

# The Infiniium 9000 Series Oscilloscope Quick Demo

9000 Series demo board, mouse and two passive probes required

# **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.



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.
- Adjust timebase to about 10 us/div and delay to get the following display of USB signals.



- Drag and drop the rise time measurement icon onto the signal to demonstrate quick measurements.
- 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 Infiniium

- 6. Highlight the **Analyze** menu at the top of the screen to show rich feature set here also.
- Highlight the Trigger menu at the top of the screen, click on setup trigger and point out trigger shortcuts and gallery.
- 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.
- 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
- 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 Power via USB from scope

- Press Default Setup
- Press AutoScale. 2.
- 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.
- Connect MSO cable from front of scope 2. 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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