



Dell Monitors: Meeting Today's Growing Business Need for High-Definition Computing

Companies increasingly need high-definition monitors to conduct business and stay competitive in today's marketplace. Such monitors are typically wider format, and generally offer more screen real estate and greater resolution compared to standard computer monitors used in businesses today.

Virtually all aspects of any company's operations now require the development, interpretation, or use of high-definition content. Using high-definition monitors can aid designers and engineers with developing new products, graphic designers and video editors with creating new marketing material, financial analysts who are examining the output of more sophisticated business models, or executives who need to zoom in on the details of enhanced business intelligence visualization dashboards.

To support such growing business needs, the question becomes: how do companies determine if they need better-quality monitors, and what features are most important for success? To better understand how organizations make decisions about using better-quality high-definition monitors to support their computing efforts, Ziff Davis Enterprise (ZDE) surveyed 106 IT influencers, all involved in purchasing workplace computers and computer monitors (see Survey Methodology).

Market Drivers Identified

Several key factors are driving the need for better-quality, high-definition monitors.

First, common business applications including presentation, video, and analytics software produce higher-resolution files and output. Second, there exists high availability of relatively low-cost computing power that is needed to produce such output or render higher-resolution videos and multimedia content. And third, there is simply much more high-definition content available over the Internet.

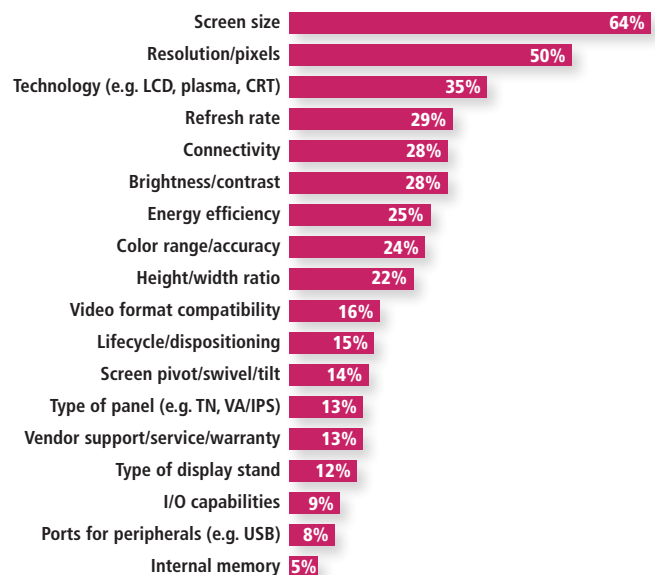
From the user's perspective, the increased time spent working

Survey Methodology

In October 2010, Ziff Davis Enterprise conducted an online survey using a random sample of its database of IT influencers. The survey was hosted by the market research firm Survey Analytics. Survey participants had to be involved in the purchase of workplace computers and displays. A total of 106 qualified respondents completed the survey.

with such content helps determine the critical characteristics and features that are needed in a monitor. In fact, the ZDE survey found that screen size and resolution topped the list of

What's Important When Buying HD Displays?



Q. What specifications or features are or would be of particular interest to your organization in buying high-definition displays?

Base: All qualified (105)

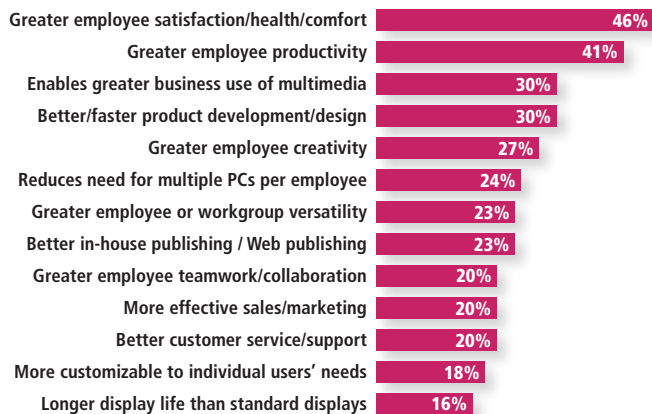


necessary features. Other features deemed desirable included the monitor's refresh rate, connectivity, brightness and contrast, energy efficiency, and color range.

Additionally, survey respondents identified a number of factors that are driving the adoption of high-definition monitors in companies today. Naturally, one big factor is that wider-format, high-resolution, flat-panel monitors have come down in price. Beyond price, respondents noted that more users are requesting better monitors, older monitors are not meeting today's monitor needs, and newer monitors offer better multimedia capabilities.

Moreover, those who have already moved to better-quality monitors cited a number of important benefits from their use. Respondents said they experienced greater worker satisfaction, comfort, and health; greater employee productivity; better and faster product development and design; greater employee creativity; and that the monitors enabled greater business use of multimedia content.

Benefits Experienced as a Result of HD Computing



Q. What benefits has your organization experienced, or do you think it might experience, as a result of using high-definition displays?

Base: All qualified (105)

Enter Monitors with IPS Glass Technology

What features does a high-definition monitor need for users to fully realize these benefits?

A larger viewing area and improved image quality that comes from higher resolution are essential. However, many times it takes more than additional screen real estate and higher

resolution to meet all the needs of today's high-definition computing professional.

Some lower-end high-definition monitors introduce two viewing problems. Many lower-end monitors present distorted images and color depending on the view angle. This can impact worker productivity and inhibit collaboration since it is harder for people to gather around a single monitor and see an undistorted image.

Further, most lower-end monitors suffer from issues including flashing, tails, and ripples when the screen is touched. For example, a ripple effect can take place on a lower-end high-definition monitor when a person touches its screen. In some cases, a person pointing to an important item on a monitor might produce a glowing halo or flashing that makes the displayed image unviewable. This can impede collaboration when colleagues huddle around a monitor to discuss the content being displayed.

Many of the aforementioned problems and issues that arise when using traditional monitors can be overcome with monitors that use In-Plane Switching (IPS) glass technology. IPS glass technology improves the display characteristics of commonly used LCD flat-panel monitors that use twisted nematic (TN) technology. Specifically, IPS glass technology significantly improves the viewing angle for graphics, videos, and any multimedia content displayed on a monitor, according to *The PC Tech Guide*.¹

In particular, Dell UltraSharp™ Monitors with IPS glass technology provide a wide 178°/178° viewing angle, which means users can see consistent images from the side, above, below, or from almost any perspective. This capability lets employees more easily collaborate. Basically, more employees can gather around a monitor, and there is an assurance that everyone will see the same image regardless of their viewing angle. Dell flat-panel monitors with IPS glass technology also allow users to see consistent colors across wide viewing angles, and eliminate haloing, flashing, rippling, and fishtailing.

With the growing use of multimedia content, image fluidity is increasingly an important attribute for a monitor to offer. Dell UltraSharp Monitors with IPS glass technology deliver fast refresh rates with extreme clarity for motion videos. Users see crisp, sharp, and ghost-free images. The benefit of superior image fluidity is that users experience less eye fatigue with moving images.

¹"In-Plane Switching – IPS – LCDs," *The PC Tech Guide*



Complementing the viewing experience that IPS glass technology provides, Dell UltraSharp monitors offer other features that deliver additional benefits.

Dell UltraSharp flat-panel monitors 24" and larger come with PremierColor technology. These monitors are color-calibrated at the factory to meet several industry standards for accurate, consistent, and precise colors, and are shipped with a certificate showing their exact color settings.

And to ensure optimal viewing, Dell UltraSharp monitors are designed with productivity and comfort-enhancing features. The monitors include a height-adjustable stand, and can easily be tilted, swiveled, and in most models pivoted. This makes for an enhanced working experience as the user can position the monitor to a comfortable eye level and orient it for an optimal viewing angle.

These benefits can translate into real value for a company. A wide viewing angle, improved color accuracy, and position-adjustable features can improve a worker's productivity. Reduced eye strain and elimination of halving and ripple effects when touching a monitor can also help users work longer and more efficiently.

Even small improvements in these areas can add up when applied over a year's time and spread throughout a company. For example, when using a monitor with TN glass technology, employees cannot see the displayed image at an angle, and there can be deficiencies including ripples and puddles. This can lead to user eye strain and fatigue.

These viewing issues are removed when using a monitor with IPS glass technology. As a result, such monitors allow a user to take fewer eye strain breaks or work longer because he or she is not fatigued. If this "extra" time is, for example, 10 minutes per day, a single worker would be able to complete about 2,500 more minutes of work per year (assuming two weeks' vacation annually).

That's almost 42 hours a year, or one additional week's worth

of work, per employee, per year. If 100 workers are outfitted with such monitors and can improve their productivity as much, that's 4,200 hours, or roughly the equivalent of adding two full-time employees.

The bottom line is that Dell UltraSharp monitors with IPS glass technology deliver a superior user experience that can increase user satisfaction, and enable more effective collaboration in the workplace.

Dell as Your Technology Partner

To reap the benefits of using IPS glass technology, companies must naturally purchase a monitor and pair it with suitable computer hardware and the right software application for their needs. That's where Dell can help.

Dell offers complete solutions, including computer hardware, monitors, software, and services. In particular, Dell provides a wide range of computer hardware to run the applications that generate the display images clearly on the monitors.

Dell also offers a breadth of high-definition UltraSharp™ monitors with IPS glass technology, affording companies solid choices so that they can match the right monitor with the right application and the right worker.

By virtue of its sales volumes and experiences supplying solutions to its many clients, Dell logistics ensures that companies get their monitors on time, and at a good price.

Additionally, Dell offers world-class support and services. Dell's tech support quickly resolves any issues you may have on set-up. If problems arise, Dell can remediate them fast. That means if you have a problem, you won't be without your monitor for weeks, as Dell can get replacements to you much faster.

 **For more information about Dell IPS glass monitors, visit: www.dell.com/monitors**