

The Non-Mainstream Powerhouse of Raw: DxO Optics Pro

BY PAUL SCHRANZ

In the realm of quality Raw-conversion software, I believe DxO Optics Pro deserves far more attention than it gets. This is a powerful program that offers more accuracy than general converters and some unique qualities that make it a truly worthwhile investment. The three major strengths of DxO Optics Pro are its specific camera/lens combination analysis, its pre-conversion geometry corrections, and its excellent demosaicizing algorithm.

DxO (www.dxo.com/us/photo) is based on modules. In translating a Raw file, it considers all of the characteristics of a specific camera body, the unique qualities of a specific lens attached to that body, and an image's metadata—especially focal length—to create a highly accurate conversion. Once images are imported into a project, DxO can apply this information as a batch process when you click

the Process Now button. This yields an extremely high-quality overall conversion, one specific to your equipment, rather than a vanilla one that treats all camera/lens images identically. In fact, DxO 5.3.4 now includes more than 1,400 camera/lens module combinations. Updates for new cameras are offered fairly regularly as new equipment is released. In addition to the major manufacturers, DxO also offers specific modules for Sigma and Tamron lenses and advanced point-and-shoots such as the Canon G10.

DxO works with any JPEG file and any supported camera sensor for Raw, though many of the pro benefits of DxO exist only for the Raw format. It outputs to JPEG, TIFF, and DNG formats.

The program comes in two versions: Standard (\$145) and Elite (\$270). The Standard version includes fewer



Figure 1. Before and after DxO conversion using Geometry Correction.

body/lens combinations, while the Elite version includes the full and expanding library.

Workflow

If you decide to go beyond the batch processing of the body/lens combination (and you should), you will edit by using the thumbnails under the Select tab. Choose only the images that you want to treat with DxO's more extensive professional controls. Clicking Add Items places selected images in the filmstrip. The filmstrip remains a constant source of image access in all stages of processing.

Each thumbnail has selection and response icons that allow you to select images for further processing or to simply hold them in the project. You also will receive information if a module is missing or if metadata focus information is missing. If it is, go to the Prepare tab and then the Geometry palette, where you can manually set focus distance. A circle with a line through it indicates an image is not supported and cannot be processed.

Selected images can be edited further by clicking on the Prepare tab, which brings up control panels on the right. However, unlike other programs, which often list all of the controls at one time (compacted or expanded), DxO uses a series of graphic icons that open specific panels related to the corrections or enhancements you want to make. The panels comprise Metadata, Light Control, Color Control, Histogram, Geometry Control, and Details, and include user presets. I find this offers a much easier and faster workflow than one that requires sliding up and down an extended array of control panels.

Control Panels

The first time I saw the Geometry Control feature, I was amazed; it makes all of the supported lenses essentially shift lenses. Three sliders, plus a zoom and crop function, work on the proxy image to apply geometric correction to the Raw file on export (See Figure 1). This reduces the stretching of pixels common in post-conversion parallel correction.

When software has corrected an image's geometry, one usually needs to crop out/remove fall-off areas. However, Auto-Crop accomplishes this as the geometric corrections are applied. You can also alter an image while using the auto-cropping application.

DxO's Color Control is powerful. Not only does it use color-rendering profiles unique to the camera sensor, it also offers a multi-point color-balance system. This allows you to give images a more realistic and pleasing overall color balance, rather than a generic, single-point, objective-only application. You also can add film grain by using the supplemental DxO FilmPack (\$70).

The other area in which DxO excels is demosaicizing images shot in low light. A nice benefit of Raw is that this process keeps improving as the company devises new algorithms.

DxO's demosaicizing process looks at the relationship of pixels farther than the nearest neighbor, farther than five pixels—the program looks at a radius of more than 10 pixels. As the megapixel size of cameras increases, this approach makes more sense. DxO's demosaicizing process seeks repeated patterns in an image, so that the formula used for demosaicizing is driven by image content, rather than simply using a library of preset algorithms. As a result, conversion artifacts, particularly in low light, are significantly minimized. Digital noise is visually lower—the company claims two full stops lower. While I can't objectively prove that, I can visually confirm that the noise created by a 1600 ISO image is significantly less pronounced than I've found using other Raw converters.

Process

Having decided how to process an image (or group of images), you select which to convert by clicking on the Process tab. Selected images are then shown in the queue, while output options appear on the left. A significant feature in the Pro version is the ability to create various output formats for JPEGs, TIFFs, and DNGs, which can be applied in sequence to any image in the queue. For a single image, you can create several different qualities of JPEG, or 8-bit or 16-bit TIFF, at different resolutions, and an additional DNG for a library archive. There is also a smooth file-exchange relationship between DxO Optics Pro and Adobe Lightroom. Keep in mind that DxO conversion is amazingly accurate, but it is not particularly fast.

The last step in the DxO process is a review process that allows you to compare your pre-converted image with the post-converted file.

DxO's research can benefit you whether you buy the program or not: DxO recently launched a Web site (www.dxomark.com) that published the analysis and data from tests the company conducted on specific camera-body sensors. These tests were the result of information measured directly from the Raw image, as opposed to making judgments on a post-Raw converted image. The tests included actual ISO sensitivity, speed-to-noise ratio, dynamic range, tonal range, color depth and sensitivity spectrum, and metamorphism. The test results give consumers an objective look at what each sensor is capable of. A qualitative-value numbering system is applied, and cameras are ranked by performance.

DxO Optics Pro is an excellent conversion program that yields optimum results. Give it serious consideration if you're looking for a high-end primary or auxiliary program for use with another digital imaging program. ■

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