

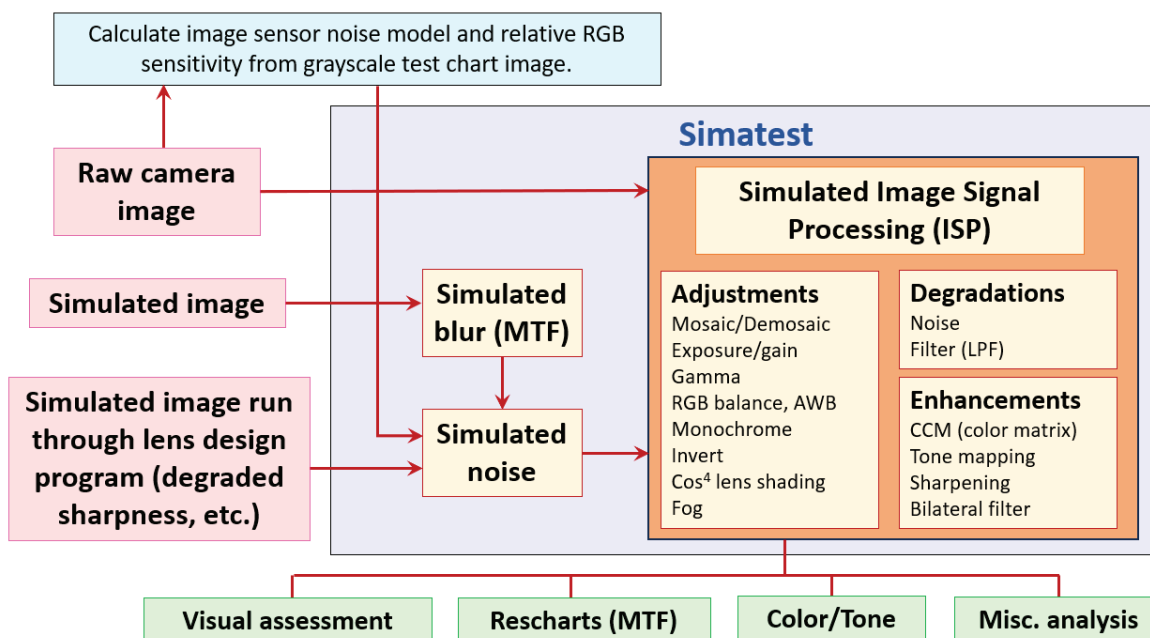
Simatest

Image Signal Processing (ISP) / Camera simulator

Why Choose Simatest?

With Simatest, you can simulate ISP pipelines and complete camera systems. Simatest includes powerful and flexible processing blocks that can be applied in arbitrary order. Input includes raw camera images, simulated images, and images degraded by lens simulations. It has a powerful image sensor noise model, based on raw image measurements.

Use Simatest to speed up the development of your image processing pipelines.



Simatest processing includes :

- ✓ **Camera and lens image degradations** such as noise, fog (veiling glare), and blur
- ✓ **Image adjustments** such as exposure and gain to simulate changing Exposure Index, gamma, and Bayer demosaicing/mosaicing
- ✓ **Image enhancements** such as applying a Color Correction Matrix, tone mapping (used in High Dynamic Range (HDR) imaging), sharpening & bilateral filtering
- ✓ **Ability to simulate** motion blur, low light conditions, misfocus, and more

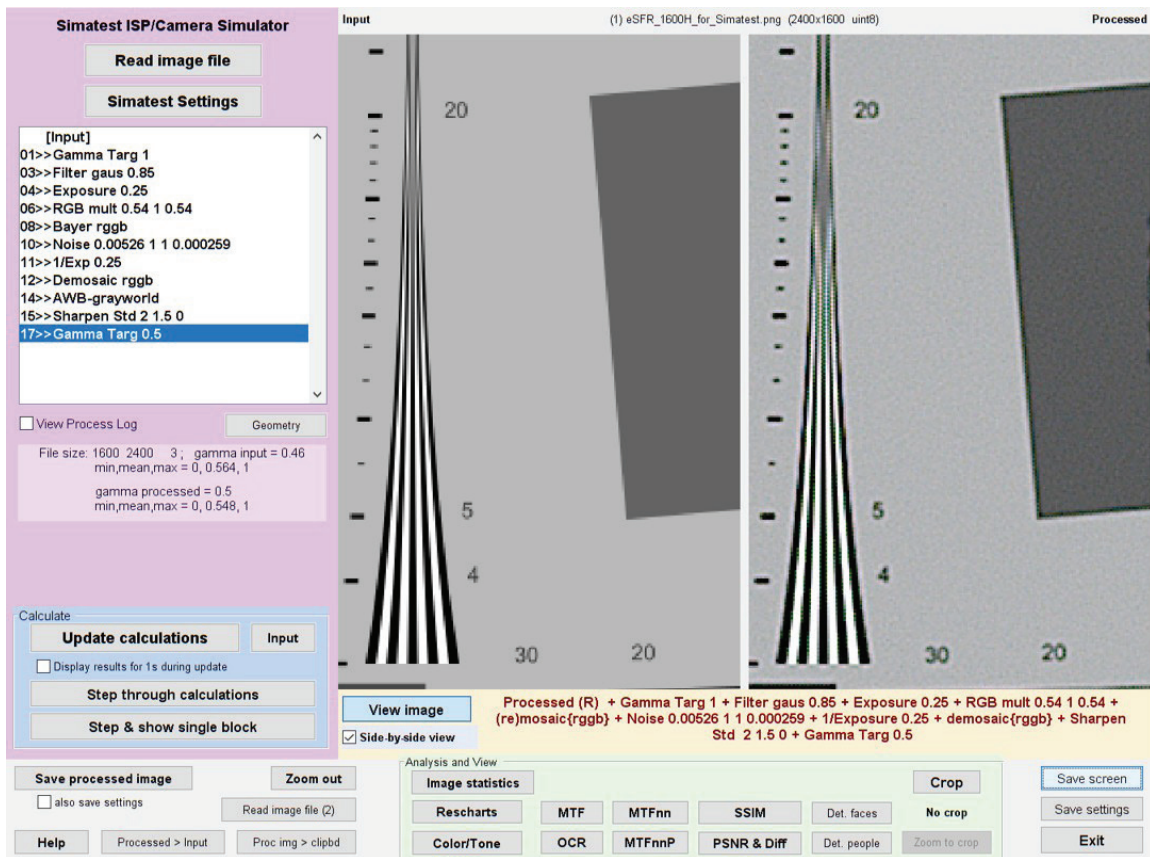
*Simatest is available in the
imatest 25.1 Pilot Program:
imatest.com/support/pilot*



Highlighted Features

- ✓ **Simatest** can operate on batches of images
 - ✓ **Simatest output** includes visual results for human vision and detailed quantitative analysis, including image information metrics, for machine vision
 - ✓ **Simatest is expandable**; processing blocks will be added based on customer requests.
- The initial processing blocks primarily affect visible and measurable image quality

Example - The image below shows ideal and processed images for a compact digital camera. The processed image includes a gaussian filter to simulate lens blur, exposure adjustment, mosaicing/demosaicing, noise, sharpening, and a bilateral filter.



Simatest side-by-side view. Input image on left; processed on right. (Zoomed in)



Simatest Instructions & Reference
imatest.com/docs/simatest/

Simatest Examples
imatest.com/imaging/simatest-example

