

FUJIFILM GFX100S

Is this the answer for large format digital photography, squeezed into a compact package without sacrificing creature comforts? Peter Eastway reports.

While a 20-megapixel sensor is practically all anyone needs, there is nevertheless a keen interest in higher resolution cameras. So, if you're a photographer who has this interest, read on because Fujifilm's latest GFX100S could be an affordable option.

Now, there are lots of caveats to add. 'Affordable' is a relative term, as is high resolution, for that matter, but most readers will understand the need or desire for higher resolution photography. While a 20-megapixel sensor will make a beautiful A2 print, a 50-megapixel sensor seems to be even better when produced at the same size and 100-megapixels better still. The more pixels you have, the better the quality of the reproduction.

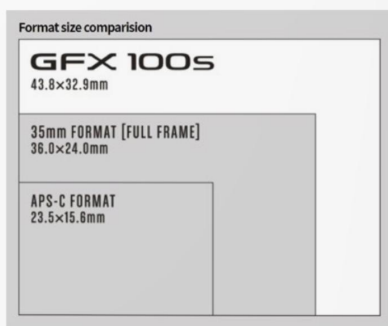
The same approach can be applied when producing photo books. If you want to make a large format book, with 400 mm square pages for example, a 20-megapixel sensor will certainly suffice, but a 100-megapixel sensor will look better. On the other hand, your photos reproduced on Instagram probably don't care what size sensor you have used at all!

So, let's get the pixel envy issue out of the way. You don't need 100-megapixels, but there are plenty of us who want them!

Large or Medium Format

Fujifilm sensibly labels its GFX cameras as 'large format' because in comparison to a full-frame sensor (which measures 24x36 mm), its GFX sensors are much bigger (around 33x44 mm) or 1.7 times the area.

Other camera manufacturers would call this 'medium format' because it is larger than the 'full-frame' 24x36 mm sensor, but much smaller than 'large format' film which starts at around 9x12 cm. However, how many people today know anything about the old film formats – and so the term 'large format' makes good sense.



Both Fujifilm and Hasselblad use the same size sensor for their mirrorless large/medium format cameras, but Hasselblad and Phase One use a larger 40x53 mm sensor on their SLR style cameras and that's 2.5 times the area of a full-frame sensor. The main challenge with these larger sensors is price and it's easy to spend \$100,000 on a camera and lens. And those cameras are relatively heavy and don't operate as quickly or easily as a mirrorless camera.

In comparison, the cost of the Fujifilm GFX100S body is around \$10,000. Add a lens for another \$2,000 to \$4,000 and you're in business, so the price differential is huge. They are completely different markets.

Several writers have suggested that Fujifilm's GFX100S isn't in competition with Phase One, rather it's competing against the Sony A1 (\$9800 body only), the Nikon Z7 II (\$5400) and Canon R5 (\$6500). Yes, the GFX100S is more expensive, but it offers at least double the number of pixels and better dynamic range. What's not to like?





Size Issues

Apart from price, what deters many people from medium format photography is the physical size of the cameras and their weight. With a larger sensor, medium format cameras have by necessity been considerably larger than 35mm or full-frame mirrorless cameras. But not now. Despite the Fujifilm GFX100S having a sensor 1.7X larger than a full-frame camera, it is smaller and lighter (900 g) than a Nikon D850 and only slightly larger than a Nikon Z7 II. Of course, you can get smaller DSLR and mirrorless cameras, but the point being made is that the GFX100S is roughly the same size and weight as what many of us are shooting with now. Size and weight are no longer a significant obstacle to medium format, er, large format photography!

The other main obstacle for medium format was a lack of speed. Accepting the larger cameras, the autofocus system and frame rate are considerably slower. In comparison, the AF on the GFX100S is sensational. It might not be the absolute fastest in the world, but the majority of users will never complain about its speed or accuracy. On the other hand, the maximum five frames per second doesn't come close to the 10 to 30 frames per second available on smaller cameras; so if hosing down your subject with a burst of exposures is part of your approach, medium format is not yet ready for you.

So, before we list what the GFX100S can actually do, let's summarise the situation. The new large format camera offers stellar image quality with roughly the same weight and autofocus system as full-frame cameras. The maximum frame rate isn't bad and the price is certainly more expensive. But if you're looking for an opportunity to dive into medium format (err, large format) photography, this seems to be the camera!

Features

The mirrorless Fujifilm GFX100S is equipped with a 102-megapixel sensor and the X-Processor 4, also found in the earlier GFX100. The back-illuminated sensor offers a dynamic

range of a little over 12 stops, which is up to a stop more than the best DSLR and mirrorless cameras and around a stop less than the Phase One IQ4. (Different people measure dynamic range differently, but the relative differences remain.)

And it wouldn't be a new Fujifilm camera without a new film simulation mode: Nostalgic Neg is characterised by high saturation and soft tonality, using colours and tones reminiscent of the "American New Colour" which, Fujifilm explains, emerged in the 1970s to replace monochrome pictures with colour photography as the mainstream style for photographic fine arts.

The body casing is made of magnesium alloy with added thickness around the base of the lens mount to support larger lenses and the package is dust and weather resistant. Inside is a newly-developed 6.0-stop, five-axis IBIS image stabilisation system. Approximately 20% smaller and 10% lighter compared to the IBIS unit in the GFX100, it uses



high-performance gyro and acceleration sensors as well as an updated algorithm for detecting vibrations for better image stabilisation – and being built into the body, it means all lenses are effectively stabilised.

The autofocus system uses 3.76 million phase detection pixels across the sensor surface, giving almost 100% coverage, and the algorithm for movement prediction and face/eye detection has been updated to track a moving subject and people within the frame more accurately. Fujifilm claims the camera attains focus smoothly, even in near-darkness conditions down to -5.5EV, such as in a dark room or at night outdoors illuminated only with starlight. However, you'll need to be using the new Fujinon GF80mm F1.7 R WR for this level of performance (because of its super wide maximum aperture).

On the top left of the camera is an exposure mode dial with six customisable positions, plus there's a selector to instantly switch between still and movie modes. On the other side, a 1.8-inch sub LCD monitor displays key settings such as shutter speed, aperture, ISO sensitivity, as well as the number of frames remaining while shooting stills and the duration of



time remaining while recording video. The display can be customised.

Video Too

On the rear panel is a 3.2-inch LCD monitor which can tilt in three directions for high- and low-angle shooting. Video producers will be impressed with up to 4K/30P capture, recording 4K/30P 4:2:0 10-bit video onto an SD card, or 4K/30P 4:2:2 10-bit video via the HDMI port for greater colour sampling.

In the DCI format (17:9 aspect ratio), commonly used by digital cinema cameras, the GFX100S records video with a sensor area measuring about 49.5mm diagonally. The size, bigger than that of large sensors increasingly adopted by high-end cinema cameras, results in outstanding high ISO performance, shallow depth-of-field capability and wide tonal reproducibility.

This makes it easier than ever to produce premium-quality video footage with more detailed textures and three-dimensional definitions, Fujifilm claims.

The GFX100S supports the H.264 and H.265/HEVC

compression codecs as well as F-Log for richer tonality and the Hybrid Log Gamma (HLG) for recording high dynamic range (HDR) footage. The bit rate can be set up to 400 Mbps and when used with the Ninja V by Atomos, the GFX100S can record the Apple ProRes RAW format which is free of in-camera processing, allowing users to apply exposure adjustments and colour grading with plenty of flexibility.

In comparison to other medium/large format digital cameras on the market, the Fujifilm GFX100S really is in a space of its own. In comparison, all other cameras are relatively slow in operation and struggle to operate as easily as the smaller format mirrorless cameras.

In many ways, the Fujifilm GFX100S gives you the best of both worlds.

