**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:**

**Hardware 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 (DIN0...23), 100MHz bandwidth, 560kΩ|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 Pmod-style connectors (100mA max)
- Includes: USB cable, fly-wire accessories (change the accessory)

**Related Items:**
- 410-349 Digital Discovery High Speed Adapter and Logic Probes

**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
- Static I/O
- Supplies: Sets the user power supply and logical levels, pull resistors, output strength
- Script: Advanced functions

**Image Links:**
- https://flic.kr/p/NPzXSf (Oblique)
- https://flic.kr/p/NPzXKb (Top)
- https://flic.kr/p/RnBrin (Connected)
# New Product

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<td>410-338</td>
<td>Scopes / Instrumentation</td>
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## Product Data

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<td>☑ Reach</td>
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<td>Other:</td>
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<tr>
<td>fly-wire accessories, high speed adapter and twisted wire high-speed cables for input channels to insure signal integrity</td>
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*Dimension & Weight include packaging