

gps-clock-r4  
Jed Margolin

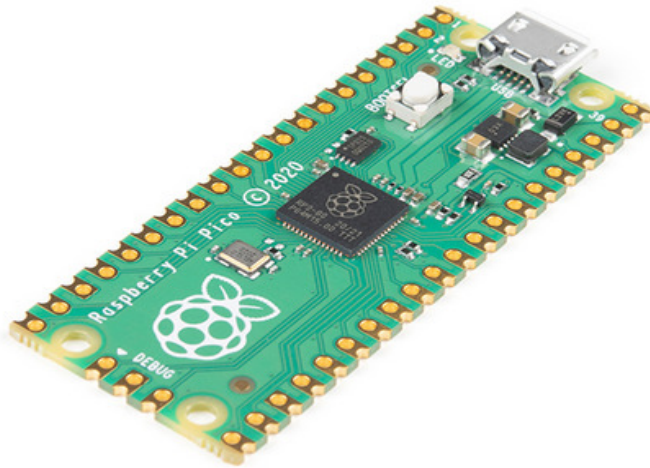
Raspberry Pi Pico Development Board  
12/6/2024

Bill of Material

RefDes	Value	Description	Lead Spacing	
C1	100uF	Capacitor, Electrolytic	0.1"	See Instructions
C2	0.1 uF	Capacitor, Monolythic Ceramic	0.1"	
C3	0.1 uF	Capacitor, Monolythic Ceramic	0.1"	
C4	10uF	Capacitor, Electrolytic	0.1"	
C5	1000pF	Capacitor, Monolythic Ceramic	0.1"	
C6	0.1 uF	Capacitor, Monolythic Ceramic	0.1"	
C7	10uF	Capacitor, Electrolytic	0.1"	
C8	0.1 uF	Capacitor, Monolythic Ceramic	0.1"	
C9	0.1 uF	Capacitor, Monolythic Ceramic	0.1"	
C10	4700pF	Capacitor, Mylar	0.1"	
C11	4700pF	Capacitor, Mylar	0.1"	
C12	10uF	Capacitor, Electrolytic	0.1"	
D1	1N5817	Schottky Diode	See Instructions	
D2	1N5817	Schottky Diode		
J1		Male Header 1x5, 0.1" spacing	HDR-1x5	Straight
J2		Male Header 1x6, 0.1" spacing	HDR-1x6	Right Angle
J3		See Instructions		
J4		Male Header 1x4, 0.1" spacing	HDR-1x4	Right Angle
LCD1		LCD1602 16 x 2 (Parallel Only)		
For the LCD				
(4) M3x10 Nylon Standoffs				
(4) M3 Washers, 1mm thick				
(8) M3 x 6 Screws				
Male Header, 1x16, 0,1" spacing (on the LCD)				
Female Header, 1x16, 0,1" spacing (on the PCB)				
LED1		LED, 5 mm, Green	LED	
LED2		LED, 5 mm, Green	LED	
LED3		LED, 5 mm, Red	LED	
PB1		Switch, Pushbutton, B3F-1070	6 x 6 x 4.3	
PB2		Switch, Pushbutton, B3F-1070	6 x 6 x 4.3	
PB3		Switch, Pushbutton, B3F-1070	6 x 6 x 4.3	
PB4		Switch, Pushbutton, B3F-1070	6 x 6 x 4.3	
R1	68K	Resistor, carbon film, 1/4W 5%		
R2	10K	TrimPot: 3362P (1-turn)		
R3	100	Resistor, carbon film, 1/4W 5%		
R4	1K	Resistor, carbon film, 1/4W 5%		
R5	4.7K	Resistor, carbon film, 1/4W 5%		
R6	47K	Resistor, carbon film, 1/4W 5%		
R7	10K 1%	Resistor, metal film, 1/4W 1%		
R8	10K 1%	Resistor, metal film, 1/4W 1%		
R9	10K	TrimPot: 3362P (1-turn)		

SW1	SPDT	The SPDT switch pins are on 0.1" centers.
SW2	SPDT	They are really inexpensive on eBay and AliExpress where they are called
SW3	SPDT	<b>"SS12D00G3 2 Position SPDT 1P2T 3 Pin PCB Panel Slide Switch"</b> .

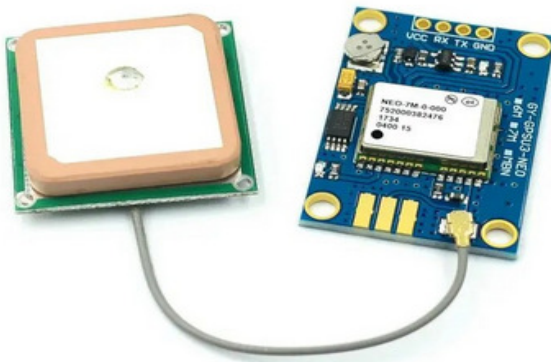
U1	Pico	Raspberry Pi Pico or Pico W	Pico
		(2) Male Header 1x20, 0.1" spacing, straight (on Pico)	
		(1) Male Header 1x3, 0.1" spacing, straight (debugger port, on Pico)	
		(2) Female Header 1x20, 0.1" spacing, straight (on PCB)	



Plain Pico  
Solder the headers yourself

U2	MCP6002	OpAmp, 8-pin DIP IC Socket with Machine Tooled Pins
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U3	NEO7M	GPS Module with antenna	Might not have the three pads next to the antenna connector.
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- (1) Male Header 1x4, 0.1" spacing, straight (on module)
- (1) Female Header 1x4, 0.1" spacing, straight (on PCB)
- (2) M3x10 Nylon Standoffs
- (2) M3 Washers, 1mm thick
- (4) M3 x 6 Screws

U4            7805        Voltage Regulator, TO-220, 5V    See Instructions

For the Board

(4) M3x18 Nylon Standoffs

(4) M3 x 6 Screws