

Keysight Technologies

Simple DMM Enhancements Make a Big Difference to Silicon Designers

Case Study

Introduction

Sometimes minor enhancements make a big difference in usability for test and measurement instruments. At least according to an engineering team in Colorado responsible for the silicon design, debug, and characterization of power-management ICs.

Display allows users to add labels on the screen

To troubleshoot and characterize input and output characteristics of their ICs, the engineers typically monitor multiple output and input voltages and currents simultaneously using a stack of digital multimeters. Their big challenge: keeping track of which DMM is measuring which voltage and which current. The engineers currently solve the problem by sticking adhesive-backed notes temporarily on each DMM with a description of the signal it is measuring.

When a Keysight Technologies, Inc. product development team demonstrated the new Truevolt 34461A DMM to the silicon designers, one small feature captured their attention. The 34461A DMM's large, liquid-crystal display allows users to add labels to measurements on the screen. The IC developers immediately saw the feature as a way to eliminate confusion about which instrument is measuring what.

After trying out the new 34461A DMM, one engineer described the labels as "very useful when you are working with others and trying to explain your test setup to them."

The engineers agreed that the 34461A DMM's front-panel LCD display made it easier to digest info quickly. Not only is the display more visually appealing than the low-resolution numeric displays on their legacy DMMs, but they can read it clearly from across the room.

The engineers also considered the ability to change the screen's color scheme a plus. By using one color scheme for inputs and a different one for outputs, they can tell from a distance which is which.

Familiarity and Usability

For many years, the silicon design engineering team has been using the Keysight 34401A, the industry-standard 6.5-digit multimeter, to make its efficiency measurements. They were delighted by the similarities between the 34401A and the new 34461A DMM.

The silicon team also liked the 34461A's 10-amp input range and its usability. They particularly appreciated that they could hold a button down to see a brief description of that button's functionality, which makes it easier to learn. They also like the built-in help topics designed to help them expand their general DMM knowledge.

myKeysight

myKeysight

www.keysight.com/find/mykeysight

A personalized view into the information most relevant to you.



www.axiestandard.org

AdvancedTCA® Extensions for Instrumentation and Test (AXIe) is an open standard that extends the AdvancedTCA for general purpose and semiconductor test. Keysight is a founding member of the AXIe consortium. ATCA®, AdvancedTCA®, and the ATCA logo are registered US trademarks of the PCI Industrial Computer Manufacturers Group.



www.lxistandard.org

LAN eXtensions for Instruments puts the power of Ethernet and the Web inside your test systems. Keysight is a founding member of the LXI consortium.



www.pxisa.org

PCI eXtensions for Instrumentation (PXI) modular instrumentation delivers a rugged, PC-based high-performance measurement and automation system.



Three-Year Warranty

www.keysight.com/find/ThreeYearWarranty

Keysight's commitment to superior product quality and lower total cost of ownership. The only test and measurement company with three-year warranty standard on all instruments, worldwide.



Keysight Assurance Plans

www.keysight.com/find/AssurancePlans

Up to five years of protection and no budgetary surprises to ensure your instruments are operating to specification so you can rely on accurate measurements.



www.keysight.com/quality

Keysight Technologies, Inc.
DEKRA Certified ISO 9001:2008
Quality Management System

Keysight Channel Partners

www.keysight.com/find/channelpartners

Get the best of both worlds: Keysight's measurement expertise and product breadth, combined with channel partner convenience.

www.keysight.com/find/DMM

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

Americas

Canada	(877) 894 4414
Brazil	55 11 3351 7010
Mexico	001 800 254 2440
United States	(800) 829 4444

Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 112 929
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Other AP Countries	(65) 6375 8100

Europe & Middle East

Austria	0800 001122
Belgium	0800 58580
Finland	0800 523252
France	0805 980333
Germany	0800 6270999
Ireland	1800 832700
Israel	1 809 343051
Italy	800 599100
Luxembourg	+32 800 58580
Netherlands	0800 0233200
Russia	8800 5009286
Spain	0800 000154
Sweden	0200 882255
Switzerland	0800 805353
	Opt. 1 (DE)
	Opt. 2 (FR)
	Opt. 3 (IT)
United Kingdom	0800 0260637

For other unlisted countries:
www.keysight.com/find/contactus
(BP-07-10-14)