

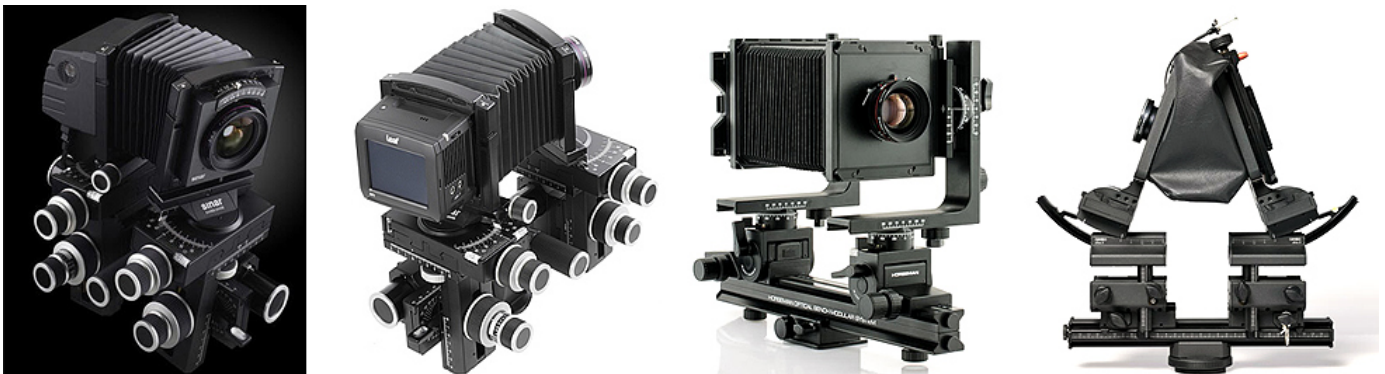
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FROM FULL FRAME DSLR TO TECHNICAL MEDIUM FORMAT: FUJI GX 680 REVIEW

# From Full Frame Dslr to Technical Medium Format: Fuji GX 680 Review

**Many photographers that focus on advertising and still life product photography use a Full Frame DSLR. This is a short story of how I've selected Fuji GX 680 as my studio technical camera.**

Acknowledge, that they can not with this equipment exploit the possibilities that photographers previously used with Large Format technical cameras.



The great advantage of these cameras was that could move independently focal plane of the lens relative to the photosensitive surface of the film at the time. The front element of the lens can be moved up and down and side to side in a horizontal or vertical angle relative with to the back element that were the film, and is moved if necessary. These moves were designed to allow these cameras to correct on camera, the perspective distortion in architectural photography and in advertising photography gave the possibility of selective focus.

Watch the video where I show all the movements of the Fuji 680 GX camera:



For example you can on camera take pictures of a package and choose any part you want to sharpen more or blur in terms of Photoshop. In photographing jewelry – which is the area that interests me most – usually when we want a jewel to be focused all along , using the technique of Focus Stacking ( in most cases even with F 22 the result is not satisfactory because with so closed diaphragm the lens is not performing well ) in Photoshop, a technique which requires several shots, depending on the size of jewelry and is time consuming .

With a technical camera can bring the level of focus of the lens parallel to the axis of the object being photographed and you can have perfectly focused jewelry, for example, with only one shot. The only disadvantage of this cameras was their price and their large size . The downside of the price no longer applies since you can find them on a fraction of their original price and relatively immaculate condition since they are machines that never leaves the studio.

Now, however, a great opportunity presents because of the digital age, the technical cameras are in approachable prices and most importantly can be combined with MFDB medium format digital backs . This gives the possibility to exploit the advantages of these movements of cameras without departing from the digital environments which we do most in recent years. For this purpose, special adapters are manufactured ,who combine a technical camera with a MFDB from another manufacturer. This creates a couple of old technical body and new digital back . This of course can occur because the size of digital backs is approximate sizes of the large format films, used by technical cameras. Due to the large sensor CCD, we can exploited and moves from the lens.

A problem occurs however, with this combination is the link of digital back to the technical body. Apart from the necessary adapter to allow the back to fasten on the technical body , need some wires that give the signal to digital back that the camera shutter is open and must record the

wires that give the signal to digital back that the camera shutter is open and must record the shot. Modern digital backs , effectively acting like scanner, so when the camera has lifted the mirror and curtain , then you must synchronize the digital back to record the image through the lens. That exactly do these cables.

Another practical problem of the combination is that there is no possibility for manual focus with the photographer's eye on the camera. This is because at the point where ( the rear of the machine ), served as a "view finder" is adapted digital back . This problem is solved by the function "live view" of modern DB via RAW Workflaw programs. Essentially watching the frame into live video and adjusts the focus of the camera looking at the computer screen . One important thing I failed to mention as " obvious " is that this combination of technical + MFDB works only Tehtered the digital back to a PC or Mac via USB cable or FireWire 400 – 800.

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## Thus the necessary components of the hybrid technical + MFDB are four:

- 1) The body of the old technical camera and lenses.
- 2) MFDB the medium format digital back
- 3) The necessary adaptor, which is suitable for the combination of a specific model technical camera with a particular model of a digital back with the necessary sync cable.
- 4) PC or Mac

Regarding the technical body of the camera there are many manufacturers that still manufacture such machines and some manufacturing also digital backs for their cameras.

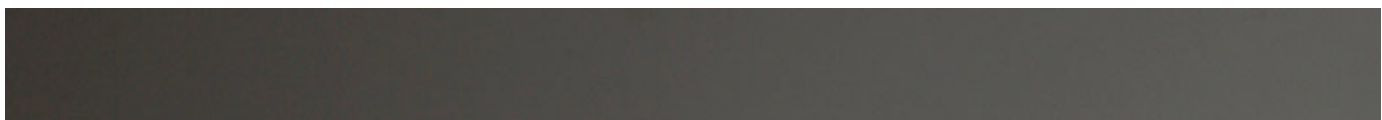
Some manufacturers large format cameras do know: Sinar, Cambo, Horseman.

Accordingly known manufacturers digital backs are: Phace One – Mamiya, Leaf, Hasselblad – Imacon, Sinar.

So searching in recent months for the components of this combination i met a medium format camera which totally ignores and does not expect that was there ! Usually when I was looking for a used technical camera body, looked older model known manufacturers large format , such as the very good Sinar P2, is essentially the penultimate Sinar model. The problem with this kind of solution was the cost of large format camera that even after so many years you can not call it low.

The P2 I mentioned as an example costs around 1300 euro to 2000 euro only the body. Another element that raises the cost , is that large format use large circle lenses to cover the large area of the film. These lenses are very good quality and so their cost is high, from 400 euro to 1200 euro depending on the type of lens you choose.

And all this without counting the cost of digital back which is at least 1500 euro for models after 2003 to 2004 . So my overall budget will not be enough even for the camera and a lens !



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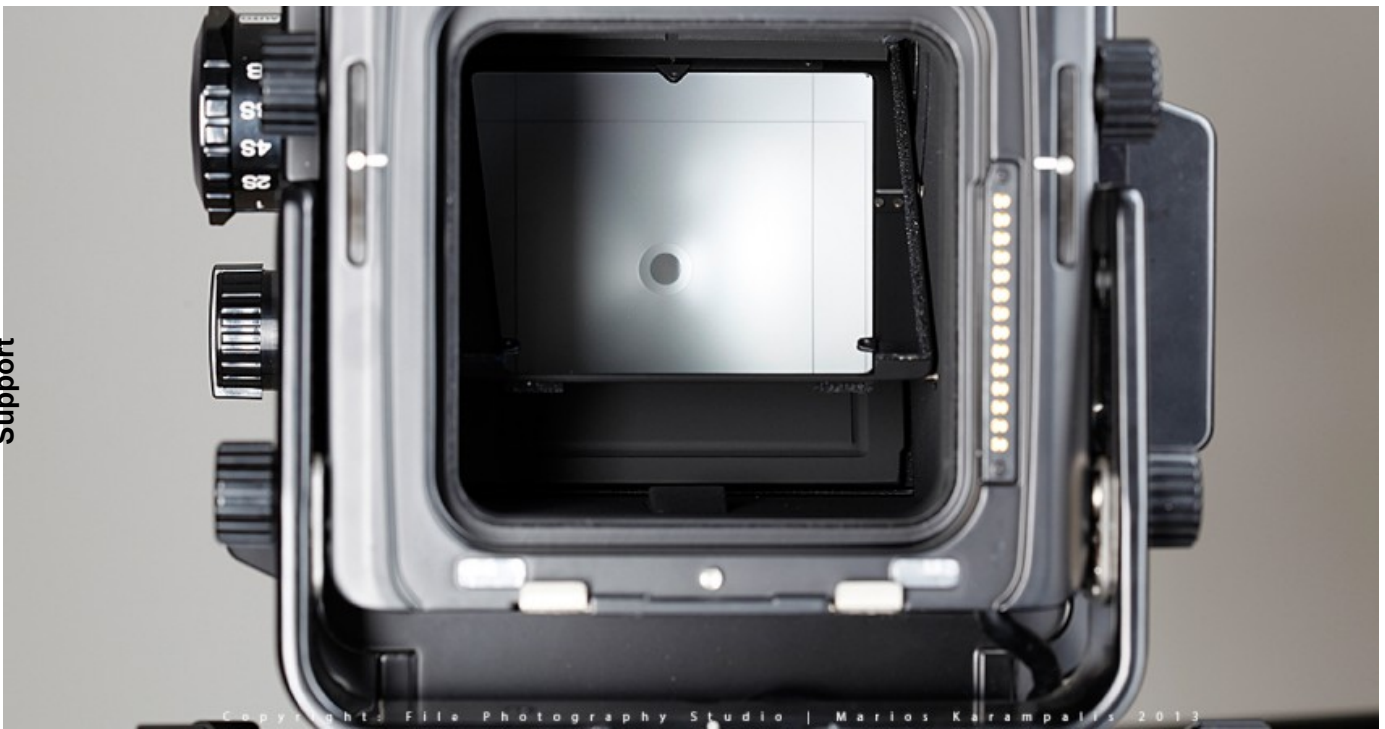
Light: File Photography Studio | Marios Karampali 2013

## Fuji GX 680 review: inside the camera





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So searching for a solution more feasible for my budget, i discovered the Fuji GX 680! Initially did not even know that Fuji had never produced anything beyond normal SLR cameras. The large advantage of this machine was that it had coveted tilt & shift movements and not worth a fortune.

Other comparative advantages are firstly that the size is almost half of the known large format cameras (Sinar, Cambo, Horseman,) certainly do not compare to a today DSLR because Fuji is almost double ! Secondly for GX 680 there are a number of very good lenses EBC Fujinon that many professionals consider them on par with the Zeiss and Schneider or Mamiya and most importantly their current cost is about 1/10 the price of the aforementioned lenses. Specifically, the cost varies from 150 euro to 700 euro and with an average value at 250 euro.

It's worth as a mediocre lens for Canon or Nikon DSLR. Third in Fuji GX 680 can be easily adjusted a digital back with an adapter. And fourth, Fuji features view finder from which you can comfortably control your focus, something in a large format camera can not be done, only by the ability of the live view – live video of the digital back, option to have only the newest DB which are more expensive.



All these advantages of the system “Fuji GX 680 – Fujinon lenes-DB” made me decide to invest in it. Surely you will wonder, that system has only advantages? the Fuji has not anyone disadvantages ? Certainly all solutions have their pros and cons. For example, this system is not suitable for photography except in studio. The camera although is small enough for medium format camera, is heavy and has a huge mirror (4 x relative to a DSLR) which generates sufficiently large vibrations especially at low speeds as a resulted images with motion blur.

This problem can be solved with a good heavy tripod and with mirror lock function available to the camera, vibrations are neutralized. So the Fuji GX 680 is not a camera, ideal for off- studio photography. Another disadvantage is that the GX 680 is able to moves the front element of the lens, but it can not move the back element in which is the DB. This restricts the creative possibilities of the camera, compared with the conventional large format movements.

In conclusion I would say that the GX 680 is a machine ideal for advertising, product, portrait and food photography.



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**/In the picture above I compare the following lenses: Canon 100mm macro | Fujinon EBC100mm GXM/**

The camera is manufactured in three different models of the GX 680 I, II and III differences are small and limited to cosmetic changes of rotating the camera buttons and the batteries are different on models I II and III . Essentially all three models have the same features . Apart from these three models , was manufactured and third the GX 680 III “S” which does not have the movements of the front element and so you may find at a lower price on ebay.

Generally, the camera has several accessories that are still on ebay and most can be used in models I and II

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**/In the pictures i compare the following lenses: Canon 100mm macro | Fujinon EBC100mm GXM/**

Along with Fuji i chose to use a DB of Imacon. The Imacon was a manufacturer of digital backs , which merged with the Hasselblad on 2004. H my choice was based on the cost of the back, of the analysis and the type of CCD . The model I chose is the Imacon iexpress 132c 22mp (2004) with the classical – 49mm x 37mm – very good quality Kodak sensor, unfortunately not produced more . It's the same sensor Phase One P25 and Sinar 54M.

Let em know what do you think. Would love to hear what camera you are using in studio.



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## 14 RESPONSES ON "FROM FULL FRAME DSLR TO TECHNICAL MEDIUM FORMAT: FUJI GX 680 REVIEW"



**ROMEO.DEBIES@GMAIL.COM65** APRIL 13, 2018 AT 01:08 [LOG IN TO REPLY](#)

I have the Fuji 680 with all the lenses in my closet collecting dust and also I have the Hasselblad 39 camera and lenses Alseef2 collecting dust because I use the Fuji GFX50S now please tell me how to get the Hasselblad back to fit on my 680 where do I find the adapter???? Thank you



**ALEXANDER FEDIN** AUGUST 11, 2016 AT 13:26 [LOG IN TO REPLY](#)

I shoot mostly landscapes with this amazing camera, both on film and h4d-31 db. It fits well into a backpack along with a bunch of fuji velvia film rolls. I don't even use a separate light meter, as I already carry my iphone with an app with me.



**EKG** FEBRUARY 27, 2015 AT 18:20 [LOG IN TO REPLY](#)

I am looking to buy a medium format camera. I have to shoot a jewelry catalog. Will a Hasselblad with a 120 macro work better than the Fuji GX680? – What lens would fill the frame of one ring? And how close do I need to get to fill the frame using a 65mm, 135mm, 180mm or a 250mm lens? With the 680 can all of these lenses be macro using the focusing rails? I am also looking for a P45 or P45+ to do the job. If you know of one, please let me know :) Would you recommend the tilt shift adapter from Hasselblad? With catalog shooting I need to go fast but have everything in focus. I have very powerful strobes and I could stop down to 45 on both cameras. Would Hasselblad be able to do this or should I go the 680 route? Thank you!





FILE PHOTOGRAPHY STUDIO FEBRUARY 28, 2015 AT 05:36 LOG IN TO REPLY

First of all you must consider the budget you have. Both of the cameras can deliver exceptional product shoots and do easily the catalog job.

A budget for example for Hasselblad H3D with 31 Mp digital back and the 120mm macro lens, if you bought it from your local Hasselblad dealer (and not from ebay unless the seller has service document from Hasselblad) is about 7.000\$

On the other hand a fully equipped Fuji 680 with three lenses ( 100mm, 135mm, 180mm all at 5,6) is about 1.000 – 1.200\$ and you can spend any budget on Digital back. For pairing the Fuji i do not recommend Phase One digital backs because they want extra equipment to work with Gx 680 body. You can look for older Hasselblad DB.

Some things to consider for both systems:

- 1) Hasselblad 120mm macro is a perfect hi end lens (3500\$ new) but is equivalent to only 94mm on a 35mm SLR. That means if you shoot a ring from the usual distance 40 – 60 cm from the camera you will have covered only 40 – 50% of the ccd sensor. (i have used H3d and it is like that)
- 2) Hasselblad has only one macro lense (HC macro 120mm) of course you can buy extenders to work ( H13, H26, H52)
- 3) All the Fuji lense can work as Macro and with the extended (80mm) rails can work as extra macro, for example with 100mm 5,6 and extender you can fill 95% of your sensor. But in such macro conditions you cant have depth of field or use tilt and shift capabilities. You must to focus stacking to work.
- 4) Hasselblad HTS 1.5 is very good tilt shift equipment, but is very expensive (6000\$) and is useful most for architectonic photography.
- 5) You can have everything sharp without f45, i usually work at f22 with Fuji and if you are not satisfied with f32 you can always do focus stacking for 5-10 frames.



**FILE PHOTOGRAPHY STUDIO** FEBRUARY 28, 2015 AT 05:50 [LOG IN TO REPLY](#)

Conclusion:

If you have budget under 10.000\$ go for Fuji with an Hasselblad DB from 2005 and earlier.

If you have 10.000\$ and more, go for an H3D II with 39 mp Digital Back for more crop area an 120mm macro and extender H13 and HC 100mm for larger products.

I forgot to tell you that, the minimum distance from the lens is crucial. With Fujinon 180mm you can't focus closer than 60cm with 80mm extender rails and 90cm with out! The best lens fro a ring is 135mm with 60% ccd covering and 40cm focus distance. I don't know the minimum focus distance for all Hasselblad lenses but i thin that you can wor for the catalogue only with 120mm all others have much bigger minimum focus distance, like HC 80 which i have work for big necklaces and has about 90cm minimum focus distance!

I hope i was helpful if you have more questions email me, i consider selling fuji. [info@filephotography.gr](mailto:info@filephotography.gr)



**TIM HILL** DECEMBER 1, 2013 AT 11:25 [LOG IN TO REPLY](#)

Hi Marios,

I shoot all my food images in my studio on my Fuji GX680 mostly with an 80mm lens and a Sinar 54 back.

Its good to know someone else appreciates this fine camera.

Regards

Tim

<http://www.timhill.co.uk>



**FILE PHOTOGRAPHY STUDIO** OCTOBER 26, 2013 AT 15:03 [LOG IN TO REPLY](#)

I got carried away!!!

In the last post I wrote backwards!!!!

Fujinon 100mm = like 48mm in FF DSLR

Fujinon 150mm = like 73mm in FF DSLR

Fujinon 180mm = like 88mm in FF DSLR

:-P



**FILE PHOTOGRAPHY STUDIO** OCTOBER 26, 2013 AT 14:57 [LOG IN TO REPLY](#)

2,05 crop factor with 6X8 film!!!

Fujinon 100mm = like 205mm in FF DSLR

Fujinon 150mm = like 307,5mm in FF DSLR

Fujinon 180mm = like 369mm in FF DSLR

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**FILE PHOTOGRAPHY STUDIO** OCTOBER 26, 2013 AT 14:52 [LOG IN TO REPLY](#)

Fujinon 50mm in GX 680 with 6×8 film is equivalent to 24,4mm in FF DSLR!



**FILE PHOTOGRAPHY STUDIO** OCTOBER 26, 2013 AT 14:40 [LOG IN TO REPLY](#)

Hi Andrei!

My imacon 132c has a 49mm x36,9mm CCD, ok? A FF DSLR has 36mm CCD, ok? Therefor the crop factor for my DB is  $49/36 = 1,36$  .

This means that a 100mm lens, in my DB is like :  $100/1,36 = 73$ mm on my canon FF. In a nutshell, a 73mm lens in a FF DSLR gives the same result with a 100 mm with Fuji GX 680 and my DB.

For this reason you can not use the GX 680 for architectural photography.

Because the smallest lens that exists for this camera is 50mm, which is as a  $50/1,36 = 36,7$ mm equivalent in DSLR, not so Wide Angle!! Of course this lens (50mm) works like a Wide Angle in 6×8 Fuji film which have 75mm width more than twice of a FF 36mm!!



**ANDREI GOLD** OCTOBER 25, 2013 AT 04:19 [LOG IN TO REPLY](#)

How does the crop factor of the digi back factor into the whole equation? The back is a 6×4 format if i am not mistaken, so how does the FOV crop down when shooting with it? Im considering getting the asme set up to shoot film with, but what happens when i want to go to digital, will i lose the wide end of the lenses? Complete noob in MF shooting, so forgive the ignorance of the question. Many thanks



**FILE PHOTOGRAPHY STUDIO** OCTOBER 23, 2013 AT 18:00 [LOG IN TO REPLY](#)

The mirror is not an issue. If you read the tutorial you can see that the mirror has a lock up function.

Unfortunately I do not have yet a wide-angle lens. There is 50mm, 65mm and 85mm but the really wide-angle is 50 mm which is the most expensive lens for the Fuji system 800 – 1100\$

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**FREDERICK\_BROWN** OCTOBER 23, 2013 AT 15:39 [LOG IN TO REPLY](#)

How well does the camera work for wide-angle macro shots? Is the mirror an issue?



**MYLES GASCOYNE** OCTOBER 22, 2013 AT 05:27 [LOG IN TO REPLY](#)

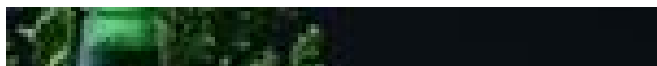
Thanks Marios very interesting

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