



ZWO ASI2600MC Pro: A Premium One-Shot Color Camera Reviewed

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By: **Lee Pullen** Published: Nov 01, 2021



ASI2600MC Pro uses Sony's latest back-illuminated IMX571 APS-C format sensor with a native 16-bit ADC. Credit: ZWO

ZWO's ASI2600MC Pro is a capable camera. Boasting an APS-C sized CMOS sensor with high sensitivity but low noise, it's a premium product for anyone wanting a One Shot Color (OSC) camera. Just be aware that the large file sizes produced may fill your computer's hard drive.

CMOS Sensor IMX571	APS-C APS-C 23.5 x 15.7mm	Resolution 6248 x 4176	ADC 16bit
Read noise 1.0e-3.3e	Cooling Temp 35°C	DDR3 Buffer 256MB	USB 3.0
FPS 3.51	Full Well 50000e	QE 80%	Pixel Size 3.75µm

The ZWO ASI2600MC Pro has impressive specifications. Credit: ZWO.

Build quality



The ZWO ASI2600MC Pro weighs 1.54lbs (700g) and feels well-built. The camera's back is dominated by a large fan, which can cool the sensor to 95 degrees F (35 degrees C) below ambient temperature. This fan is useful to lower noise levels, but perhaps more importantly allows you to create a library of calibration frames at a set temperature that you can re-use.

As the cooler takes so much power to run, it has its own power port on the back of the camera. Next to this port is a USB3.0 port to hook the camera up to your controller of choice – it works perfectly with an ASI AIR, although this review did not consider other company's products. There are also two USB2.0 out ports, meaning the camera can act as a hub for other accessories. There's even a built-in heater to stop the sensor from frosting over.



The author's ZWO ASI2600MC Pro. Credit: Lee Pullen.

Star of the show

The ZWO ASI2600MC Pro's sensor is the star of the show. It's APS-C sized (23.5 x 15.7mm), which is a sweet spot; large enough to give wide fields of view, but not so big that it requires particularly high-quality telescope optics in order to be sharp right to the edges.

It has a resolution of 6248x4176, which is ample to give good detail of most targets, and even affords enough headroom to do some serious cropping if needed. It boasts a dynamic range of 14 stops, leading to smooth images with excellent contrast. The sensor is also very sensitive, with a Quantum Efficiency (QE) – a measure of how effective a sensor is at converting photons of light into recorded signal – in the 80 percent to 90 percent range. Noise levels are low, and there's zero amp glow.

The camera sensor is a modern CMOS type, which means it works effectively even with short sub-frames; well under a minute is perfectly viable, but longer works fine, too, if you prefer. You still need long total integration times, but the days of long CCD sub-frame exposures are over.

That wonderful sensor does lead to the main drawback: the images that the ZWO ASI2600MC Pro produces are 50MB each. This necessitates a lot of computer hard disk storage, and if you're stacking many hundreds of images – likely if you're shooting short sub-frames but aiming for long total integration times – you'll want a powerful computer for image processing.



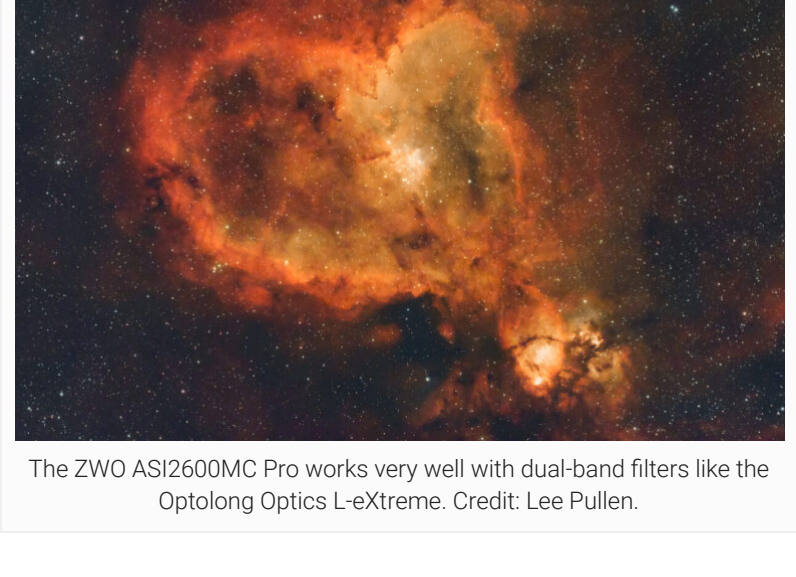
Noise levels are low, but calibration frames and noise reduction in post-processing still help to create smooth final images. Credit: Lee Pullen.

Alternatives

QHYCCD's QHY268C features the same sensor as the ZWO ASI2600MC. It's slightly more expensive, with an MSRP of \$2099.

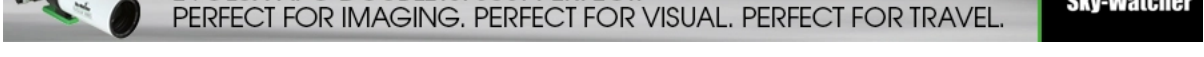
If you want an even bigger sensor then consider the **ZWO ASI6200MC Pro**. It has very similar specifications to the ASI2600MC Pro, but the sensor size is full-frame. It's about double the price, though, with an MSRP of \$3999.

If OSC isn't your cup of tea, then ZWO offers a Mono equivalent: the **ZWO ASI2600MM Pro**. It has an MSRP of \$2480, or \$3599 if bundled with an electronic focus wheel, off-axis guider, and full set of filters.



The ZWO ASI2600MC Pro works very well with dual-band filters like the Optolong Optics L-eXtreme. Credit: Lee Pullen.

- Plus:**
High image quality and low noise levels
Able to shoot short sub-frames
- Minus:**
Produces large file sizes
- Read more in *Urban Astrophotography's ZWO ASI2600MC Pro review.*
- MSRP:** \$1999
- Website:** astronomy-imaging-camera.com



About Lee Pullen

<http://urbanastrophotography.com>

Lee Pullen is a science writer and communicator from the city of Bristol, UK. He has a degree in Astronomy and a master's in Science Communication. He began his career writing for organisations including the Hubble European Space Agency Information Centre and the European Southern Observatory, as well as becoming Staff Writer for the International Year of Astronomy 2009, the world's largest ever science outreach initiative. Lee runs the website UrbanAstrophotography.com

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