Digilent Vmod Breadboard Reference Manual

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Overview

The Digilent Vmod Breadboard (VmodBB) offers a ready-made solution for prototyping breadboarded or wire-wrapped circuits as accessories to Digilent system boards. The VmodBB provides connectors suitable for direct connection of various Digilent system boards.

The VmodBB is available in a wire-wrap version or a solderless breadboard version.

Features include:

- VHDCI connector for connection to Digilent System boards
- Two 32 pin breadboards with 16 pins each, connected directly to signals from the system board
- Two power and one ground bus around
- Prototype connections on every signal
- Ships with two 300 tie point breadboards separated by a 100 tie point bus strip.

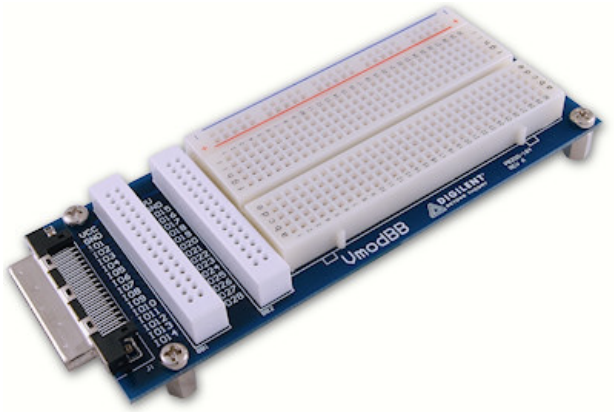

Figure 1
Digilent Vmod Breadboard

Functional Description

The Digilent Vmod Breadboard (VmodBB) is used to connect a breadboard to the VHDCI connector and implement up to 28 IO signals to or from Digilent system boards.

Power Connection

The VmodBB provides two power busses and a ground bus. The two power busses are labeled VU and VCC and are powered through the VHDCI connector. These two busses are made available at each connector position on the board. There is also a ground plane that connects the ground pins from all connectors together.

The usual Digilent convention is to power the VCC bus at 3.3V and the VU bus at 5.0V. However depending on the system board connected, other voltages may be present.

68 Pin, VHDCI Connector

VHDCI connector J1 is provided on one side of the board for connection to Digilent system boards like the Genesys that contain a VHDCI style connector. The Digilent VHDCI connector signal convention provides for 40 general-purpose I/O signals.

28 of the 40 general-purpose I/O signals from the VHDCI connector are brought out to connectors BB1 and BB2. These signals are labeled IO1-IO28. See Table 1 and Table 2 for a description of the relationship between VHDCI connector pins and signal names on BB1 and BB2.

Table 1: VHDCI Signals and Connector Pinout

J1			
1	IO1	35	IO15
2	GND	36	GND
3	IO2	37	IO16
4	IO3	38	IO17
5	GND	39	GND
6	IO4	40	IO18
7	IO5	41	IO19
8	GND	42	GND
9	IO6	43	IO20
10	IO7	44	IO21
11	GND	45	GND
12	IO8	46	IO22
13	IO9	47	IO23
14	GND	48	GND
15	IO10	49	IO24
16	VCC	50	VCC
17	VU	51	VU
18	VU	52	VU
19	VCC	53	VCC
20	IO11	54	IO25
21	GND	55	GND
22	IO12	56	IO26
23	IO13	57	IO27
24	GND	58	GND
25	IO14	59	IO28
26	IO29-	60	IO35-
27	GND	61	GND
28	IO30-	62	IO36-
29	IO31-	63	IO37-
30	GND	64	GND
31	IO32-	65	IO38-
32	IO33-	66	IO39-
33	GND	67	GND
34	IO34-	68	IO40-
S1	SHIELD	S2	SHIELD

Note: Signal names appended with '-' are not used

Table 2: BB1 and BB2 Signals

BB1		BB2	
1	VCC	1	VU
2	GND	2	GND
3	IO1	3	IO15
4	IO2	4	IO16
5	IO3	5	IO17
6	IO4	6	IO18
7	IO5	7	IO19
8	IO6	8	IO20
9	IO7	9	IO21
10	IO8	10	IO22
11	IO9	11	IO23
12	IO10	12	IO24
13	IO11	13	IO25
14	IO12	14	IO26
15	IO13	15	IO27
16	IO14	16	IO28