PmodKYPD™ Reference Manual

Overview

The PmodKYPD is an array of buttons used for input.

Features include:

- 16 labelled keys (0-F)
- 12-pin header

Functional Description

The PmodKYPD uses a standard 12-pin Pmod header that indicates which row and which column has been pressed in the array of buttons.

Connector J1 – Column/Row Indicators		
Pin	**Signal**	**Description**
1	COL4	Column 4
2	COL3	Column 3
3	COL2	Column 2
4	COL1	Column 1
5	GND	Power Supply Ground
6	VCC	Power Supply (3.3V)
7	ROW4	Row 4
8	ROW3	Row 3
9	ROW2	Row 2
10	ROW1	Row 1
11	GND	Power Supply Ground
12	VCC	Power Supply (3.3V)

Device Usage

The PmodKYPD is set up as a matrix in which each row of buttons from left to right are tied to a row pin, and each column from top to bottom is tied to a column pin. This gives the user four row pins and four column pins to address the button push.

To read a button's state, the column pin in which the button resides must be pulled low. This enables all of the buttons in that column.

When a button in that column is pushed, the corresponding row pin will read logic low.

All of the buttons can be read by walking a logic 0 through each column pin (keeping the other pins at logic high) and reading the row pins. This will read the state of each button.