

# Digilent Pmod Button Header Module Board

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## Overview

The Pushbutton PMOD provides four normally-low pushbutton inputs that are debounced with an RC filter and Schmidt trigger. It provides a quick and easy way to add pushbuttons to any circuit.

Features include:

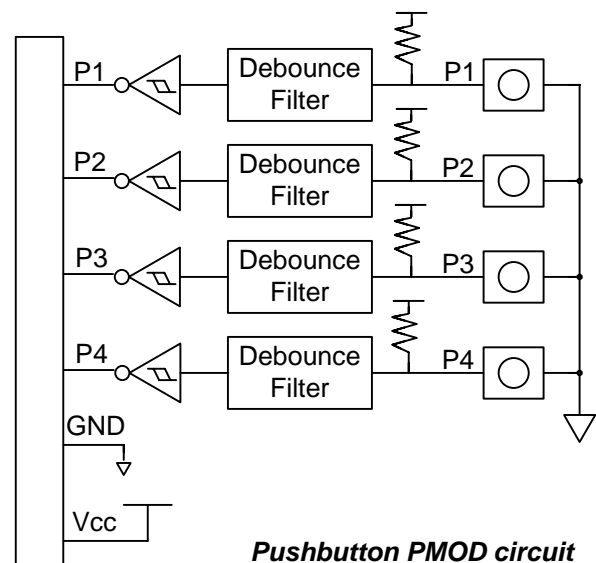
- four momentary pushbutton switches
- eight protection diodes
- four Schmitt-trigger inverters
- four debouncing filters
- a 6-pin header connector
- small form factor (1.30" x 0.80")

## Functional Description

The Digilent Pushbutton PMOD allows four momentary pushbuttons to be added to any system board using a 6-pin header connector. All button inputs are debounced to eliminate multiple signal transitions caused by the buttons electrical making and breaking contact several times ("bouncing") before settling into position.

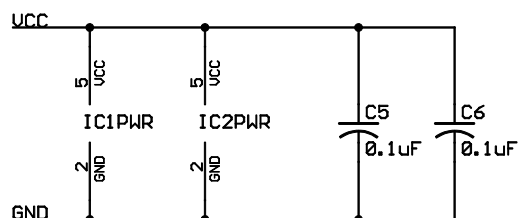
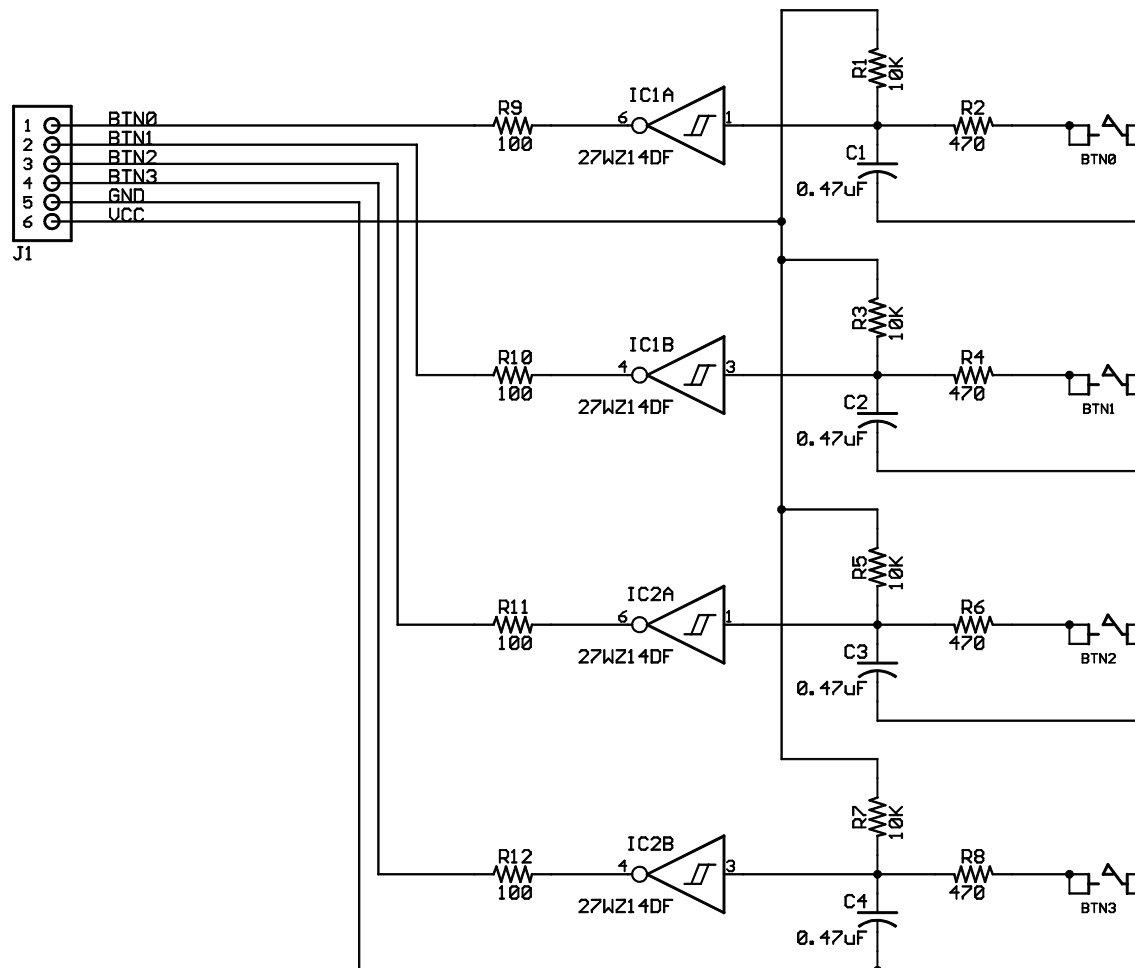
Each of the button module's four pushbutton switch signals has an analog filter consisting of two resistors and a capacitor. The filters absorb and diffuse large signal bounces, presenting smoother, constantly changing signals to the Schmitt-trigger inverters. The Schmidt triggers ensure that a single, sharp signal transition results from each button press. The pushbutton switches can be used individually or any of them can be used simultaneously.

The button module has ESD protection diodes to prevent damage to downstream circuits from inadvertent ESD discharges. Each button signal also has a series resistor to prevent electrical shorts or conflicts when connected to other boards.



The button module has a 6-pin header for easy connection to a Digilent system board. Some system boards, like the Digilent Pegasus board, have a 6-pin header that can connect to the button module with a 6-pin cable. To connect the button module to other Digilent system boards, a Digilent Modular Interface Board (MIB) and a 6-pin cable may be needed. The MIB plugs into the system board, and the cable connects the MIB to the button module.

For more information, see [www.digilentinc.com](http://www.digilentinc.com)



# Digilent Button Header Module

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