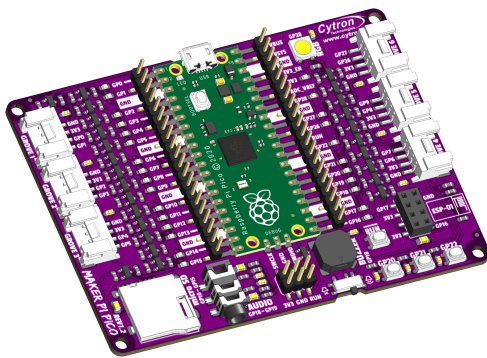


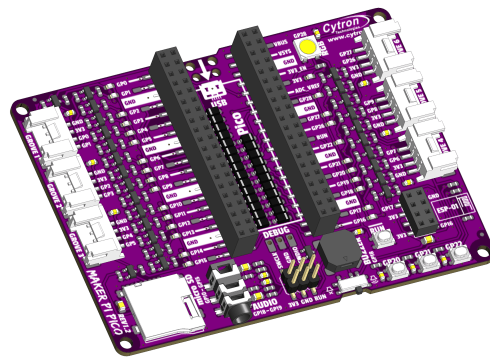


# **MAKER PI PICO**

## **Simplifying Raspberry Pi Pico for Beginner**



**MAKER-PI-PICO**



**MAKER-PI-PICO-NB**

## **Datasheet**

Rev 1.2  
March 2021

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# 1. BOARD LAYOUT & FUNCTION

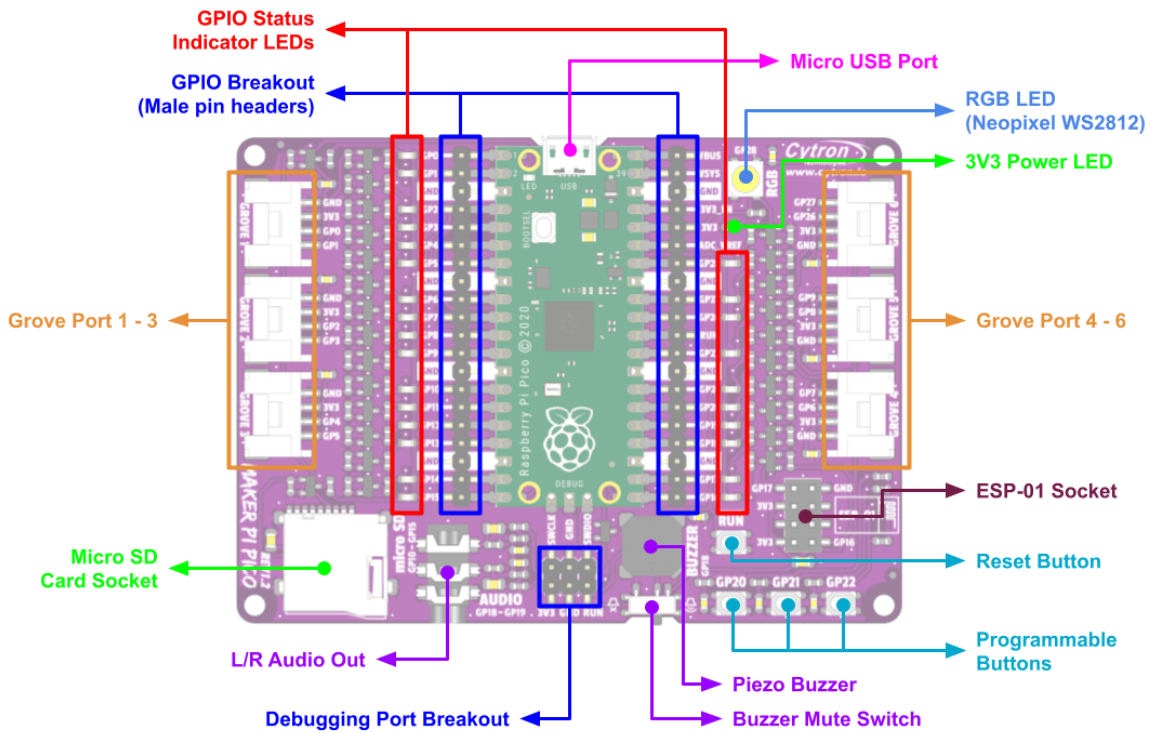


Figure 1: MAKER-PI-PICO Board Functions

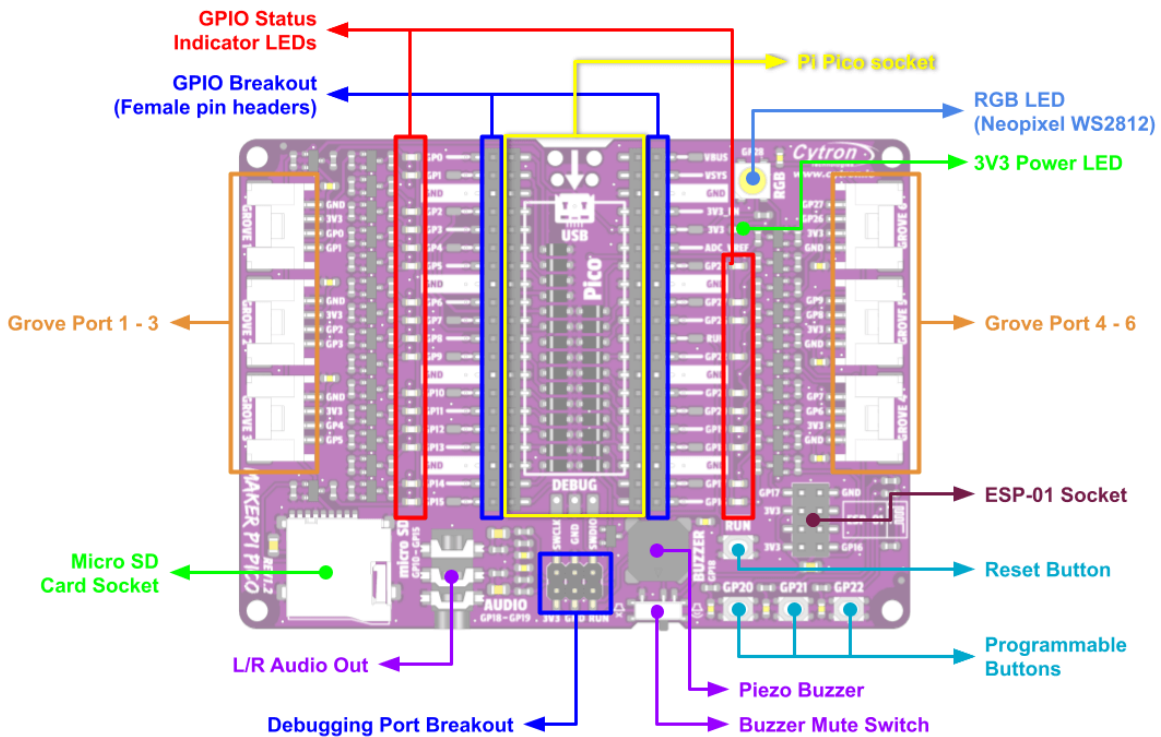


Figure 2: MAKER-PI-PICO-NB Board Functions

Function	Description																							
<b>Micro USB Port</b> *MAKER-PI-PICO only	Used to power up the Maker Pi Pico and upload programs from PC.																							
<b>3V3 Power LED</b>	LED indicator for 3V3. Turn on when powered up.																							
<b>GPIO LEDs</b>	LED indicator for Raspberry Pi Pico GPIO. Turn on when the GPIO state is high.																							
<b>WS2812B RGB LED</b>	User programmable WS2812B RGB LED. Connected to GP28.																							
<b>GPIO Breakout</b>	Breakout of the Raspberry Pi Pico GPIO pins. * MAKER-PI-PICO = Male Pin Headers * MAKER-PI-PICO-NB = Female Pin Headers																							
<b>Debugging Port Breakout</b>	Breakout of the Raspberry Pi Pico debugging port.																							
<b>Reset Button</b>	Press to reset the Raspberry Pi Pico.																							
<b>Programmable Buttons</b>	Connected to pin GP20, GP21 and GP22 respectively. Accessible from the user program. * Rev1.0.0 to 1.1.0 = To enable internal pull-up in software. * Rev1.2.0 = Pulled-up permanently on hardware with debouncing capacitor.																							
<b>Piezo Buzzer</b>	Can be used to play tone or melody. Connected to GP18.																							
<b>Buzzer Mute Switch</b>	Used to mute the piezo buzzer.																							
<b>Audio Out</b>	Non amplified audio output. Can be connected to an earphone or amplified speaker. <ul style="list-style-type: none"> <li>● Left Channel : GP18</li> <li>● Right Channel : GP19</li> </ul>																							
<b>ESP-01 Socket</b>	Socket for ESP-01 ESP8266 WiFi module. Can be used to IoT-enable your project.																							
<b>Micro SD Card Socket</b>	Socket for micro SD Card. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2" style="background-color: #c0c0c0;">Raspberry Pi Pico GPIO</th> <th colspan="2" style="background-color: #c0c0c0;">SD Card</th> </tr> <tr> <th style="background-color: #c0c0c0;">SD Mode</th> <th style="background-color: #c0c0c0;">SPI Mode</th> </tr> </thead> <tbody> <tr> <td>GP10</td> <td>CLK</td> <td>SCK</td> </tr> <tr> <td>GP11</td> <td>CMD</td> <td>SDI</td> </tr> <tr> <td>GP12</td> <td>DAT0</td> <td>SDO</td> </tr> <tr> <td>GP13</td> <td>DAT1</td> <td>X</td> </tr> <tr> <td>GP14</td> <td>DAT2</td> <td>X</td> </tr> <tr> <td>GP15</td> <td>CD/DAT3</td> <td>CSn</td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 5px;">* Unused pins must be configured as internal pull-ups.</p>	Raspberry Pi Pico GPIO	SD Card		SD Mode	SPI Mode	GP10	CLK	SCK	GP11	CMD	SDI	GP12	DAT0	SDO	GP13	DAT1	X	GP14	DAT2	X	GP15	CD/DAT3	CSn
Raspberry Pi Pico GPIO	SD Card																							
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GP11	CMD	SDI																						
GP12	DAT0	SDO																						
GP13	DAT1	X																						
GP14	DAT2	X																						
GP15	CD/DAT3	CSn																						
<b>Pi Pico Socket</b> *MAKER-PI-PICO-NB only	Socket for Raspberry Pi Pico. Can be used with <a href="#">Raspberry Pi Pico with Pre-soldered Headers</a> .																							

Table 1: MAKER-PI-PICO & MAKER-PI-PICO-NB Board Functions

## 2. RASPBERRY PI PICO PINOUT DIAGRAM

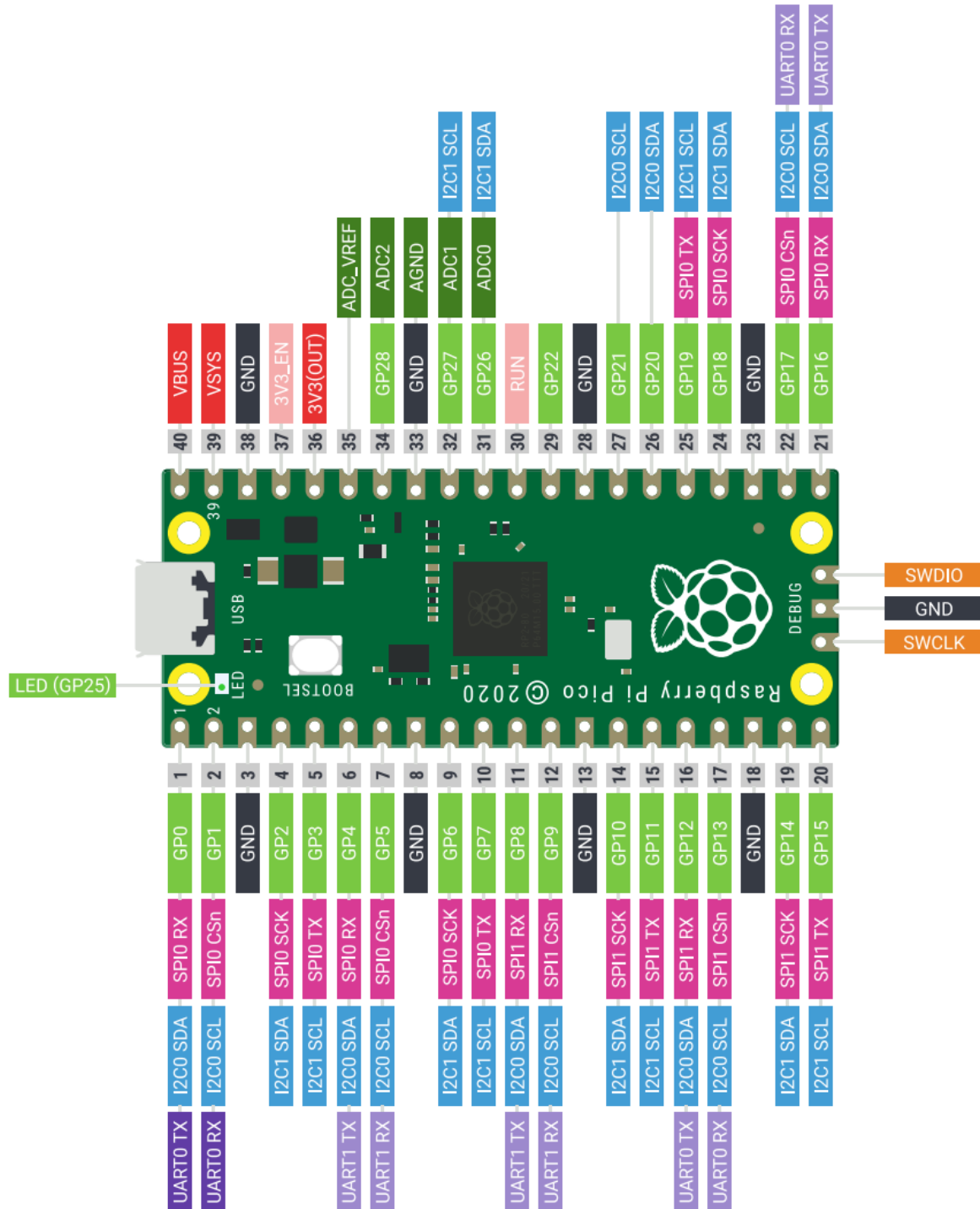


Figure 3: Raspberry Pi Pico Pinout Diagram

### 3. SPECIFICATIONS

No	Parameters	Min	Max	Unit	
1	Power Input Voltage (USB)	4.5	5.5	VDC	
2	Digital Input Voltage	Low Level	-0.3	0.8	V
		High Level	2.0	3.6	V
3	Digital Output Voltage	Low Level	0	0.5	V
		High Level	2.62	3.3	V
4	Analog Input Voltage	0	3.3	V	
5	Operating Temperature	-20	85	°C	

*Table 2: MAKER-PI-PICO Absolute Maximum Ratings*

## 4. DIMENSION

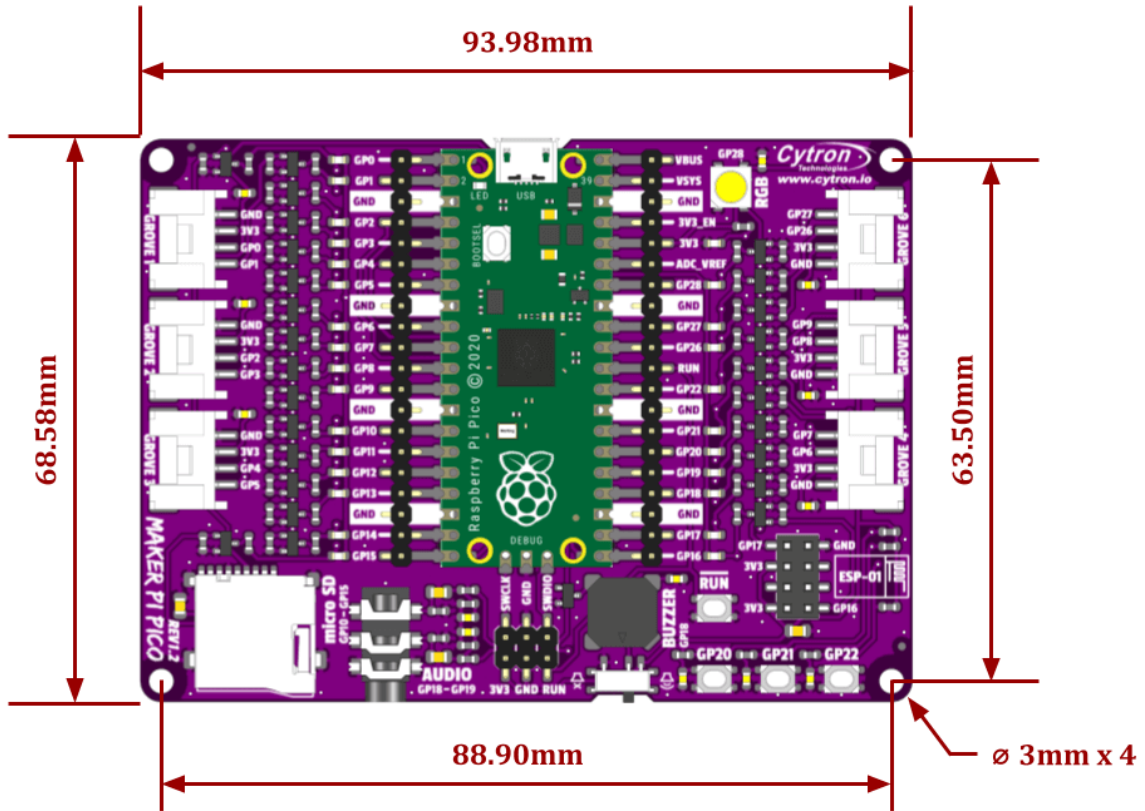


Figure 4: MAKER-PI-PICO Dimension

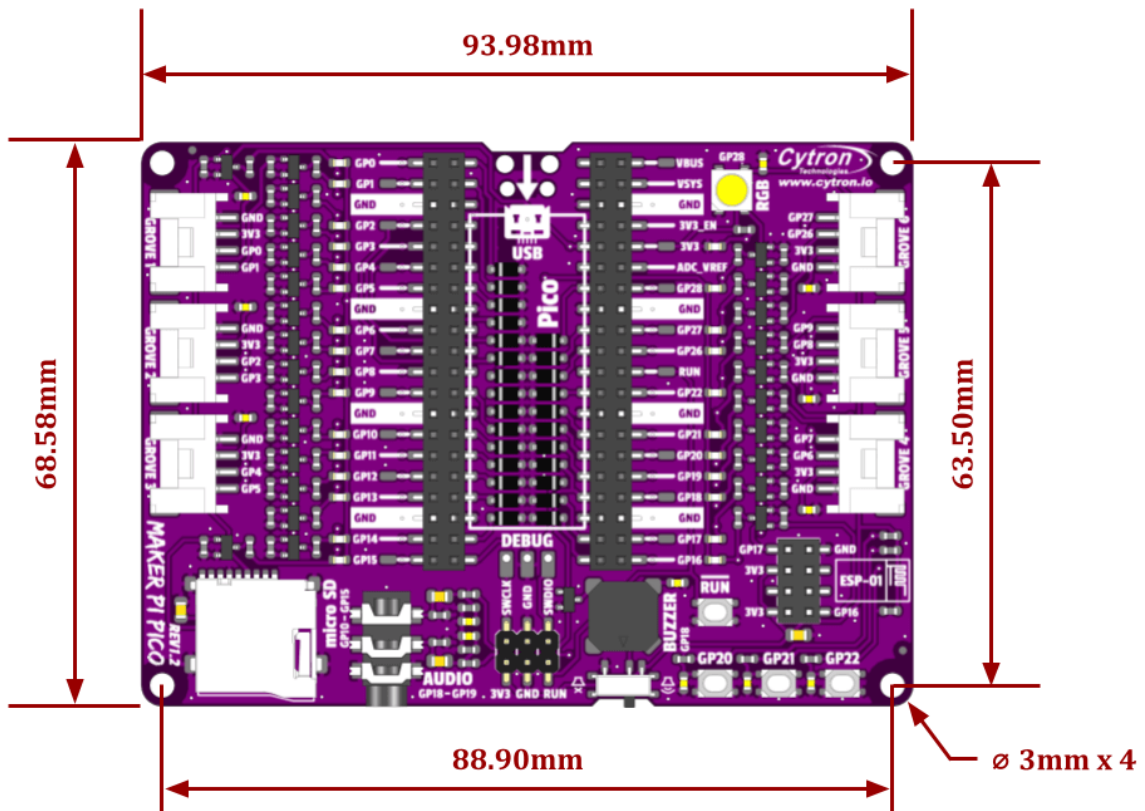


Figure 5: MAKER-PI-PICO Dimension

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