

# TOUCH BOARD | AND SHIELDS

## IS IT COMPATIBLE?



**YES**

**YES —**  
with modifications

FULLY FUNCTIONAL

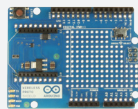
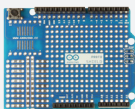
PARTIALLY FUNCTIONAL with no mods

FUNCTIONAL with MODIFICATIONS to Touch Board

FUNCTIONAL with MODIFICATIONS to Shield

FUNCTIONAL with MODIFICATIONS to Touch Board and to Shield

	FULLY FUNCTIONAL	PARTIALLY FUNCTIONAL with no mods	FUNCTIONAL with MODIFICATIONS to Touch Board	FUNCTIONAL with MODIFICATIONS to Shield	FUNCTIONAL with MODIFICATIONS to Touch Board and to Shield
<b>ARDUINO</b>					
Proto Shield	Yes	No	No	No	No
Wireless Proto Shield	Yes	No	No	No	No
Motor Shield	No	Yes	No	No	Yes
<b>adafruit</b>					
NeoPixel Shield	No	No	No	No	No
16-Channel 12-bit PWM/ Servo Shield	No	No	No	No	No
Bluefruit EZ-Link Shield	No	No	No	No	No
<b>sparkfun</b>					
Ardumoto	No	Yes	No	No	Yes



### Arduino Proto Shield

The Arduino ProtoShield makes it easy for you to design custom circuits and extend the capabilities of your Touch Board. As it has no inherent functionality it does not conflict with the Touch Boards core functions.

#### Why this shield is great

You can solder parts, like a potentiometer, to the prototyping area to create a volume knob for example, or add a small solderless breadboard on top to quickly test circuit ideas without having to solder.

#### Pins and mods

There are no pin maps or modifications necessary for this shield to function, however check out the Touch Board Pin Functions guide to help you navigate and add in your custom design.

### Arduino Wireless Proto Shield

The Wireless Proto Shield allows your Touch Board to communicate wirelessly using a wireless module. It is based on the Xbee modules from Digi, but can use any module with the same footprint.

#### Why this shield is great

This is a great shield to send and receive touch data from a remote, untethered location. We used this shield to make a wireless doorbell, but could also be great for interactive artworks or installations that are hard to reach with cables.

#### Pins and mods

The Xbee wireless module that fits on top of the Wireless Proto Shield only uses D0(RX) and D1(TX) to communicate with the Touch Board. These two pins are already free to use on the Touch Board and this does not require any modifications.

### Arduino Motor Shield

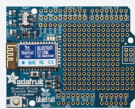
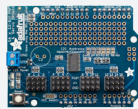
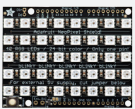
This shield has two separate motor channels that can each drive or sense a motor. It is based on the L298, a dual full-bridge driver designed to drive inductive loads such as relays, solenoids, DC and stepping motors. It is also Tinker Kit compatible.

#### Why this shield is great

This is a great shield and is fairly easy to modify to work with the Touch Board. This is a key shield if you want to change a touch event into a physical movement. If you are just driving the motors without a brake you may not need to do any mods.

#### Pins and mods

Motor B requires you to remove the solder bridge at D8 on the Touch Board, disabling the MP3 function. To use Motor A you need to remap D3 to D10 on the Motor Shield. Removing all the solder bridges on the Touch Board also allows you to connect Tinker Kit output modules to the shield that use D5 and D6.



### Adafruit Neopixel Shield

The NeoPixel shield hosts 40 configurable RGB LEDs. The pixels are arranged in a 5x8 matrix and are all individually addressable. Only one pin (D6) is required to control all the LEDs. You can cut a trace and use nearly any other pin if you need some customization.

#### Why this shield is great

This is an amazing shield that we often use in demos at trade fairs. We set it up to map raw capacitance data on a painted sensor connected to a touch electrode to the LEDs to create a visual display of proximity.

#### Pins and mods

This shield requires a very quick and simple modification using a soldering iron. Simply remove the solder bridge on pin 6 or remap it to another pin, like D13. The latter option saves the MP3 functionality on the Touch Board.

### Adafruit 16-Channel 12-bit PWM/ Servo Shield

This shield uses only two I2C pins to control 16 free-running PWM outputs. You can even stack multiple shields on top of each other to control more.

#### Why this shield is great

This shield is a great way to get multiple things moving and responding to touch. It is fully compatible with the Touch Board, although you may need to use an external power source for your motors. Definitely a good design for interaction artists and designers.

#### Pins and mods

There are no pin maps or modifications necessary for this shield to function. You will need to use external power for the motors. The Touch Board's capacitive sensor (MPR121) has it's I2C address set to 5C, so keep this in mind when altering the shield's default address.

### Adafruit Bluefruit EZ-Link Shield

This Bluetooth shield is a regular 'SPP' serial link client device and can pair with any computer or tablet and appear as a serial/COM port (except iOS). The EZ-Link can automatically detect and change the serial baud rate and the DTR/RTS/DSR flow control pins are automatically synced to the computer serial port.

#### Why this shield is great

The Bluefruit EZ-Link shield is the easiest way to get Bluetooth connectivity to your Touch Board. If you have any ideas for interesting interfaces that connect to other Bluetooth compatible gadgets without cables, this is your shield.

#### Pins and mods

This shield works without any mods as it takes commands from D0 and D1 pins which are free for use on the Touch Board. There is also a nice prototyping area, so check the Pin Function guide if you want to add some extras on top.

### Sparkfun Ardumoto

Similar to Arduino Motor Shield this shield has two motor channels. You can control the speed and direction of your motors and it works with motor A without any mod's.

#### Why this shield is great

Get motor channel A driving a motor in minutes with this shield. It is the simplest way to transform a touch event into a physical movement.

#### Pins and mods

To get both motor channels running you will need to re-map pin D3 (PWMA) to another PWM pin like pin D10.