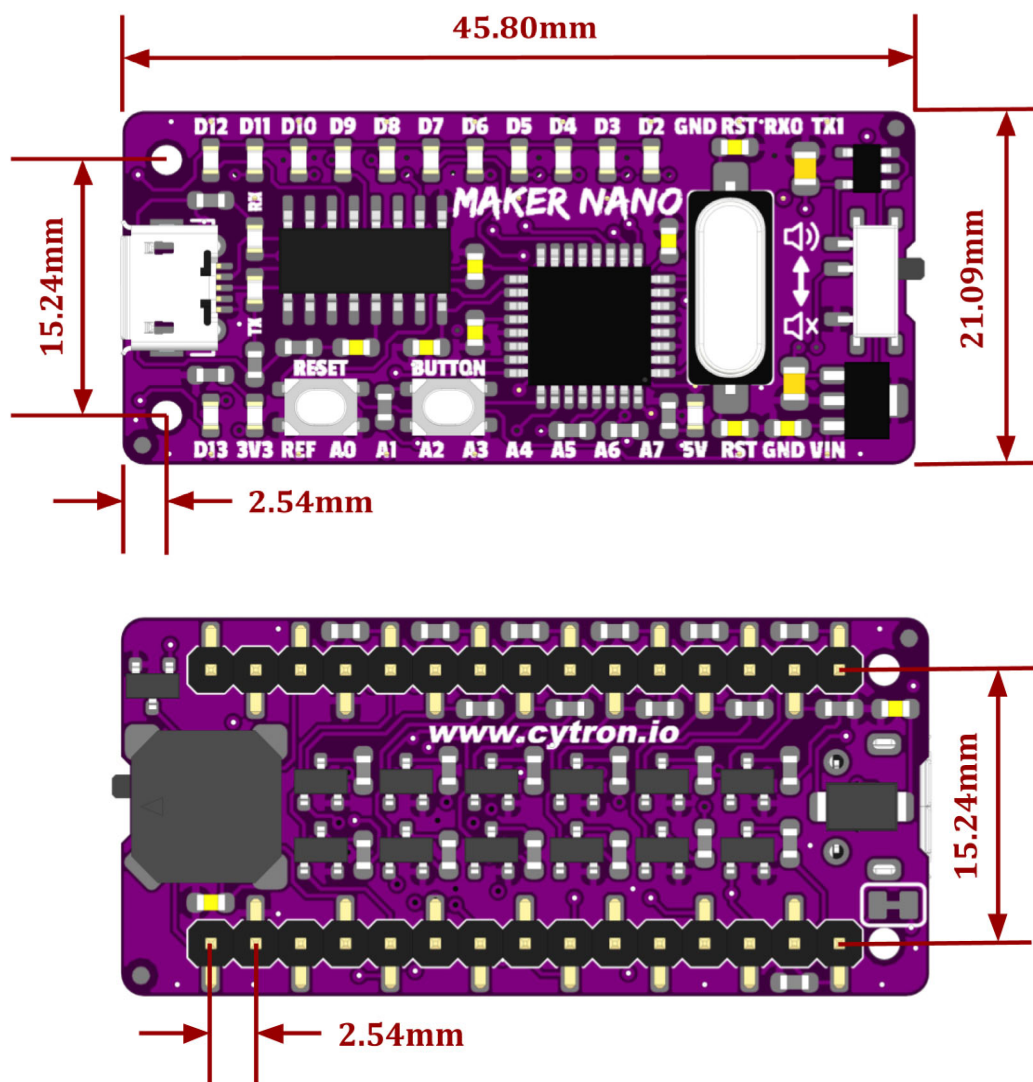


Figure 4: MAKER-NANO Dimension



*Prepared by:*

***Cytron Technologies Sdn Bhd***

[www.cytron.io](http://www.cytron.io)

No. 1, Lorong Industri Impian 1,  
Taman Industri Impian,  
14000 Bukit Mertajam,  
Penang, Malaysia.

*Tel:* +604 - 548 0668

*Fax:* +604 - 548 0669

*Email:*

[support@cytron.io](mailto:support@cytron.io)

[sales@cytron.io](mailto:sales@cytron.io)