NEW PRODUCT	**DIGILENT** *A National Instruments Company*	*Release Year* 2016	*Released Quarter* Q4
Digilent Part Number 410-326		*Category* Pmods	

OVERVIEW

Product Name: Pmod NAV: 9-axis inertial measurement unit (IMU) Plus Barometer

Product Subtitle: Add Pmod NAV to your hardware platforms and systems to enhance the navigation capability

Product Description: The Digilent Pmod NAV uses the STMicroelectronics LSM9DS1 3-axis accelerometer, 3-axis gyroscope, 3-axis magnetometer, plus the STMicroelectronics LPS25HB digital barometer to provide users with 10 degrees-of-freedom (DoF) functionality. The Pmod NAV provides a variety of orientation related data, allowing users to easily determine the exact position the module is in and where it is headed. With 16-bit full scale registers for acceleration, rotation, and orientation, and 24 bits of resolution for pressure data, users can easily figure out if their moving robot is falling over, how high in the air their hot air balloon is located, or which direction they are facing.

Key Search Terms: Inertial Sensor, STMicroelectronics LSM9DS1, STMicroelectronics LPS25HB, 9-axis IMU, Barometer	*Video Link:* N/A

Datasheet: https://reference.digilentinc.com/reference/pmod/pmodnav/reference-manual

Demo / Project Links:

https://reference.digilentinc.com/_media/reference/pmod/pmodnav/pmodnav.zip (Microprocessor)
Accelerometer & Gyroscope Complementary Filter Example (Microprocessor)
https://github.com/Digilent/vivado-library/tree/master/ip/Pmods/PmodNAV_v1_0 (FPGA)

Features

- STMicroelectronics LSM9DS1 iNEMO inertial module
- STMicroelectronics LPS25HB MEMS pressure sensor: 260-1260 hPa absolute digital output barometer
- ±2/±4/±8/±16 g linear acceleration full scale
- ±245/±500/±2000 dps angular rate full scale
- ±4/±8/±12/±16 gauss magnetic full scale
- 260-1260 hPa piezoresistive pressure sensor
- Embedded temperature sensors for compensation
- 12-pin Pmod connector with SPI interface
- Follows Digilent Interface Specification Type 2A
- Library and example code available

Product Image

Image Links:

- https://flic.kr/p/CWLjPo (Oblique)
- https://flic.kr/p/CrnsNU (Top)
- https://flic.kr/p/CrnsQN (Back)

3 Target Applications

- Robotics
- Indoor navigation
- Weather station equipment

Related Products

- All Digilent FPGA boards
- Digilent Pro Mx7

PRODUCT DATA

*Dimension**	3x0.2x4 inches	*Weight**	0.02 lbs
Product Type	☒Digilent ☐Resell		
Packaging	ESD Bag		
Export	EAR99	*HTS Code*	8473.30.11.80
Kit Contents	☐USB Cable ☐Voucher ☐Power Supply Other: <Example>		
Certifications	☒CE ☒RoHs ☒Reach ☐Other:		

*Dimension & Weight include packaging