Articles

Shooting for 5x ©2025 Joseph T. Sinclair

There are two previous articles about shooting with a 60MP full-frame camera and cropping down to 5x. This is more a collection of examples than an article. Its purpose is to enhance the previous two articles with more photos.

I used a Sony a7CR full-frame 61MP camera with a Sony FE 50mm f2.5 G lens. Both of these are very small, thus provide an extra benefit (if small is desirable).

Sony a7CR with a Sony f2.5 40mm G lens

This combination is exceedingly high quality, not to mention expensive. It comes with a base to provide more comfortable handling for those with large hands; but I use it without the base very comfortably. The lens hood is quite small. It is a thoroughly professional camera, albeit without the extra features intended for a commercial studio photographer.

Pixel shifting

Pixel shift multi shooting, is a camera technique that captures multiple images while slightly shifting the sensor. These images are then combined to create a final image with higher resolution and color fidelity.

This camera features 16-image pixel shifting (for still subjects only). Prior Sony models required a tripod for pixel shifting; this model does not. The 16-pixel shifting increases the detail in an image but results in a 240MP (19008 x 12672) photo. Hence, you can take an enhanced still shot but will need plenty of high-speed memory. But just think what you could carve out of 240 MP.

Caveat: this definitely does not work for photos that include movement.

Some of the photos below are the standard example (standard crop) of about 5x (12MP). That is, 5x is a crop that equals about 1/5 of a full photo (in a 60MP camera). Thus, such examples are the equivalent of those taken by a

12MP camera with a 50mm telephoto lens. Other examples are more than 5x.

Original 61 MP photo

5x crop, about 12MP photo

Original 61 MP photo

5x crop, about 12MP photo

Original 61 MP photo

5x crop, about 12MP photo (notice the detail in the tower – and look closely to see that the electric lines are visible)

Original 61 MP photo

5x crop, about 12MP photo

This technique solved a specific problem I had during a recent Rhine River cruise. There are many ancient castles along the Rhine. The normal way to shoot them from the boat would be to use a telephoto lens. The minimum for a significant telephoto is about 250mm. What are the disadvantages:

- Zoom lens quality may not be up to one's standards.
- Non-zoom telephoto lenses are big and heavy, not great for traveling or handling.
- Tripods are not convenient for traveling, and handholding a telephoto lens may reduce sharpness.
- The vibrations from the boat may affect a telephoto lens more than a 50mm requiring a faster shutter speed – not convenient when you shoot in aperture priority.
- Telephoto lenses are expensive and require changing lenses as your photography changes from shot to shot.

Thus, a 61MP camera with a 50mm lens is a reasonable answer to the above considerations. The lens quality is prime. The lens is small. A tripod is not necessary. The vibrations from the boat have minimal effect. Good 50mm lenses are considerably less expensive than good telephoto lenses.

Thus, I simply shot the castles with my 61MP 50mm camera and cropped down to as much as 14x.

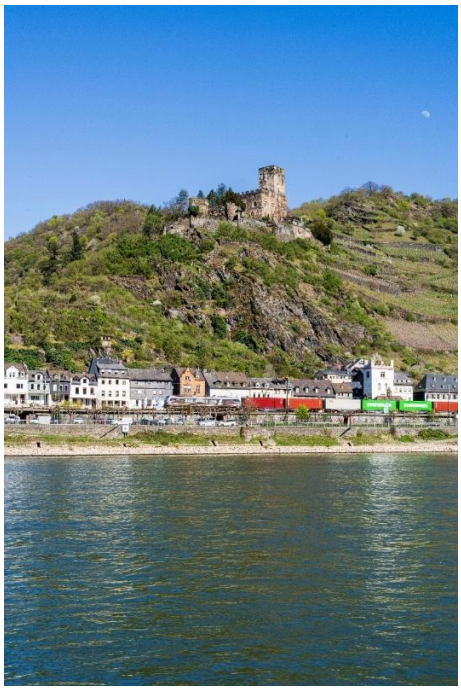
Rhine River photos:

Original 61 MP

12x crop

Original 61 MP

10x crop

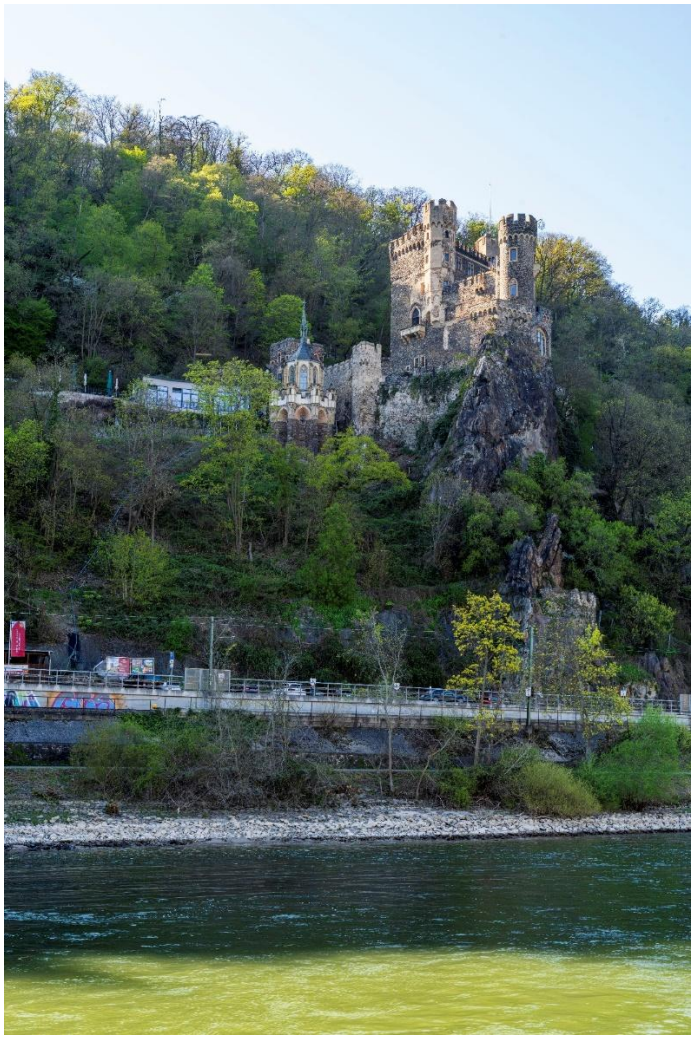


Original 61 MP

14x crop

Original 61 MP

7x crop



Original 61 MP

6x crop

IMHO

This section of the Rhine River is overhyped. The castles aren't very impressive. Very disappointing. Not a great photo op. The commercial/industrial activities and the scenery along the river are much more interesting.

Note that all photos in this article were postprocessed with the same routine processes in RAW and then cropped and rendered into

JPEGs. The individual photos could be further postprocessed for greater appeal.

I'm sure there are cases for which using this technique doesn't work well. Nonetheless, it seems to work well a lot of the time.

If you use your 50mm lens + 60MP sensor as a 5x telephoto, you will want to put your subject in the center of the frame and then crop around it. In other words, you don't need to compose a 5x photo until you crop it in postprocessing.

A 5x photo = about 12MP. With such a size, you can make a reasonably large print @240 dpi (about 16 inches) without enlargement. Nonetheless, you can crop a 10x photo just as easily. It won't print as large, but it may be OK for other purposes (e.g., digital presentations).

And don't forget enlargements. With Photoshop Camera Raw, you can now use the AI-enhanced Super Resolution to make your photos (e.g., your 5x photos) larger with little loss of quality. Other photo editing software now has such capability too.

And then there's the internet. A high-resolution size for the internet is HD, which is 1920 x 1080 (about 2MP). This is the HDTV standard. Does that mean that you can crop out a 30x high-quality photo with your 50mm+60MP combo? Alas, that might be a crop too far. But it's certainly worth some experimentation.

Original 61 MP

30x crop

Camera pros and cons

What are the advantages and disadvantages of smartphone cameras vs. high-MP cameras?

High-MP cameras (i.e., 60 MP sensor)

Pros

- Under $5,000 but equivalent to or better than a $15,000 Leica
- Complete robust shooting controls
- Viewfinder (i.e., easy to frame)

- High resolution images (e.g., 9728 x 6656)
- Wide choice of lenses
- Can simulate high-quality 5x with 50mm lens via cropping
- Prints up to 40 inches without enlarging

Cons

- Bulky (i.e., requires strap and or harness)
- Heavy
- Subject to theft if not attached to body or kept in sight
- Expensive

High-end smartphone cameras (i.e., 50 MP sensor)

Pros

- Under $1,200
- Small (e.g., fit in pocket)

- Light
- Secure against theft if kept on a lanyard
- Includes wide angle to 5x optical lenses (e.g., can shoot 5x at top resolution)
- Inexpensive comparatively

Cons

- Limited shooting controls with limited convenience
- No viewfinder
- Low resolution images (e.g., 5712 x 4284)
- Limited to built-in lenses
- Prints over 20 inches require enlarging

What do you want to do? That's what determines your choice. For normal shooting, a top-end phone camera is adequate quality, even for professional photography. If you print huge prints, you may want to use a high-MP camera.

You can shoot 5x with your high-MP camera via cropping. But you can shoot 5x with your phone camera via its telephoto lens without a loss of resolution; the result is higher resolution for 5x photos.

The point to be made is that the ability to shoot 5x with a high-MP camera and a 50mm lens tends to make it the equivalent of a high-end phone camera. On the other hand, if shooting high-quality photos is your goal, a phone camera may be perfectly suitable if you can live with the cons such as lack of a viewfinder. And a phone camera will provide higher resolution photos at 5x.

Paranoia

Although my small Sony mirrorless camera is ideal for traveling, it has a significant drawback. It's an expensive camera, and I'm paranoid all the time that it might be stolen. Consequently, it was never out of my sight on a recent four-week trip abroad, a horrible inconvenience. My spouse's CPAP in a case was stolen out of the overhead bin on a train in the Czech Republic. Thus, my paranoia was justified. I love shooting with my Sony, but now I think that perhaps a smartphone is really all one needs for travel photography.

AI tells all

The article (below) was written completely by the ChatGPT AI generator.

Input: “write an article on how to get 5x (12mp) photos using a 60mp camera and 50mm lens”

How to Capture 5x 12MP Photos Using a 60MP Camera and a 50mm Lens

If you're using a 60MP full-frame camera and want to extract multiple 12MP images from a single shot, you're in luck—modern sensors offer incredible flexibility for cropping while maintaining high image quality. With the right technique and understanding of resolution, you can effectively capture five distinct 12MP photos from a single frame. This method is especially useful in controlled settings like landscapes, cityscapes, still life, or when creating multiple compositions from one high-resolution source.

Understanding the Numbers

- 60MP full-frame sensor resolution ≈ 9504 × 6336 pixels
- 12MP resolution ≈ 4000 × 3000 pixels

This means that one 60MP image holds enough pixels to fit about 5 non-overlapping 12MP crops.

Step-by-Step Guide

1. Shoot with the Highest Resolution (RAW Recommended)

Ensure your camera is set to its maximum resolution (ideally in RAW for best editing flexibility). Using a 50mm lens on a full-frame camera gives you a natural field of view, similar to what the human eye sees—perfect for versatile compositions.

2. Use a Tripod or Keep a Stable Frame

To maximize crop potential:

- Use a tripod for precise framing and consistent composition.

- If handheld, make sure the scene includes multiple interesting sub-compositions.
- Leave room around your subject to allow reframing during post-processing.

3. Compose with Cropping in Mind

Look for compositions where the scene contains multiple elements that can stand alone:

- Portraits of multiple people
- Architecture with repetitive patterns
- Landscapes with distinct foreground/midground/background elements
- Street photography scenes with layers of subjects

Think of the entire 60MP frame as a canvas, and visualize it broken into smaller 12MP sections.

4. Import and Crop in Post-Production

Using software like Lightroom, Capture One, or Photoshop:

- Open your 60MP image.
- Crop out multiple 4000×3000 pixel sections (12MP).
- Each crop should tell a standalone story or serve a different purpose.

Depending on the original framing and subject, you can extract up to five high-quality 12MP images.

5. Preserve Aspect Ratio (Optional)

The standard 12MP resolution uses a 4:3 aspect ratio. If you want all outputs to be exactly 12MP and consistent, stick to 4000×3000 pixels. However, you can also crop to 3:2 (like 4240×2828) or square (3456×3456) if the composition benefits from it.

Bonus Tips

- Overlap Slightly for Panoramas or Storytelling: If you don't need the images to be completely independent, slight overlaps

can allow storytelling sequences or collages.

- Try Focus Stacking or Exposure Bracketing: A single high-res image lets you also experiment with different post-processing techniques like HDR or detail recovery.

- Batch Export with Presets: To speed up your workflow, create export presets for 12MP crops in your photo editor.

Why This Technique Works

High-megapixel sensors like 60MP provide immense detail, often beyond what is required for most use cases like web publishing, social media, and even moderate-size prints. By intelligently cropping, you essentially turn one image into a mini photoshoot.

This approach is perfect for:

- Maximizing efficiency in studio or travel shoots

- Creating multiple image assets from one exposure
- Improving workflow when shooting fast-moving or dynamic scenes

Conclusion

With a 60MP camera and a 50mm lens, you're holding a digital Swiss army knife. By cropping thoughtfully, you can extract up to five distinct 12MP images from a single frame—saving time, capturing multiple moments, and getting the most from your gear. Whether you're a content creator, a photographer on the go, or just trying to simplify your shoot, this technique turns megapixels into flexibility.

Clearly, we no longer need an article writer for PSPC. Let ChatGPT do it. And I can retire and enjoy the good life away from the overwhelming and unremitting pressures of the Pagosa photosphere.