Keysight Technologies
Infiniium 9000 Series Oscilloscope

Demo Guide

Infiniium 9000 Series

Engineered for the broadest measurement capability.

Designed to fit your environment

– Biggest screen in class (15" XGA)
– Touchscreen with 1024x768 resolution
– Thin
– Light (26 lbs)
– Knob per channel
– Convenient USB and other connectivity
– Quiet fans (30 db in front)

3 instruments in 1 box

Scope: Powerful Infiniium features coupled with superior specs for precise signal representation.
Logic analyzer: 16 fully integrated digital channels to see critical data values and timing relationships
Protocol analyzer: World's first scope-based protocol viewer with multi-tab viewing to quickly drill down and move between protocol and physical layers. Widest range of debug and compliance apps: Tailor your scope to simplify debug and compliance testing today and in the future with the industry's widest range of application software.

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9000 Series demo board, mouse and two passive probes required
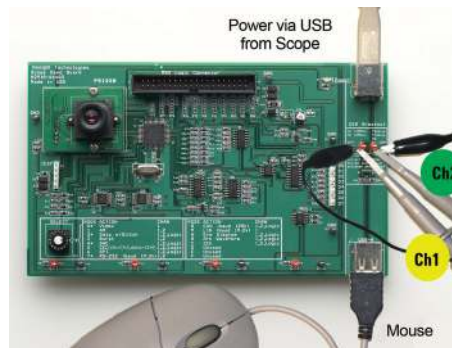
Connect channel 1 probe to red test point marked D+ and corresponding ground, connect channel 2 probe to red test point marked D- and corresponding ground. Mouse signal is passed through and acquired by scope. Move mouse and see transmission of USB packets with XY coordinates.

Oscilloscope Demonstration

600 MHz, 1 GHz, 2.5 GHz, 4 GHz Models · 20 Mpts – 1 Gpt Memory · 10- 20 GSa/s

Quick demo

1. Press **Default Setup.**
2. Press **AutoScale.**
3. Adjust timebase to about 10 us/div and delay to get the following display of USB signals.


4. Drag and drop the rise time measurement icon onto the signal to demonstrate quick measurements.
5. Expand the measurement tab window. Highlight the **Measure** menu at the top of the screen to illuminate the drop down menus and walk through some of the measurements.

6. Highlight the **Analyze** menu at the top of the screen to show rich feature set here also.
7. Highlight the **Trigger** menu at the top of the screen, click on setup trigger and point out trigger shortcuts and gallery.
8. Then choose **InfiniiScan** and select **Zone Qualify** from the menu. Draw a box around area where signals occur when you move the mouse and select **AND Must Intersect** from the Zone 1 menu choice. Powerful hardware triggering combined with InfiniiScan event triggering makes for efficient troubleshooting.
9. Highlight the **Setup** tab at the top of the screen and select **Acquisition**. Change the Analog Memory Depth setting to **Manual** and select **Max**. Close the setup screen and adjust the timebase to about **1 ms/div** to show multiple bursts on screen.
10. Press the **zoom** button to see detail for one of the bursts. Responsive deep memory allows you to take advantage of your investment to zero in on the details when needed.

Protocol Analyzer Demonstration

– Time-aligned physical and protocol views
  – Broadest support available
– Industry's only multi-tab viewer on scope

Quick demo
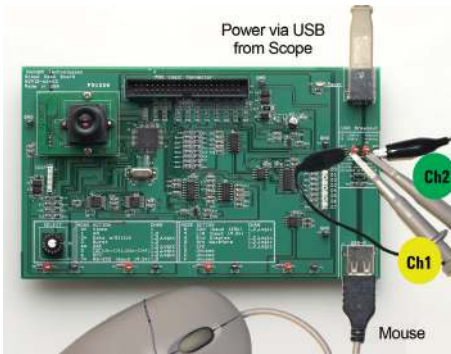
1. Press **Default Setup**.
2. Press **AutoScale.**
3. Select **Setup tab** at the top of the screen and select **Serial Decode.**
4. Choose **Serial Decode** from the menu and select USB 2.0. Check the **Show Decode** box and press **AutoSetup** to get the following display.
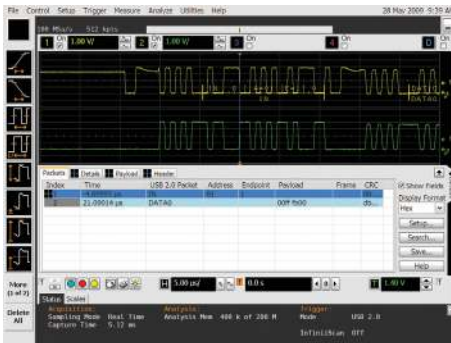

5. Note that the payload value (which contains coordinate information) changes as you move the mouse. The blue cursor on the waveform display is time-aligned to the blue highlighted line in the decode display.
6. Now let's set up to trigger on a mouse move. Highlight the **Trigger** tab at the top of the screen and select **Setup Trigger**. In the **Type** menu choose **Data**. Select the **Payload** tab in the decode view and note that the scope triggers and displays the data each time the mouse is moved.

Mixed-Signal Oscilloscope (Logic Analyzer) Demonstration

– 16 integrated, time-aligned channels
  – 2 GSa/s · 128 Mpts per channel

Quick demo
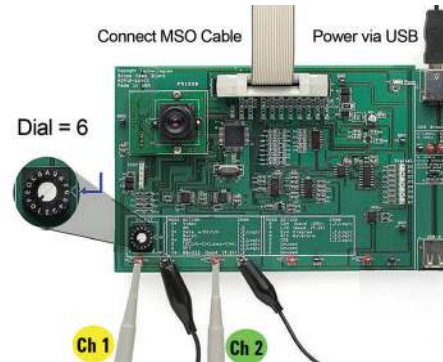
1. Connect probes and ground leads from channel 1 and channel 2 to corresponding test points provided.
2. Connect MSO cable from front of scope to connector on demo board.
3. Turn the mode select knob to position 6 (SPI)
4. Press **Default Setup**
5. Press **AutoScale** to get the following display of analog and digital channels:
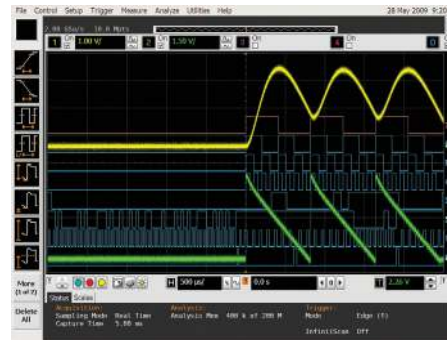
6. Note that the digital channels can be grouped into buses if desired. Trigger and decode are available across any combination of analog and digital signals, and the display is totally time-aligned.
7. Highlight the **Setup** tab at the top of the screen and select **Acquisition.** Select **Segmented** under Sampling Mode. Manually enter **100** for the # of segments. Close the box and press **Run**.
8. After all 100 segments are acquired, use the **Play** menu at the bottom of the screen to demonstrate stepping through the acquisitions to note the differences.

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