

## PmodIEXP™ Reference Manual

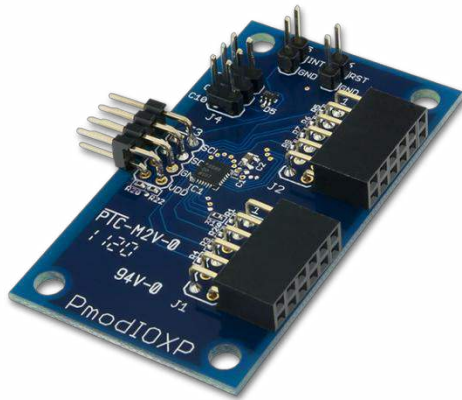
Revised May 23, 2013

This manual applies to the PmodIEXP rev. A

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### Overview

The Digilent PmodIEXP is an Input/Output Expansion module capable of providing up to 19 additional IO pins.



*The PmodIEXP.*

Features include:

- Communicates via the I<sup>2</sup>C interface
- 16-element FIFO for event recording
- 19 configurable I/Os
- Built-in keypad decoding for matrices up to 11×8
- PWM generator
- Open-drain interrupt output
- Two programmable logic blocks
- Debouncing on I/Os

## 1 Functional Description

The PmodIEXP utilizes Analog Devices' ADP5589. Through the use of I<sup>2</sup>C, users may expand from the two I/O pins required to nearly 10 times the amount of available I/O.

## 2 Interfacing with the Pmod

The PmodIEXP communicates with the host board via the I<sup>2</sup>C protocol. By sending out the 7-bit slave address of 0110100 and a read or write bit (1/0), users may then read or write to a specific register to configure the Pmod to enable interrupts or read the status of GPIO pins.

## 2.1 Pinout Description Table

Pin	Signal	Description
1 & 5	SCL	Serial Clock
2 & 6	SDA	Serial Data
3 & 7	GND	Power Supply Ground
4 & 8	VCC	Power Supply (3.3V/5V)

Any external power applied to the PmodIEXP must be within 1.65V and 3.6V; it is recommended that Pmod is operated at 3.3V.

## 3 Physical Dimensions

The pins on the pin header are spaced 100 mil apart. The PCB is 1.3 inches long on the sides parallel to the pins on the pin header and 2.3 inches long on the sides perpendicular to the pin header.