



## DEXTER STUDIOS UNLEASHES VFX CREATIVITY AND EFFICIENCY WITH AMD RYZEN™ THREADRIPPER™ PRO PROCESSORS

Harnessing the power of AMD Ryzen™ Threadripper™ PRO CPUs to enhance performance, streamline workflows, and push through creative boundaries

**AMD**  
**THREADRIPPER**  
PRO

### CUSTOMER

**DEXTER**  
STUDIOS

### INDUSTRY

Media & Entertainment

### CHALLENGES

Dexter Studios sought to enhance rendering speed, manage temperature, improve multitasking, and efficiently handle larger data sets in their VFX and virtual production workflows.

### SOLUTION

Dexter Studios opted for the high core count, multi-threading, and cost-effectiveness of AMD Ryzen™ Threadripper™ PRO processors.

### RESULTS

Dexter Studios significantly boosted its performance, enabling faster rendering, real-time revisions, efficient multitasking, and the handling of larger data sets.

### AMD TECHNOLOGY AT A GLANCE

AMD Ryzen™ Threadripper™ PRO 5995WX processor

### TECHNOLOGY PARTNER

**@mTek**  
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**Dexter Studios is a powerhouse of innovation and creativity that distinguishes itself in the global market for visual effects (VFX) and virtual production by offering a comprehensive approach to content creation, which includes in-house planning, technical participation, and the production of complete scenes and movies.**

The studio places immense demands on computing power, from creating high-quality assets using photogrammetry technology to implementing large LED synchronized displays. This is where AMD Ryzen™ Threadripper™ PRO processors come into play, powering the studio's workstations and rendering stations, creating stunning full 3D backgrounds, and facilitating the use of applications like Autodesk® Maya®, Adobe® Substance 3D™, Adobe® Photoshop®, and Epic Unreal® Engine.

### Dexter Studios' strategic shift to AMD Ryzen Threadripper PRO CPUs

Dexter Studios' decision to choose AMD was strategic, built on years of trust and positive experiences. Seonku Kim, Dexter's virtual production CG supervisor, revealed that their journey with AMD was influenced by Lux Machina, a renowned technical consulting firm that had proven the stability of the Threadripper PRO processors during their work on Dexter's D1 virtual production studio. Seonku Kim's personal experience with AMD further solidified the choice. "Having tested AMD products and specifications over the years, I've developed a deep trust in AMD and the performance of the Threadripper PRO processor."

Seonku Kim detailed Dexter's shift to AMD, explaining, "The chief considerations were whether AMD could run our programs smoothly, prevent crashes, and handle our heavy data. AMD checked off all these items." He added, "The Threadripper PRO processor was significantly superior to the competitor regarding core count, multi-threading capability, and performance-to-price ratio. Today, all PCs in our D1 virtual studio and head

office for rendering, control, and artists use AMD Threadripper processors."

Seonku Kim highlighted that the performance boost with the upgrade to AMD Ryzen Threadripper PRO 5995WX CPUs wasn't just a theoretical improvement; it had real-world implications. "The performance improvement was about 1.47x," Seonku Kim shared. "This allows us to produce high-quality content faster." Taeseob Kim from Dexter Studio's VFX Department echoed that sentiment, noting that the performance improvement was attractive to supervisors. "It means I can see render results faster and more often," he explained.

Seonku Kim further explained the choice to upgrade to AMD Threadripper PRO processors over adding more GPUs. "Upgrading the AMD Ryzen Threadripper PRO processor doesn't raise temperatures like adding a GPU does," said Seonku Kim. "At the same time, it doubles performance, unlike the lesser 25-30% increase from adding a GPU. That was an important consideration when we chose the AMD Ryzen Threadripper PRO processors."

### Powering Dexter's unreal transformation

AMD Ryzen Threadripper PRO processors enabled Dexter to address complex challenges, such as using Unreal Engine to drive the massive LED wall in its D1 studio. Previously, achieving the desired framerate for in-camera VFX was only possible by using multiple GPUs.

With the Threadripper PRO CPU's 128 threads, double the main cores, and quadruple the multi-cores of the previous CPU, Dexter reported a performance boost of up to two times for Unreal Engine.

The increased power of the AMD Ryzen Threadripper PRO processor also enabled Dexter to double its frame rates, crucial for synchronizing multiple large LED walls. "With our prior CPU, we could only achieve 30 FPS. Now, we get 60 FPS even without optimization," Seonku Kim shared.

"A higher frame rate means no compromise on resolution and a significant increase in image quality." Seonku Kim added that the AMD Ryzen Threadripper PRO processor upgrade significantly streamlined the creation of environmental assets for virtual production and a project that would have taken over six weeks was reduced to just four weeks.

### Equipping Dexter VFX artists to enhance multitasking

The ability to multitask across various applications is not just a convenience—it's a necessity. "Our VFX artists often have to handle multiple steps in a process simultaneously, for example, doing pre-comp and texture work," explained Seonku Kim. "We used to give two PCs per artist so that they would use one PC for perhaps rendering and checking data, and the other for synthesizing and doing lighting work," Seonku Kim explained. "I used to work with three PCs at the same time!"

Seonku Kim said, "With the Threadripper PRO processors, our artists can have Katana® and Nuke™ running simultaneously, making their workflow more efficient." This helps with troubleshooting, as well. "When there is an issue with upstream data, we have to open multiple apps to troubleshoot the problem. Now we can open Maya® and SideFX Houdini™ simultaneously to solve any issues."

### Harnessing the data deluge

AMD Ryzen Threadripper PRO processors enable Dexter Studios to handle larger data sets without first breaking them into smaller pieces, reducing risk of error and increasing stability. The ability to handle larger and more complex projects without needing repeated saving and re-importing significantly improved the efficiency of Dexter Studios' workflows.

An example of this increased capacity can be seen in a multi-million dollar project for an overseas theme park that required producing a vast 3D natural environment filled with numerous trees, rocks, mountains, flowers, and more. "We were quite stretched when doing this work with our previous processor. We only could do a little bit of the work before having to save, re-import the work, and then start doing work again," Seonku Kim shared. "With our upgraded Threadripper PRO processors, we can easily handle more intricate workloads."

### Transforming Dexter's rendering workflows

The impact of the AMD Ryzen Threadripper PRO processors on Dexter Studios' rendering capabilities was particularly evident when the team

created cloud scenes using VDB (volumetric database). Taeseob Kim emphasized, "The Threadripper PRO processors solved our limitation of having to finish the rendering of the first scene before moving on to the next. With the Threadripper PRO processor upgrade and the multi-rendering feature of Katana, we can now work on multiple scenes simultaneously. This increased our speed and rendering output and ultimately contributed to a higher quality of VFX workloads."

Seonku Kim further elaborated on the benefits for his VFX artists. "Having shorter rendering time means we can do the same number of iterations in a shorter time, which frees up time when something unexpected happens. We need a minimum of three to four iterations per shot, and we have projects involving 1000 to 10,000 shots. If you do the multiplication, you understand how many iterations we must do," he explained.

Seonku Kim highlighted the human element involved in their work, saying, "Something unexpected always happens. In the past, when rendering took longer, we would be racing against our tight deadlines. Threadripper PRO processors freed up time so there's less risk of missing a deadline, and we can handle unexpected situations better."

*"With the Threadripper PRO processor upgrade and the multi-rendering feature of Katana, we can now work on multiple scenes simultaneously. This increased our speed and rendering output and ultimately contributed to a higher quality of VFX workloads."*

*Taeseob Kim, VFX Department Team, Dexter Studio*

### Prepared for what comes next

The evolving capabilities of AMD CPUs are anticipated to continue influencing the nature of Dexter Studios' work, especially as software applications like Maya and Unreal Engine demand more from hardware. Seonku Kim reflected on the transformation brought about by the improved CPU performance, "Previously, our artists had to rely on predictions and past experiences, only seeing the output the next day. Now, with Threadripper PRO CPUs in our render farms and workstations, they can work and make revisions more quickly, seeing results in real-time."

Seonku Kim anticipates that the increased CPU performance will also affect how Dexter Studios interacts with AI. "We're exploring deep learning tools like Stable Diffusion to enhance workflow. Speeding up the iterative process of producing AI-generated outputs would be highly beneficial," he shared.

Summing up the changes at Dexter Studios, Seonku Kim concluded, "The continuous upgrades in hardware are making it difficult for us to rest. The Threadripper PRO processor is always ready to work!"



### About Dexter Studios

Dexter Studios is a leading VFX company based in Korea, renowned for its cutting-edge visual effects solutions. With a rich history of delivering exceptional quality, Dexter Studios specializes in creating immersive worlds, mind-blowing creatures, and seamless integration of CG elements. Their innovative expertise has made them a trusted partner for global film and television productions. To learn more about Dexter Studios visit [dexterstudios.com](https://dexterstudios.com).

### About AMD

For more than 50 years AMD has driven innovation in high-performance computing, graphics, and visualization technologies. Billions of people, leading Fortune 500 businesses, and cutting-edge scientific research institutions around the world rely on AMD technology daily to improve how they live, work and play. AMD employees are focused on building leadership high-performance and adaptive products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit the AMD (NASDAQ: AMD) [website](https://www.amd.com), [blog](#), [LinkedIn](#), and [Twitter](#) pages.

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