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Internal Tools

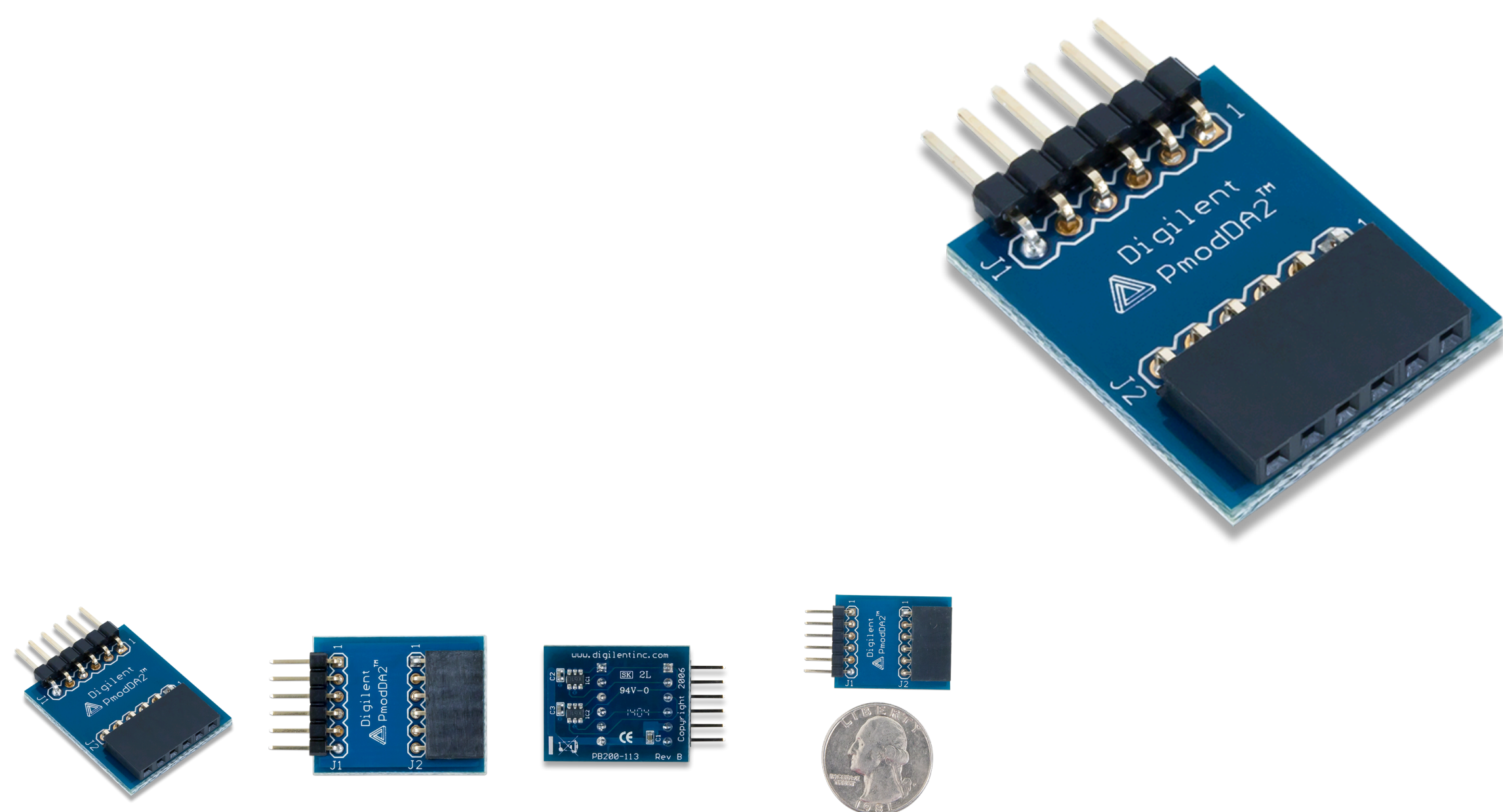
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Pmod DA2 Reference Manual

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The Digilent Pmod DA2 is a 2 channel 12-bit Digital-to-Analog Converter module capable of outputting data up to 16.5 MSa.



Additional Important Documentation:

-  [EMC Disclaimer, Digilent Development and Evaluation Kits](#)

Features

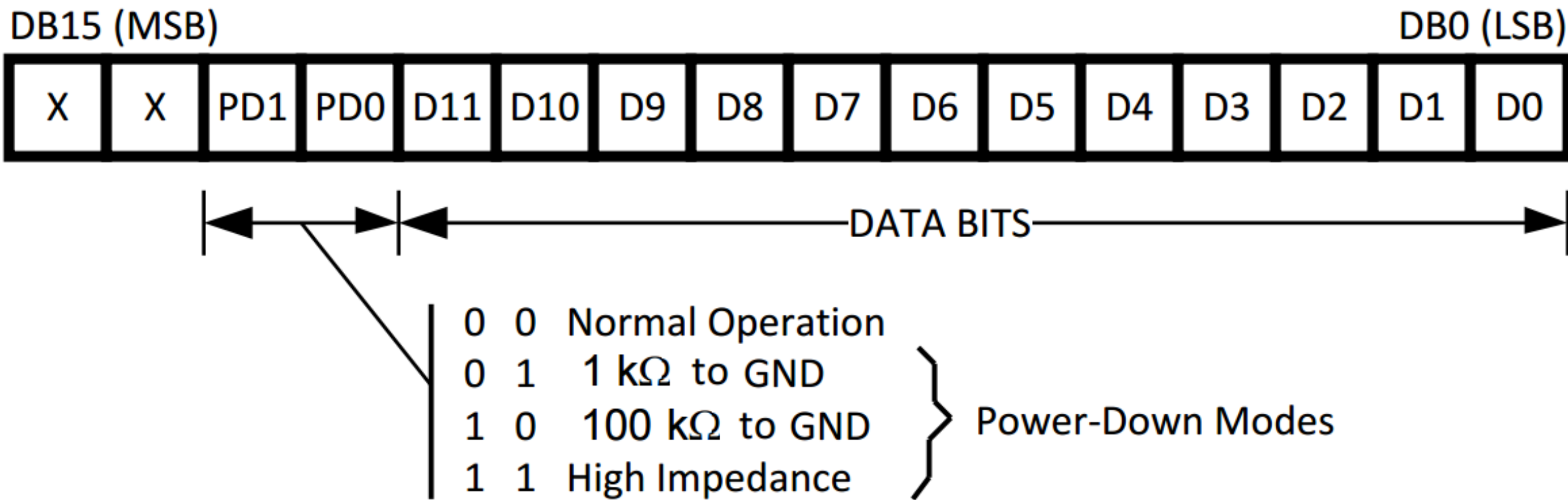
- 12-bit digital-to-analog converter
- Two simultaneous conversion channels
- Very low power consumption
- 6-pin Pmod connector with GPIO interface

Functional Description

The Pmod DA2 provides two channels of 12-bit Digital-to-Analog conversion, allowing users to achieve a resolution up to about 1mV.

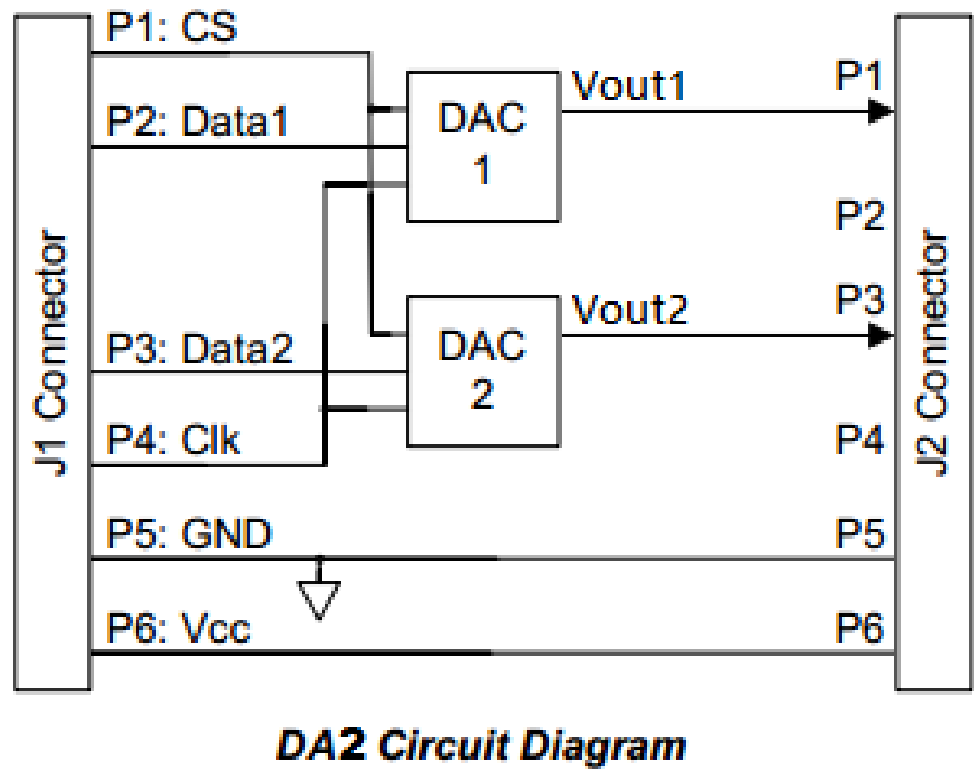
Interfacing with the Pmod

The Pmod DA2 communicates with the host board via an **SPI**-like protocol. By bringing the Chip Select line to a low voltage state, users may send a series of 16 clock pulses on the Serial Clock line (SCLK). The data is sent out with the most significant bit (MSB) first on the last 12 clock pulses. An example data stream of how the data might look is provided from the [TI datasheet](#) below:



Pinout Description Table

Pin	Signal	Description
1	~SYNC	Chip Select
2	DINA	Data In for Channel A
3	DINB	Data In for Channel B
4	SCLK	Serial Clock
5	GND	Power Supply Ground
6	VCC	Power Supply (3.3V/5V)



Any external power applied to the Pmod DA2 must be within 2.7V and 5.5V; however, it is recommended that Pmod is operated at 3.3V.

Physical Dimensions

The pins on the pin header are spaced 100 mil apart. The PCB is 1 inch long on the sides parallel to the pins on the pin header and 0.8 inches long on the sides perpendicular to the pin header.

Additional Information

The schematics of the Pmod DA2 are available [here](#). Additional information about the DAC including communication modes and specific timings of the chip can be found by checking out its datasheet [here](#).

Example code demonstrating how to get information from the Pmod DA2 can be found [here](#).

If you have any questions or comments about the Pmod DA2, feel free to post them under the appropriate section (“Add-on Boards”) of the [Digilent Forum](#).

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