September 2017

IQ3 100MP Trichromatic
Digital Back

The IQ3 100MP Trichromatic Release Note

This release note describes the new features of the IQ3 100MP Trichromatic Digital Back for the XF Camera System.

Phase One Trichromatic Philosophy

The Phase One Trichromatic Philosophy is our guiding principle. It holds that our goal is to be truthful to the vision of the photographer by portraying color exactly how their eyes see it in the scene before them. Created together with Sony, Phase One's Trichromatic color technology has set a new benchmark in the era of digital color photography.

The technology inherent in the IQ3 100MP Trichromatic starts with the hardware. We have physically customized the Color Bayer filter on an all-new 101-megapixel sensor to tailor the color response. This allows the IQ3 100MP Trichromatic to capture color in a new way, unlike anything else. In essence, it's designed around the concept of mimicking the dynamic color response of the human eye.

TRICHROMATIC SENSOR

STANDARD CMOS SENSOR

The customization of the Bayer filter material in the IQ3 100MP Trichromatic allows the sensor to capture, and thus produce, cleaner color separation of the red, green and blue pixels, particularly at lower wavelengths. Separating color at a sensor level from the time of capture, with little to no color contamination, provides improved latitude in the final image render. This separation allows for richness and control that otherwise cannot be achieved. Recorded RAW data is, therefore, able to supply a more faithful representation of color in the final file, making it possible to easily and accurately achieve natural results.

Features

New sensor dedicated to color

Commissioned by Phase One and built by Sony, the new Phase One Trichromatic sensor is only found within the IQ3 100MP Trichromatic Digital Back. This opens a fresh world of color capability, capturing vivid and vibrant color close to the dynamic color ability of human vision. This pioneering technology sets the IQ3 100MP Trichromatic in a league of its own.

> "The ability to capture an image that reflects almost exactly what you see the moment you press the shutter button, with little to no interpretation or conjecture, is a fantastic leap for photography and, more importantly, for the integrity of image quality."
>
> -Niels Knudson, Phase One Image Quality Professor

Prioritizing Image Quality – ISO 35

The ISO performance of the new IQ3 100MP Trichromatic sensor has expanded to a range never-before reached in a medium format CMOS sensor. While others may concentrate on higher ISO's, Phase One concentrates first on image quality. A base ISO of 35 means the IQ3 100MP Trichromatic can produce the cleanest 101-megapixel image possible, and reaching to 12,800 provides the flexibility required by the world's most demanding photographers.

Please contact your local Phase One Partner to learn more about the IQ3 100MP Trichromatic

Firmware

The IQ3 100MP Trichromatic is available only for the XF Camera System.

To maintain complete system compatibility, it is recommended that Feature Update #4, or later, for the XF Camera System is installed **(Camera package file CP4.00.52.fwp, or later).** Previous versions of the XF Camera firmware may be compatible with the IQ3 100MP Trichromatic but are not recommended.

Please download the most recent Camera Operating System from http://www.phaseone.com/Downloads

Capture One

The RAW files (IIQ) produced by the IQ3 100MP Trichromatic are supported in Capture One 10.2 or later, in Pro or DB mode.

You can download Capture One from www.phaseone.com/Downloads. DB mode for Capture One is free for all Phase One Digital Back users.

IQ3 100MP Trichromatic FAQ

Questions and answers for the IQ3 100MP Trichromatic

Has the IQ3 100MP Trichromatic changed the array of the color filter on the new Trichromatic sensor?

- The filter array of the IQ3 100MP Trichromatic remains as a standard *RGBG* Bayer filter mosaic. As this sensor is customized specifically for color, the filtering material that defines the color response of each individual pixel has been customized to produce cleaner R, G and B values.

Will the IQ3 100MP Trichromatic produce more accurate colors than other digital CMOS sensors?

- The new sensor of the IQ3 100MP Trichromatic is designed to provide accurate colors more easily as the sensor can ensure the purity of color measure for each individual pixel. This is easiest to see in richer chroma as there is less contamination (and therefore improved additive color control) from neighboring hues.

Does the IQ3 100MP Trichromatic have a greater color depth than previous digital backs?

- The IQ3 100MP Trichromatic, along with the existing IQ3 100MP and IQ3 80MP Digital Backs, produce 16bit color RAW files. The IQ3 100MP Trichromatic, however, is able to capture, control and therefore deliver these colors in a way that mimics the color response of the human eye, giving a more natural, pure result. This provides improved color performance, efficiency and post processing flexibility.

Is it possible to update my existing IQ3 100MP digital back to an IQ3 100MP Trichromatic?

- As the IQ3 100MP Trichromatic is built around an all new sensor, it is not possible to apply the changes to an existing IQ3 100MP. You are able, however, to trade in your existing IQ3 100MP for an IQ3 100MP Trichromatic through your local Phase One Partner.

The XF Camera Manual and technical specifications are available from www.phaseone.com