New Product	DIGILENT® A National Instruments Company	Release Year	Released Quarter		
		2017	Q1		
Digilent Part Number		Category			
410-338		Scopes / Instrumentation			

OVERVIEW

Product Name: Digital Discovery: High Performance Pocket Sized Logic Analyzer, Built-in Pattern Generator

Product Subtitle: Debug, visualize, and simulate digital signals for embedded projects

Product Description: The Digilent Digital Discovery™ is a combined logic analyzer and pattern generator instrument for the embedded debug. Makers, hobbyists, engineers and designers can use Digital Discovery™ to debug, visualize, and simulate digital signals for embedded projects. Connect Digital Discovery™ (Mac, Linux, or Windows) over high-speed USB.

It comes with Free application software Waveforms 2015

Key Search Terms: Instrumentation, Embedded, Logic Analyzer, Pattern Generator, Digital Signals, Bus signals, Protocol Analyzer

Video Link: https://www.youtube.com/watch?v=dnYoayFSofQ

Getting Started Guide:

https://reference.digilentinc.com/learn/instrumentation/tutorials/digital-discovery-getting-started/start

Hardware Reference Manual:

https://reference.digilentinc.com/reference/instrumentation/digital-discovery/reference-manual

Tutorial:

- Using the Logic Analyzer
- Using the Pattern Generator
- Using the Static I/O

Projects:

Decoding VGA signals

Hardware Resources

- 24 high-speed input pins (DINO...23), 100MHz bandwidth, $560k\Omega$ ||10pF accessible through one 2×16 connector
- 2Gbit DDR3 acquisition buffer for DIN pins
- 16 digital I/Os (DIO24...39) arranged in two Pmod-style (2×6) connectors
- Output buffer: 32K samples/channel for DIO pins
- Automatic or manual strength and slew settings for outputs.
- User programmable DIN and DIO LVCMOS voltage levels from 1.2V to 3.3V (5V compatible)
- User power supplies, 1.2V to 3.3V, available in the two Pmodstyle connectors (100mA max)
- Includes: USB cable, fly-wire accessories (change the accessory)

Product Image



Related Items:

410-349 Digital Discovery High Speed Adapter and Logic Probes

Image Links:

- https://flic.kr/p/NPzXSf (Oblique)
- https://flic.kr/p/NPzXKb (Top)

Virtual Instruments

- Logic Analyzer
 - Up to 800MSps input sample rate with 8 inputs (and the High Speed Adapter)
 - Up to 200MSps with 32 inputs
 - Digital Bus Analyzers (SPI, I²C, UART, Parallel)
- Patterns generator
 - Algorithmic pattern generator or buffer based patterns
 - ROM Logic for implementing user defined Boolean functions and State Machines
 - 100MSps max output sample rate (50MHz maximum output frequency)
- Protocol controller
 - DIO pins are used for UART send and receive, SPI read and write, I2C read and write capable
- Supplies: Sets the user power supply and logical levels, pull resistors, output strength
- Script: Advanced functions

- https://flic.kr/p/RnBrin (Connected)

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PRODUCT DATA					
Dimension*	3.14x3.14x0.98 inches	Weight*	0.17 lbs		
Product Type	⊠ Digilent □ Resell				
Packaging	Plastic Box				
Export	EAR99	HTS Code	8473.30.11.80		
Kit Contents	☑USB Cable ☐Voucher ☐Power Supply Other: fly-wire accessories, high speed adapter and twisted wire high-speed cables for input channels to insure signal integrity				
Certifications	⊠CE ⊠RoHs	⊠Reach □Ot	her:		

^{*}Dimension & Weight include packaging