A Mini Guidecam Punching Above Its Weight; ZWO ASI120MM Mini Mono Review

By: Lee PullenPublished: Dec 27, 2021

ZWO ASI120MM Mini. Credit: ZWO

Astronomy imaging company ZWO offers a variety of guidecams, with their entry level option being the ZWO ASI120MM Mini mono (MSRP $149). Despite modest specifications it has a well-earned reputation as an effective guidecam, punching above its weight and earning a place on many imaging rigs.

The ZWO ASI120MM Mini mono, with 1.25" extender attached. Credit: Lee Pullen.

Small but perfectly formed

I've been using a ZWO ASI120MM Mini mono for a year now, coupled with a William Optics 32mm Slide-base Uniguide Scope for guiding my Askar FRA400 f/5.6 72mm Quintuplet APO Astrograph on an Orion Sirius EQ-G mount. It's proved to be a very capable guidecam for this wide-field imaging system, with star trails due to tracking errors being rare.

As the "mini" in its name suggests, the ZWO ASI120MM Mini mono is tiny. It measures just 2.4" (61mm) from front to back, and only a little longer if you use the supplied 1.25" extender for ease of installing into the back of a guidescope. It also weighs a mere 2.1oz (60g), which will be much appreciated by anyone trying to keep the weight of their imaging rig down. Despite its diminutive stature, build quality is high, with the metal body feels very sturdy.

The ZWO ASI120MM Mini mono has only two ports, both on the camera's back. Credit: Lee Pullen

The rear of the ZWO ASI120MM Mini mono houses a USB2.0 type C port used to connect the camera to your controller of choice. It works flawlessly with an ASIAIR PRO or Plus, making for a streamlined and effective set-up. Note that the older, non-Mini versions – ASI120MM and ASI120MC – are not compatible with ASIAIR units, so if that's your control method make sure you're buying the right version!

Also on the rear is an ST4 port for connecting directly to a mount's guiding port. If you're using an ASIAIR PRO or Plus, this is unnecessary; all commands are sent via the USB cable.

Small but suitable sensor

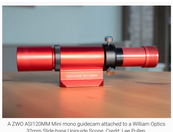
The ZWO ASI120MM Mini mono's sensor is 1/3" measured diagonally, which is small but fine when used for its intended purpose of guiding. It's best coupled with a low focal length guidescope to ensure that the resulting field of view is wide enough to capture not just one, but ideally multiple stars for guiding. It couples well with a William Optics 32mm Slide-base Uniguide Scope (MSRP $199). Noise levels are also sufficiently low to allow for relatively clean images, which is a boon for guiding.

With a resolution of 1280×960 and the ability to capture images at 30fps, in principle this little camera could also be used for planetary imaging. This aspect is beyond the scope of this review, although guide cameras with more modern sensors and USB3.0 connections would be more appropriate for guiding / planetary imaging dual-use.

The ZWO ASI120MM Mini mono sensor size is small, but perfectly adequate for guiding. Credit: Lee Pullen.

Alternatives

The ZWO ASI120MM Mini mono is pitched as an entry-level guidecam, although this doesn't undermine its effectiveness. If more precise guiding is needed, then the ZWO ASI290MM mini (MSRP $299) may fit the bill. Its sensor utilises smaller pixels, improving its ability to detect the movement of stars. The ZWO ASI174MM Mini (MSRP $499) is yet another step up, with a much larger sensor (1/1.2"), making it particularly well-suited for use with an off-axis guider.



A ZWO ASI120MM Mini mono guidecam attached to a William Optics 32mm Slide-base Uniguide Scope. Credit: Lee Pullen.

Plus:
Small and light
Affordable

Minus:
Sensor not optimal for planetary imaging

MSRP: $109

Website: astronomy-imaging-camera.com

Read more in Urban Astrophotography's ZWO ASI120MM Mini review.

About Lee Pullen

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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 Stuff 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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