


NEW PRODUCT	 DIGILENT A National Instruments Company	Release Year 2023	Released Quarter Q1
Diligent Part Number 410-416		Category System Boards and Expansion Modules	

OVERVIEW

Product Name: Zmod Digitizer 1430-123: 2-Channel 14-bit Digitizer Module

Product Subtitle: Dual-channel ADC SYZGY™ compatible digitizer module

Product Description: The Diligent Zmod Digitizer is a SYZGY™ compatible module containing a dual-channel ADC and the associated front end. The Zmod Digitizer is intended to be used with any SYZGY™ compatible carrier board having the required capabilities.

When coupled to a base board using the SYZGY™ expansion, like the [Eclipse Z7](#) or [Genesys ZU](#), the combination will serve as a powerful prototyping platform for instrumentation, high-speed control, and SDR. By utilizing these expansion capabilities, users can spend more time on the analytical and system-level aspects of the solution rather than having to focus on the component-level interactions of the devices.

The Zmod Digitizer module is a variant of the similar Zmod Scope module but optimized for RF signal acquisition and frequency-domain analysis. The simpler DC-coupled input and 60 MHz anti-aliasing input filter improves immunity to stray RF radiation and the versatile and very low-jitter on-board clock generator enables acquisition at key rates, including 122.8 MHz often used in SDR applications.

Key Search Terms: FPGA digitizer, FPGA oscilloscope, SDR, software defined radio, SDR digitizer

Video Link: N/A

Datasheet: <https://diligent.com/reference/zmod/digitizer/reference-manual>

Specifications / Tutorials / Project Links:

- [User guide](#)
- [Schematic](#)
- [Adapting Projects Using the Zmod Scope for the Zmod Digitizer](#)
- [Diligent Platform Management Utility](#)
- [Using the Eclipse Z7 with WaveForms](#)
- [Declaration of Conformity](#)

Features

- Channels: 2
- Channel type: Single-ended
- Resolution: 14-bit
- Input range: ±1 V

Product Image

- Absolute Resolution: 0.13 mV
- Sample rate (real time): 125 MS/s, max
- Input impedance: 1 M Ω || 5 pF
- Analog bandwidth:
 - 60+ MHz @ -3 dB
 - 20 MHz @ -0.5 dB
 - 8 MHz @ -0.1 dB
- Input protected to: \pm 50 V

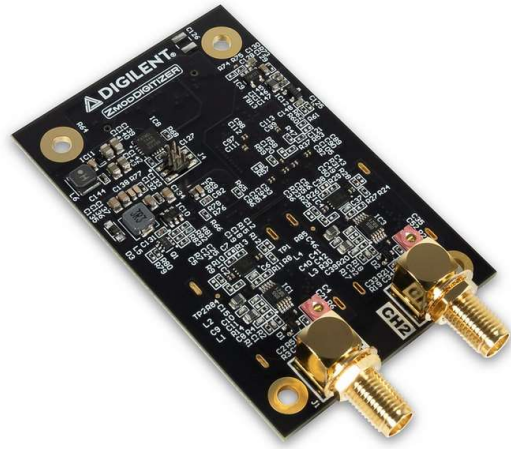


Image Links:

- <https://flic.kr/p/2od2ezC> / (Oblique)
- <https://flic.kr/p/2ocYCyR> / (Front)
- <https://flic.kr/p/2od4uq4> / (Back)

3 Target Applications

- Software Defined Radio

Related Products

- Eclipse Z7 (PN: 410-393)
- Genesys ZU (PN: 410-383-5EV)
- Zmod Scope 1410 (1410-40)
- Zmod Scope 1410-105 (1410-105)
- Zmod Scope 1410-125 (1410-125)