

LEDs, camera, action: Accelerating virtual production

Orbital Studios + Dell Precision workstations +
AMD Ryzen™ Threadripper™ PRO processors

At a glance

Challenge

Orbital Studios needed powerful PCs to render massive environments on LED volumes in real time—without dropped frames or sync errors. During filming, every minute of downtime could cost up to \$6,000.

Solution

The Dell Precision 7875 Tower workstation, featuring AMD Ryzen Threadripper PRO 7000 WX-Series processors, delivers the multithreaded performance, stability, and scalability Orbital requires.

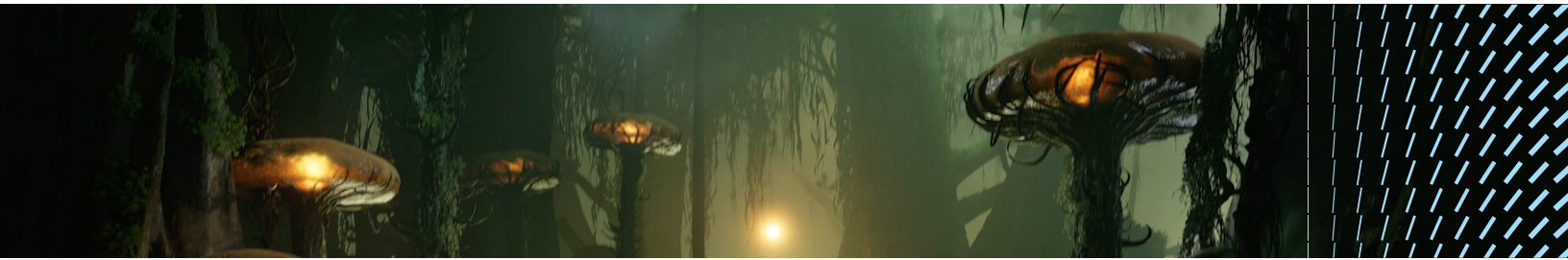
Impact

Now, Orbital loads maps with millions of polygons up to 50% faster than on previous PCs. They continue to push the limits of real-time visuals, running complex simulations in Unreal Engine seamlessly on set.



The first time I launched a map on the Dell Precision 7875, it brought some of the fun back—just being able to play with the tools and not wonder, ‘Why is this not working? Why is it taking so long?’ It’s what every creative wants.”

Wilder Herms
Orbital Studios



Situation

To achieve pixel-perfect content during virtual productions, a lot of technology needs to work together seamlessly in real time. Without flawless synchronization, visuals stutter, systems crash, and minutes are lost while background scenes are relaunched—and the rest of the crew and cast wait. “Depending on the size and scale, it could cost anywhere between \$1,000 and \$6,000 per minute when a system goes down,” Orbital Studios founder A.J. Wedding, said. Five minutes of downtime is a huge problem while filming. “It’s kind of like walking a tight rope,” he added. “We need to know all the threads holding that rope together are super solid, so we can get across as quickly as possible.”



Solution

The Dell Precision 7875 Tower workstation, featuring AMD Ryzen Threadripper PRO 7000 WX-Series processors, delivers the performance, stability, and scalability Orbital needed. “With this system, we never have to compromise on quality or limit our options,” Wedding said. “We don’t even question if it’s possible. It’s obvious—we can do that. We just go for it.” AMD Ryzen Threadripper PRO processors’ unmatched multithreaded performance, combined with the versatility and reliability of Dell Precision, creates a virtual production powerhouse. “This is a high-performance system that we can easily pack up, go, and know that it’s ready to run a virtual production on location,” Wedding said.



Challenge

Orbital Studios is known for innovation and agility. “We always look at what’s coming and how to make it work for filmmakers, as opposed to making filmmakers change what they do to use the technology,” Wedding said. Orbital’s LED volumes serve as dynamic backdrops for everything from Mercedes commercials to Hulu series, both in studio and on location. Never ones to shy away from a challenge—like displaying real-time water or smoke simulations in Unreal Engine—they quickly realized their PCs couldn’t keep up. “You’re trying to load something, and the system crashes,” Wilder Herms, Orbital’s virtual production operator, said. “We want our systems to just let us work.”



Impact

Now, Orbital loads maps with millions of polygons up to 50% faster than on their previous systems. It used to take more than 10 minutes to load an asset-heavy city environment or a high-poly-count canyon scene. “Our canyon map is normally not something you would ever run on a wall. It’s just too heavy,” Herms said. But on the Dell Precision workstation powered by AMD Ryzen Threadripper PRO processors, they can launch each map in under five minutes. “The better our systems get, the more we say, let’s do this. Let’s push it further,” Wedding said. With Dell and AMD, Orbital continues to take virtual production to the next level.

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