



PRESS RELEASE

FOR IMMEDIATE RELEASE - FEBRUARY 27, 2025 – 9AM (TOKYO)

DxO introduces a new generation of its AI-based denoising DeepPRIME technology for both Bayer and X-Trans sensors

This new mathematical approach sets a new bar for image quality by combining RAW image demosaicing, denoising, and chromatic aberration removal in a single pass.

Tokyo (Japan): As the international photography trade show CP+ today opens in Japan, DxO Labs, the undisputed leader in RAW image processing for more than two decades, announces DeepPRIME 3, the new generation of its AI-based RAW image denoising and demosaicing technology. Compared to the previous DeepPRIME, DeepPRIME 3 incorporates a third process: the simultaneous correction of residual lateral and longitudinal chromatic aberrations at a sub-pixel level. Trained on an image dataset ten times larger than that of DeepPRIME and using DxO's unique database of over 100,000 DxO Modules, it sets a new industry standard for what can be achieved from a single RAW file in terms of image quality.

DxO simultaneously announces the technology preview of DeepPRIME XD3 X-Trans (beta), an even more computationally intensive architecture for images that were previously considered unusable. While the previous DeepPRIME XD2 generation was dedicated to Bayer sensors, this new beta version, however, focuses on X-Trans sensors.

Both DeepPRIME 3 and DeepPRIME XD3 X-Trans (beta) will be available as part of version 5 of DxO's unique RAW preprocessing software PureRAW and will also be available in the coming weeks in DxO PhotoLab, the industry-leading full RAW editing solution, as a free upgrade.

A brand-new approach to the image pipeline

The first generation of DeepPRIME was introduced four years ago when DxO pioneered the massive use of machine learning to enhance RAW files for unprecedented image quality.

With this new generation of DeepPRIME, DxO researchers have paid particular attention to the issue of color misalignment induced by the CFA (Color Filter Array) and chromatic aberrations. By correcting these imperfections simultaneously within the network, they have succeeded in pushing the boundaries of demosaicing quality even further while correcting residual lateral and longitudinal chromatic aberrations.

This model has also leveraged the power of the proprietary image databases of DxO Labs, totaling more than 100,000 DxO Modules. It is trained on an image dataset 10 times larger than the previous DeepPRIME.



DeepPRIME XD3 X-Trans (beta) technology preview

DxO today also introduces the technology preview of DeepPRIME XD3 X-Trans (beta), a new network architecture based on the same image pipeline idea as DeepPRIME 3: to resolve chromatic aberration as part of the RAW conversion process to achieve a new level of performance in both domains.

Introduced two years ago as an extension of DeepPRIME, the DeepPRIME XD (for 'eXtra Detail') engine already pioneered more intensive processing of the most demanding files, delivering incredible results for images captured at ISO levels that had previously been considered unusable. One year later, DeepPRIME XD2 pushed this approach even further. However, DeepPRIME XD2 technology was only compatible with Bayer sensors.

This new DeepPRIME XD3 X-Trans (beta) is the result of more than a hundred iterations of exploratory research aimed at optimizing both network training and its architecture. The result is a model with several hundred million parameters and a depth four times greater than that of previous generations. This process has required several thousand hours of computation on DxO's Nvidia H100-based supercomputer cluster.

Accessible in the upcoming PureRAW 5 as a technology preview, DeepPRIME XD3 X-Trans (beta) will give X-Trans photographers early access to the next generation of noise reduction and detail extraction. Furthermore, DxO will solicit the feedback of the vibrant X-Trans community to finalize this research project and bring X-Trans users the ultimate image quality they deserve.

In parallel, DxO continues to work on its DeepPRIME eXtra Detail (XD) architecture roadmap for Bayer sensors, with the goal of covering both major sensor architectures.

Celebrating 100,000 DxO Modules

Last month, DxO passed a milestone: its exclusive laboratory in Paris has now produced more than 100,000 DxO Modules.

Pioneered by DxO more than 20 years ago, a DxO Module is a mathematical model that describes the characteristics of a lens paired with a specific sensor. This model is then used by DxO software to enhance the performance of a lens/camera combination and push it beyond the laws of physics.

The quality of the results relies on the precision that DxO's team of highly experienced technicians deploys, conducting tests in controlled environments, and using custom-made equipment and meticulous processes that have been developed over the last two decades.

DxO Modules ensure that photographers get the absolute best possible quality from their equipment.

[Learn more about the DxO Modules](#)



About DxO

For over 20 years, DxO has blazed a pioneering trail in the fields of photographic science and digital image processing. Built on principles of technical rigor and ceaseless innovation, we were at the forefront of bringing RAW development to photographers, and continue to build the most powerful and versatile software on the market, all designed to offer the greatest image quality and creative freedom.

Along with the exacting DxO Modules available in all our products, we publish DxO PhotoLab, which won the EISA 2020-2021 award for Best Photo Software and the TIPA Award for Best Imaging Software Professional in 2020, 2021, 2022, 2023, and 2024; the award-winning RAW preprocessing and noise reduction software, DxO PureRAW; and Nik Collection, the renowned suite of creative plugins for Adobe Photoshop, Lightroom Classic, and DxO PhotoLab. In addition, we publish DxO ViewPoint which allows photographers to achieve geometric perfection in their images, and DxO FilmPack which provides authentic renderings of classic film stocks.

[Learn more about DxO Labs](#)

Press contact

press.relations@dxo.com

DxO is a trademark of DxO Labs. Other trademarks and trade names may be used in this document to refer either to the entities claiming the trademarks and names or to their products. DxO Labs waives any claim to third-party trademarks and/or trade names.