

FOR IMMEDIATE RELEASE



**Press Contact:**

Kim Stowe

Stowe Consulting

408 839-8750

[kim@stoweconsulting.com](mailto:kim@stoweconsulting.com)

## **Study: USB Multi-Monitor Systems Use Up to 80% Less Power than Discrete Graphics**

*DisplayLink responds to growing interest in Green IT with  
'Multiple Monitors and Energy Use' white paper.*

INTEROP, NEW YORK, NY/PALO ALTO, CA – September 17, 2008 – Rising fuel costs and environmental concerns have made energy conservation a priority for many IT departments around the world. However, balancing productivity gains and electrical consumption can be particularly challenging when working in a digital environment. In an effort to help IT managers reduce in-office electrical consumption, DisplayLink, a provider of networked display technology, studied the methods used to provide multi-display capability and their respective power requirements.

One of the best ways to boost productivity is to add multiple displays to a PC for instantaneous access to needed information and applications. In fact, according to a Microsoft Research study<sup>1</sup>, using two or more displays can increase productivity by as much as 50 percent. Researchers at the University of Utah<sup>2</sup> have shown that users of multiple displays make up to 33 percent fewer mistakes than those working on a single monitor. Along with the additional displays, however, comes increased power consumption and generated heat. In an office setting, this may result in increased building cooling costs and strained local surge protectors.

The DisplayLink study measured the power needed for a desktop PC to run one to four LCD monitors. Two identically configured systems were used; one equipped with DisplayLink-enabled USB-to-DVI adapters and software, and another with dual-DVI discrete graphics cards (the most common type of dedicated multi-display board). Power consumption was measured at the entry of the computer power supply to gauge total system power usage under different system loads.

## **USB GRAPHICS VS. DISCRETE GRAPHICS SOLUTIONS**

The study found that adding a display with a USB adapter incurred an average increase of only 4 Watts per display, or a 7 percent increase in power consumption.

The discrete graphics solution, meanwhile, used considerably more power due to the necessary installation of dedicated hardware inside the computer. When driving a single display, the discrete card used, on average, an additional 34 Watts of power, or a 67 percent increase in power consumption—without the benefit of any additional displays. When the system was configured to drive four displays (which required the installation of a second card), the power consumption jumped to an average of 117 Watts, or an increase of 132 percent compared to the single-display configuration.

Other key findings of the study included:

- The USB graphics solution used up to 80 percent less power to drive an extra display than a discrete graphics solution.
- The discrete graphics solution consumed as much, if not more, power than an extra LCD monitor. This causes the overall system power consumption to more than double if three or more displays are used, or an increase of 128 percent.
- When three additional displays were connected to the system using USB adapters (for a total of four displays), the system used only 22 percent more power (a total of 62 Watts) than needed to drive a single display.
- USB multi-display technology works with notebooks and small form-factor PCs, where a discrete graphics solution is not possible, allowing multiple display users to use more power-efficient notebook PCs in the place of traditional desktop PCs.

“We have always said that USB-based networked displays were far more cost-effective and simpler to use than discrete graphics solutions. Now, we’ve shown they are significantly more energy efficient as well,” said Dennis Crespo, executive vice president of marketing and business development at DisplayLink. “Clearly, IT administrators and consumers who are serious about cutting back on electrical usage, whether as part of an initiative to ‘go green’ or simply to lower their electric bills, will see USB connectivity offers significant, real-world advantages over discrete graphics cards.”

To download a copy of DisplayLink’s white paper, *Multiple Monitor Energy Use*, go to [www.displaylink.com/](http://www.displaylink.com/). To view a DisplayLink “Green IT” product demo, visit <http://www.youtube.com/watch?v=GmTM2p5798U>.

### **About DisplayLink**

DisplayLink Corp. is a network display chip and software company that creates simple connections between computers and displays via USB, making the benefits of expanded visual workspace available to everyone. Using universally accepted wired or wireless networking protocols and proprietary software compression techniques, graphically rich content can be

transmitted easily between a single device and multiple monitors. Leading global manufacturers have integrated network display technology into an array of consumer electronics including USB-enabled monitors, video docking stations, and display adapters. More information can be found at [www.displaylink.com](http://www.displaylink.com)

###

Footnotes:

- (1) Two Screens Are Better Than One, Suzanne Ross  
<http://research.microsoft.com/displayArticle.aspx?id=433&0sr=a>
  
- (2) Productivity, Screens and Aspect Ratios, James A Anderson,  
[http://www.necdisplay.com/gowide/NEC\\_Productivity\\_Study\\_0208.pdf](http://www.necdisplay.com/gowide/NEC_Productivity_Study_0208.pdf)