The science behind the report:

# Give your employees flexibility and convenience while reducing power usage with Dell P-Series displays

This document describes what we tested, how we tested, and what we found. To learn how these facts translate into real-world benefits, read the report Give your employees flexibility and convenience while reducing power usage with the new Dell P-Series displays.

On July 3, 2018, we finalized the hardware and software configurations we tested. Updates for current and recently released hardware and software appear often, so unavoidably these configurations may not represent the latest versions available when this report appears. For older systems, we chose configurations representative of typical purchases of those systems. We concluded hands-on testing on July 18, 2018.

## The displays we tested

| | Dell™ 24 Monitor - P2419H | HP EliteDisplay E243 |
|---|---|---|
| Resolution | 1920x1080 | 1920x1080 |
| Screen size | 23.8" | 23.8 |
| Number of USB 2.0 ports | 2 | 0 |
| Number of USB 3.0 ports | 2 | 4 |
| USB-C connectivity | No | No |
| Video ports | DisplayPort, HDMI, VGA | DisplayPort, HDMI, VGA |
| Base dimensions (width x depth) | 8.12 x 6.54 in. 53.2 sq. in. | 8.85 x 7.08 in. 62.7 sq. in. |

Note: We used the following steps to determine the dimensions of the base:

1. Using a set of zeroed digital calipers, measure the base width three times and take the median measurement.
2. Measure the base depth three times and take the median measurement.

# How we tested

## Measuring power usage with SYSmark 2014SE

SYSmark 2014SE installs the following applications, which its test scripts employ:

- Adobe® Acrobat® XI Pro
- Adobe Photoshop® CS6 Extended
- Adobe Premiere® Pro CS6
- Google Chrome
- Microsoft® Excel® 2013
- Microsoft OneNote® 2013
- Microsoft Outlook® 2013
- Microsoft PowerPoint® 2013
- Microsoft Word 2013
- Trimble SketchUp™ Pro 2013
- WinZip® Pro 17.5

If any of these applications are already on the system under test, they will cause problems with the benchmark due to software conflicts. To avoid any such issues, before we installed the benchmark, we uninstalled all conflicting pre-installed software applications, including different versions of any of the programs SYSmark 2014SE uses.

## Setting up the test

1. Purchase and install SYSmark 2014SE with default settings from https://bapco.com/products/sysmark-2014-se/.
2. Install the following two SYSmark 2014SE patches:
    a. SYSmark 2014 SE patch 1 v2.0.1.78
    b. SYSmark 2014 SE patch 1 Hotfix 2 v2.0.1.87
3. Connect an Extech Power Analyzer / Datalogger 380803 via a USB-to-Serial cable to the display under test.

## Running the test

1. Launch SYSmark 2014SE by double-clicking the desktop icon.
2. Enter a Project name.
3. Select 3 Iterations, check the box beside Conditioning Run and beside Process Idle Tasks, and click select Configuration. Use the default SYSmark configuration options and click Save. Verify that the Energy Consumption test is checked and that the correct COM Port is selected.
4. Click Run Benchmark.
5. When the benchmark completes and the main SYSmark 2014SE menu appears, click Save FDR to save the results.

This project was commissioned by Dell Technologies.