Teensy 4.0 Breakout (Revision A, Standard)

Contact Info

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This is a breakout for the **Teensy 4.0** development board by **PJRC**. Included are all the pin headers you need to assemble it, a switch to select between USB or external power, a switch to select between USB host or device mode, machine screws and standoffs for mounting, a coin cell battery holder, a USB-A jack, and a sleep button. This breakout can also optionally be assembled with the **Teensy 4.0 Socket Kit** which is available separately. Scored carrier rails provide additional versatility and mounting options. The rails can optionally be removed for use with a breadboard.

Included Parts (visual part identification sheet attached)

	Qty.	Part Type	Pins	Rows	Tech.	Mfr.	Part Number / Desc.
A	1	Pre-assembled PCB	56	2 × 28	TH	Tall Dog	TD-T40B-A4
B	1	Flex Cable	8	1 × 8	SMD	Tall Dog	TD-T40F-A2
C	3	Male Pin Header	40	1 × 40	TH	*Generic*	*Standard*
D	1	Male Pin Header	10	2 × 5	SMD	*Generic*	*Standard*
E	1	Male Pin Header	4	2 × 2	TH	*Generic*	*Standard*
F	2	Slide Switch	3	1 × 3	TH	*Generic*	SS12D00G3
G	2	Jumper / Shunt	2	1 × 2	*N/A*	*Generic*	*Standard*
H	4	Machine Screw	*N/A*	*N/A*	*N/A*	*Generic*	M2 × 4 mm
I	4	Female Standoff	*N/A*	*N/A*	*N/A*	*Generic*	M2 × 6 mm
J	1	USB-A Jack	4	1 × 4	TH	*Generic*	*Standard*
K	1	Battery Holder	2	1 × 2	SMD	*Generic*	⌀ 12 mm
L	1	Coin Cell Battery	*N/A*	*N/A*	*N/A*	*Generic*	CR1220
M	9	4.7 kΩ Resistor	2	1 × 2	SMD	*Generic*	0805

Pre-assembled Parts (these are already soldered to the board)

Ref.	Qty.	Part Type	Pins	Rows	Tech.	Mfr.	Part Number / Desc.
N/A	1	FPC Connector	8	1 × 8	SMD	*Generic*	1.0 mm Pitch
N/A	1	Micro SD Socket	8	1 × 8	SMD	Molex	1051620001
N/A	1	Tactile Button	2	1 × 2	SMD	*Generic*	4 × 3 mm
R1*	1	120 Ω Resistor	2	1 × 2	SMD	*Generic*	0805
C1 C5	2	100 μF Capacitor	2	1 × 2	SMD	*Generic*	1206
C2* C3*	2	0.1 μF Capacitor	2	1 × 2	SMD	*Generic*	0805
C4	1	2.2 μF Capacitor	2	1 × 2	SMD	*Generic*	0805
U1*	1	CAN Bus Transceiver	8	2 × 4	SMD	Microchip	MCP2558FD
U2	1	Current Limit Switch	8	2 × 4	SMD	Texas Instruments	TPS2055A

*These 4 components are only populated on the **CAN Bus** version of the board.

Variants

Unlike previous Teensy breakouts, this board comes partially pre-soldered with a number of surface-mount components to make assembly easier. There are two pre-assembled variants: one which includes a CAN Bus transceiver (Microchip MCP2558FD) and its supporting passives, and one which leaves these components depopulated, for those who don't require CAN Bus support and want to use the associated pins for other purposes. If you're not sure, choose the one without the CAN Bus parts.

Detailed Specs (not including carrier rails)

- **Grid Spacing** — 0.1″ / 2.54 mm
- **Board Dimensions** — 2.8″ × 1.0″ / 71.12 mm × 25.4 mm
- **Board Surface Area** — 2.8 in² / 18.06 cm²
- **Board Thickness** — 0.063″ / 1.6 mm
- **Number of Breakout Pins** — 56 pins (2 rows × 28 pins)
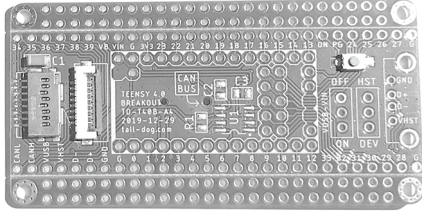- **Row Spacing** — 0.9″ / 22.86 mm

Recommended Tools

- Soldering iron
- Solder and flux
- Breadboard
- Diagonal cutters
- Blue tape
- Razor blade
- PCB holder

Assembly Instructions

Please visit this website for step-by-step assembly instructions:

`https://talldog.dozuki.com`

A	B

C	D	E

F	G	H	I

J	K	L	M

2.8" / 71.12 mm

2.6" / 66.04 mm

Thickness: 0.063" / 1.6 mm

1.0" / 25.4 mm

1.2" / 30.48 mm

1.4" / 35.56 mm

Ø 0.095" / 2.41 mm
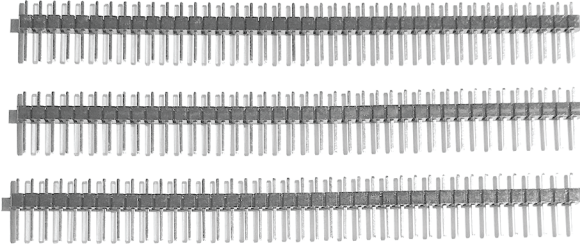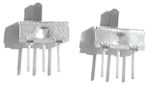
R 0.1" / 2.54 mm

Teensy 4.0 Breakout (Revision A, Standard) **Dimensional Drawing for PCB REV-A4**

Teensy 4.0 Breakout Standard Edition

Revision A4

Micro USB Port
USB Host Port

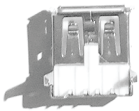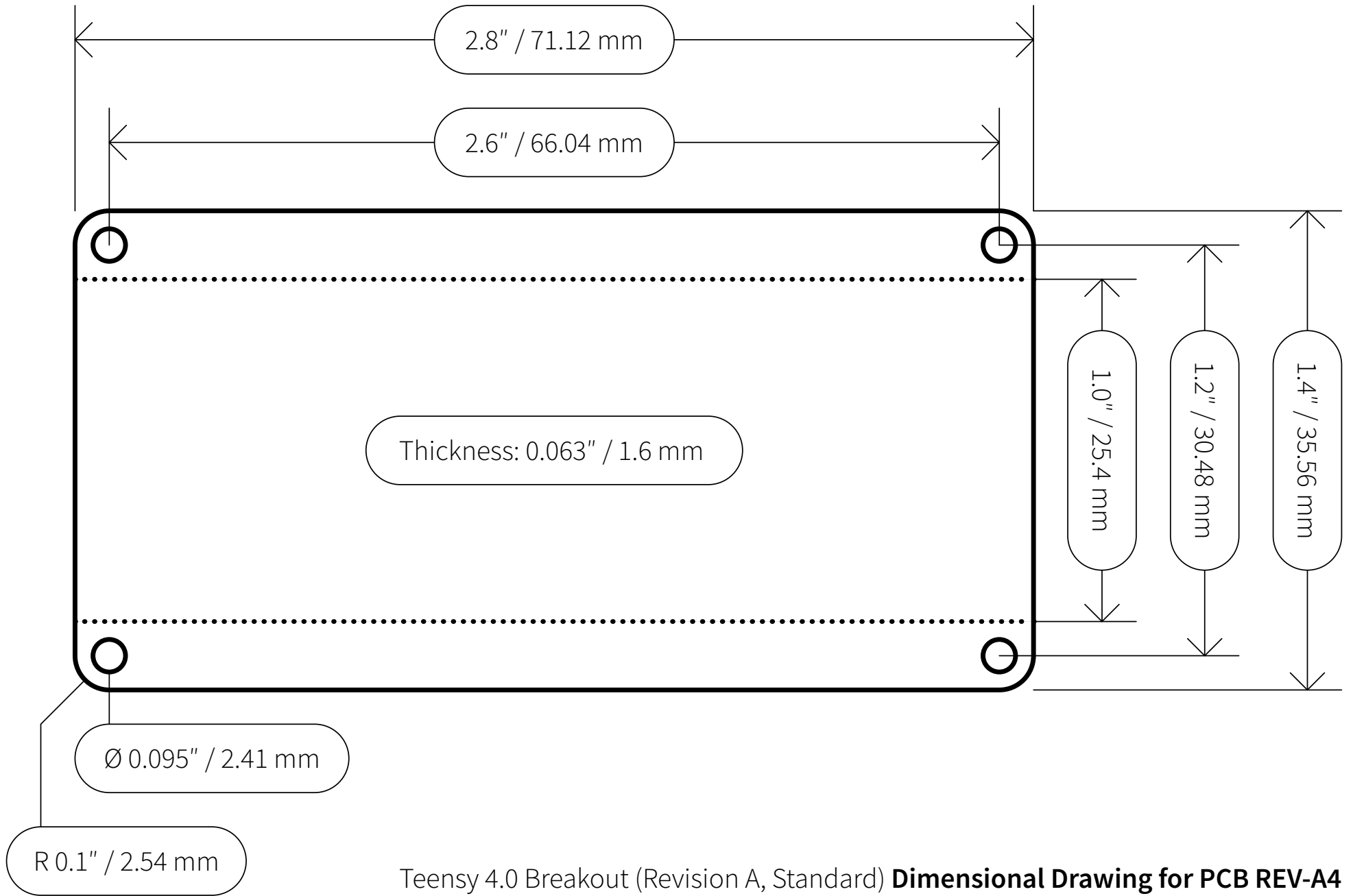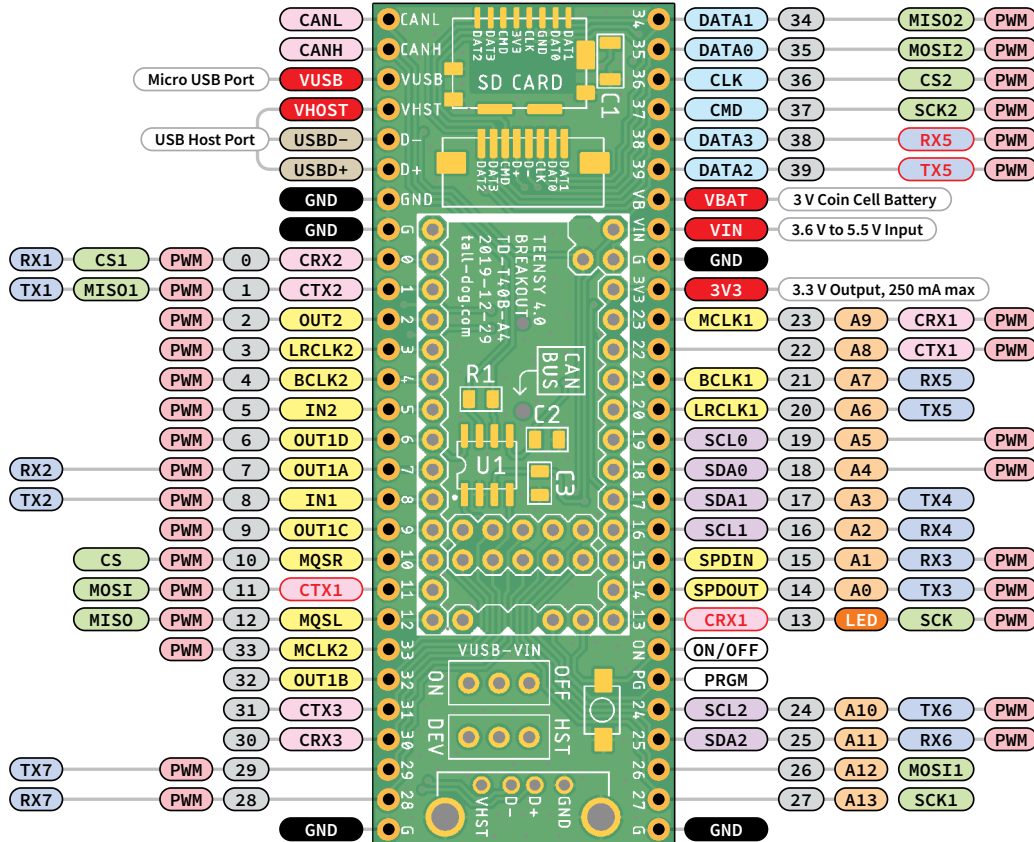| Left pins				Center	Right			
		CANL	CANL	34	DATA1	34	MISO2	PWM
		CANH	CANH	35	DATA0	35	MOSI2	PWM
		VUSB	VUSB	36	CLK	36	CS2	PWM
		VHOST	VHST	37	CMD	37	SCK2	PWM
		USBD−	D−	38	DATA3	38	RX5	PWM
		USBD+	D+	39	DATA2	39	TX5	PWM
		GND	GND	VB	VBAT		3 V Coin Cell Battery	
		GND		VIN	VIN		3.6 V to 5.5 V Input	
					GND			
				3V3	3V3		3.3 V Output, 250 mA max	
RX1	CS1	PWM	0	CRX2	MCLK1	23	A9	CRX1	PWM
TX1	MISO1	PWM	1	CTX2		22	A8	CTX1	PWM
		PWM	2	OUT2	BCLK1	21	A7	RX5
		PWM	3	LRCLK2	LRCLK1	20	A6	TX5
		PWM	4	BCLK2	SCL0	19	A5	PWM
		PWM	5	IN2	SDA0	18	A4	PWM
		PWM	6	OUT1D	SDA1	17	A3	TX4
RX2		PWM	7	OUT1A	SCL1	16	A2	RX4
TX2		PWM	8	IN1	SPDIN	15	A1	RX3	PWM
		PWM	9	OUT1C	SPDOUT	14	A0	TX3	PWM
	CS	PWM	10	MQSR	CRX1	13	LED	SCK	PWM
MOSI		PWM	11	CTX1	ON/OFF			
MISO		PWM	12	MQSL	PRGM			
		PWM	33	MCLK2	SCL2	24	A10	TX6	PWM
			32	OUT1B	SDA2	25	A11	RX6	PWM
			31	CTX3		26	A12	MOSI1
			30	CRX3		27	A13	SCK1
TX7		PWM	29					
RX7		PWM	28					
			GND		GND			

SD CARD

CAN BUS

TEENSY 4.0 BREAKOUT
TD-T40B-A4
2019-12-29
tall-dog.com

VUSB−VIN
ON DEV
OFF HST
VHST D− D+ GND

Legend

Voltage Pins	
Ground Pins	
Digital Pins	40
Analog Pins	14
PWM Pins	31
Audio Ports	3
Serial Ports	7
I2C Ports	3
SPI Ports	3
CAN Bus Ports	3
SD Card Port	1
USB Host Port	1
Alternate Functions	