

NEW PRODUCT	 DIGILENT A National Instruments Company	Release Year 2018	Released Quarter Q2
Digilent Part Number 410-355	Category Pmods		

OVERVIEW

Product Name: Pmod CMPS2: 3-Axis Compass

Product Subtitle:

Product Description: The Digilent Pmod CMPS2 is a digital compass module using [Memsic's MMC34160PJ](#) magnetometer. The local magnetic field strength can be measured in a ± 16 Gauss range with a heading accuracy of 1° and up to 0.5 mG of resolution.

Key Search Terms: digital compass, GPS, Memsic, magnetometer, 3-axis magnetic sensor, Pmod, position sensor

Video Link: NA

Datasheet: <https://reference.digilentinc.com/reference/pmod/pmodcmps2/reference-manual>

Demo / Project Links:

Microprocessor

- [Installing the Digilent Core for Arduino](#)
- [Library and example code for a microcontroller using the Arduino IDE](#)

Programmable Logic

- [Getting Started with Digilent Pmod IPs](#)

Features

- [Memsic's MMC34160PJ](#)
- Low noise 3-axis digital compass
- 0.5 milligauss field resolution in ± 16 Gauss fields
- I2C Slave, FAST (≤ 400 kHz) mode
- Optional pull-up resistors for SCL and SDA pins
- 1° heading accuracy
- Small PCB size for flexible designs $0.8" \times 1.25"$ ($2.0 \text{ cm} \times 3.2 \text{ cm}$)
- 6-pin Pmod connector with I²C interface
- Pass-through Pmod host port for daisy chaining
- Follows Digilent [Pmod Interface Specification 1.1.0](#)

Product Image

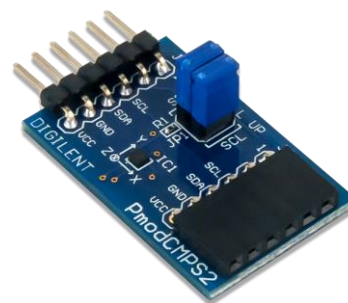


Image Links:

- <https://flic.kr/p/SoWQ2U> (Oblique)
- <https://flic.kr/p/SoWPY7> (Top)
- <https://flic.kr/p/SrqQNz> (Bottom)

3 Target Applications

- Electronic Compass
- GPS Navigation
- Position Sensing

Related Products

- Replacement for Pmod CMPS (410-285)
- All Digilent FPGA boards
- Basys Mx3 (PN: 410-336)