

All-in-One Workstation Built for CAD

Dear Desktop Engineering Reader:

The case for an all-in-one workstation is obvious: You and your tiny desk are packed like sardines in tight cubicles. Your tower workstation and large monitor eat up all your workspace. The case against an all-in-one has merits: most are built for home or office usage, not engineering. In fact, "an all-in-one workstation built for CAD professionals" sounds like a paradox. But that's how HP describes its recently announced HP Z1 workstation, and I have to say this looks like the real enchilada. Let me add that it seems HP -- which never did this sort of thing before -- learned a lesson or two from some of the other all-in-one computers out there too. More on that in a moment.

Here's why I think that the HP Z1 workstation is the real iron needed by CAD/CAE pumping engineers: It supports up to 32GB of RAM and you can equip it with quad-core 3.5GHz Intel Xeon processors (with 8MB cache) and with NVIDIA Quadro professional-level graphics. (Digression: both are firsts in the all-in-one category, according to HP and NVIDIA, respectively.) And the HP Z1's 27-in. LED backlit display can produce more than a billion colors.

That means you can do compute-intensive renderings and visualizations on a nice big screen in a desk space-friendly form factor. And, knowing something about the NVIDIA Quadro line, you should also be able to hit, say, a 3ds Max rendering, toggle back to SolidWorks or something, and work productively while the rendering runs in the background. In any workstation that's a feat. In an all-in-one ... well, holy ray tracing, Batman.

OK, lessons learned. The first is that the stand collapses rather than being a solid pedestal like the one I have at home. You can completely fold down the HP Z1 and easily stash it -- stand and computer -- behind the backseat of your car if you had to get away in a hurry. Folding is important for the second lesson learned: The HP Z1 is not a closed box like many all-in-ones. You fold it down then, without any tools, open it to gain access to the components, which you can then swap out -- also without tools -- making upgrades easy. Finally, here's a third lesson learned. I guess. I'm not sure. But it's what you'll show off the most: The display has a hydraulic hinge inside. So, when you're done ogling the inside and move the monitor down to the closed position, it first descends quickly but then it slowly eases on home for the last inch or so. It's just neat, albeit indicative of the thought that went into this workstation.

The HP Z1 begins shipping sometime this month. Pricing starts at \$1,899 for a base unit. You can learn more about the HP Z1 All-in-One Workstation from the links in today's [Pick of the Week write-up](#). Watch the video on how HP made the HP Z1. It's short, but you'll find it interesting.

Thanks, pal. — Lockwood

Anthony J. Lockwood



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[Click here](#) for more information on the HP Z1 All-in-One Workstation.



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