PmodBB™ Reference Manual

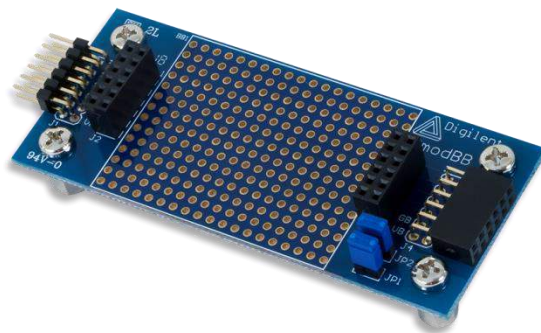**Revised May 24, 2016**
This manual applies to the PmodBB rev. A

Overview

The Digilent PmodBB is handy prototyping platform that can plug directly into a Pmod header on your system board. It has a 14×19 wire wrap surface as well as a 170 tie point solderless breadboard that can be snugly placed on top of the perfboard.

The PmodBB.

Features include:

- 266 tie point wire wrap area
- 170 tie point solderless breadboard
- Jumper blocks to tie the power pins together
- Additional Pmod host port
- Small PCB size for flexible designs 3.5" × 1.5" (8.9 cm × 3.8 cm)
- 12-pin connector, all signals pass through

1 Functional Description

The PmodBB is able to act as an intermediary module between the system board and external circuitry. This is useful if you need a small area to add a filter to process the incoming signals or a visual indicator showing the status or strength of the signals.

2 Interfacing with the Pmod

The PmodBB is connected to the system board so that all of pins are pass through. Any specific protocol would be dependent on the circuitry placed on the module. The two jumper blocks, JP1 and JP2, tie the positive power and ground lines of both ends of the module together, respectively. Headers J2 and J3 are directly tied to the Pmod headers J1 and J4, respectively, for easy prototyping access.

The first and last column of 14 holes on the wire wrap surface each have two sets of seven holes to create mini-buses for the the positive power supply and ground power supply of both ends of the PmodBB.

A pinout table of the headers on the PmodBB is provided below:

Headers J1 and J2		
Pin	Signal	Description
1	P1	Pin 1
2	P2	Pin 2
3	P3	Pin 3
4	P4	Pin 4
5	GA	Power Supply Ground
6	VA	Power Supply (3.3V/5V)
7	P7	Pin 7
8	P8	Pin 8
9	P9	Pin 9
10	P10	Pin 10
11	GA	Power Supply Ground
12	VA	Power Supply (3.3V/5V)

Headers J3 and J4		
Pin	Signal	Description
1	P1	Pin 1
2	P2	Pin 2
3	P3	Pin 3
4	P4	Pin 4
5	GB	Power Supply Ground
6	VB	Power Supply (3.3V/5V)
7	P7	Pin 7
8	P8	Pin 8
9	P9	Pin 9
10	P10	Pin 10
5	GB	Power Supply Ground
6	VB	Power Supply (3.3V/5V)

Jumper JP1	
State	Description
Loaded	VA and VB are tied together
Jumper JP2	
State	Description
Loaded	GA and GB are tied together

Table 1. Connector J1: Pin descriptions as labeled on the Pmod.

Any external power applied to the PmodBB must be safe operating limits of the any on-board or external circuitry attached to it. Typically, this means that PmodBB must be operated at 3.3V or 5V.

3 Physical Dimensions

The pins on the pin header are spaced 100 mil apart. The PCB is 3.5 inches long on the sides parallel to the pins on the pin header and 1.5 inches long on the sides perpendicular to the pin header.