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## [ASI6200 Guide] 5 connection methods to get 55mm back focus length

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How to connect ASI6200MM Pro to 2" EFW/M54 filter drawer and M68 OAG?

How many solutions are there for ASI6200MM Pro to get 55mm back focus length?

How to connect ASI6200MM Pro to the M68-thread telescope side?

If you are still stressed with these problem, then this tutorial is exactly what you are looking for.

There are **five connection solutions** for ASI6200MM Pro.

### 1. Using adapters only

## Full frame cooled camera connection solutions



This solution needs the M48-M48 16.5mm extender and the M54-M48 21mm extender. You can find them in the package of the ASI6200 camera.

### 2. Using 2" EFW

#### Full frame cooled camera + 2" EFW



This solution needs M48-M48 16.5mm extender and the M54-M48-2 adapter (come with the 2" EFW). You can also buy the M54-M48-2 adapter separately.

You need to disassemble the back cover of the 2" EFW and then fix it to the camera via the screws.

### 3. Using M54 filter drawer

#### Full frame cooled camera + filter drawer



It is much easier to connect to M54 filter drawer than to the 2" EFW with the M54\* 0.75 male thread of the filter drawer, as the picture shows below:



Please note that the back focus length of the solution 2 and 3 is 56mm, and the M48-M42 adapter will block the sensor for a little bit as the diagonal of the ASI6200 sensor is already 43mm.

Thus, we more recommend you go solution 4 and 5.

#### 4. Using M68 OAG and M54 filter drawer

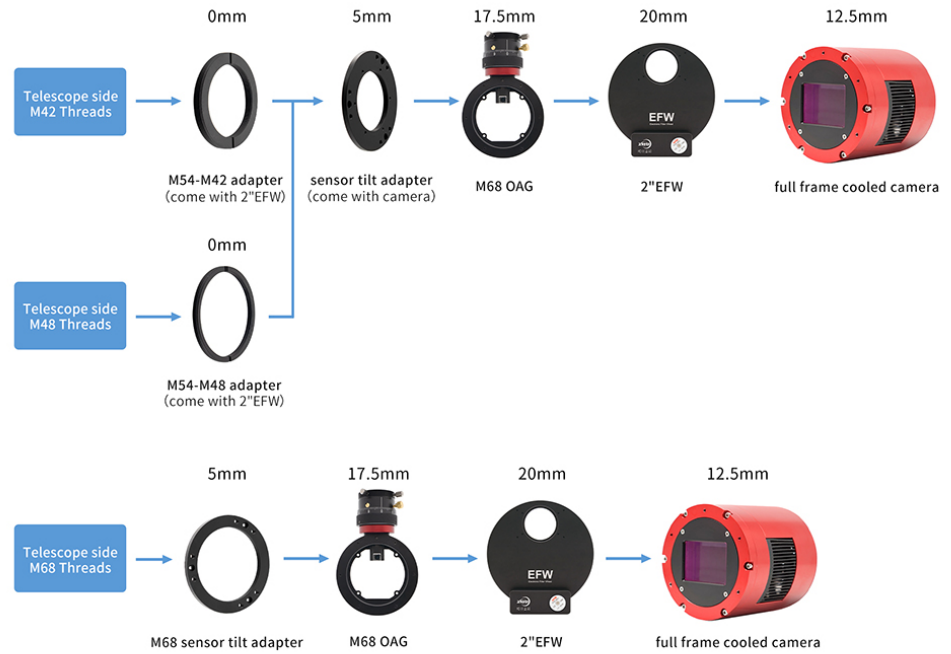
Full frame cooled camera + M54 filter drawer + M68 OAG



This solution only suits for the telescopes with M68 thread side.

#### 5. Using M68 OAG and 2" EFW

## Full frame cooled camera + 2" EFW + M68 OAG



This is the very first and also the most recommended connection solution. The combination of the mono full-frame camera and 2" filter wheel can create many possibilities on your astrophotos. The use of OAG will also help simplify your imaging setup by replacing the guide scope. It's very suitable for the middle and high-level astrophotographers.

The installation of the M68 OAG, 2" EFW and ASI6200 camera is not very complex, but considering you need to remove the sensor tilt adapter of the camera first, so we'd like here teach the detailed connection steps to help you quickly complete installation without making mistakes.

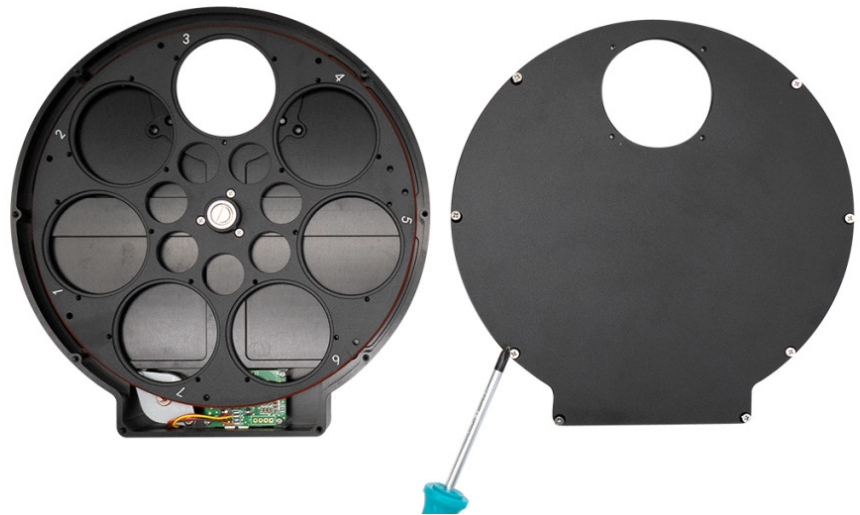
### The detailed guide of the first connection solution:

- 1) Disassemble the 5mm sensor tilt adapter on the main camera with the help of a screwdriver:



- 2) Remove the back cover of EFW:

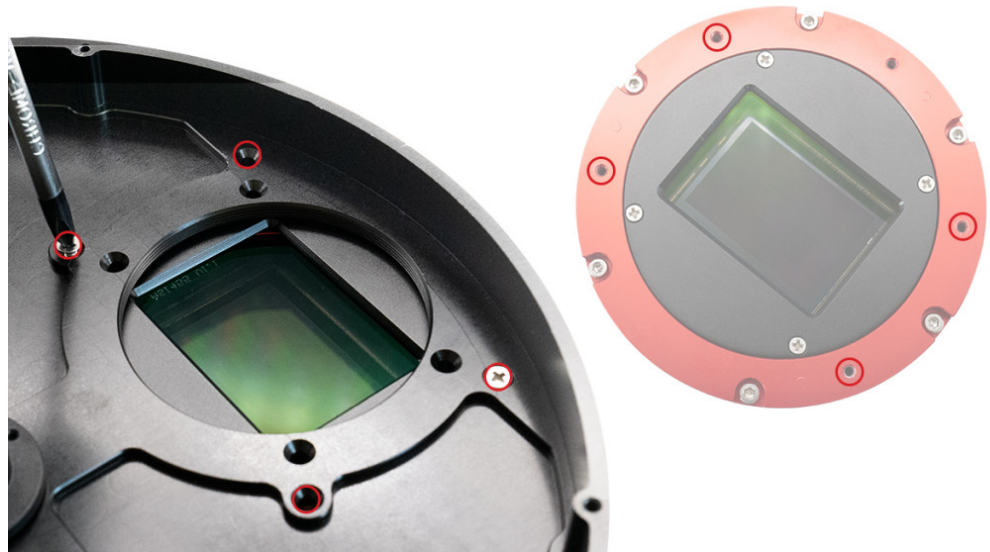




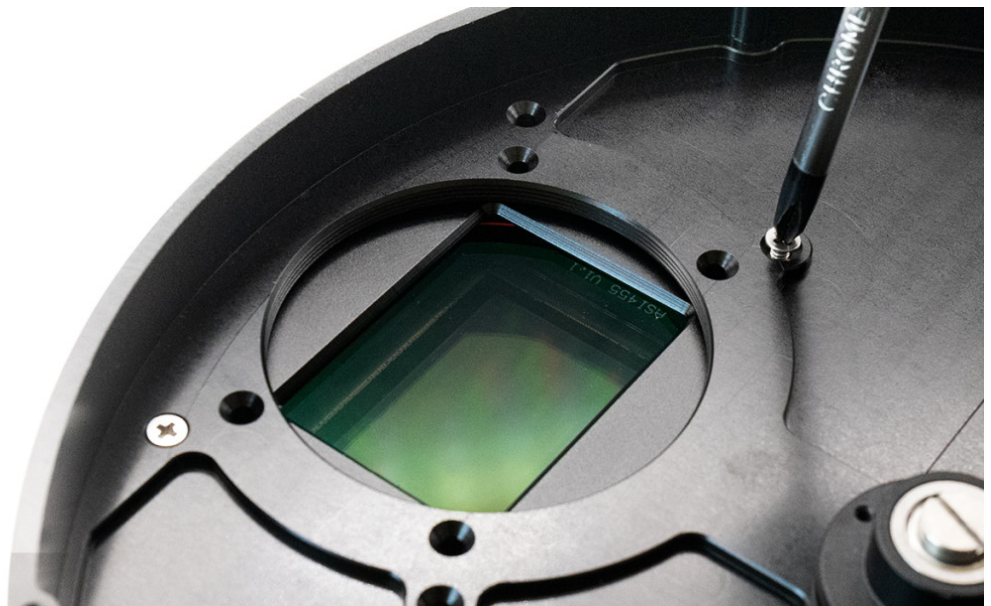
3) Disassemble the filter wheel carousel (Note: Please do not disassemble or move the central screw of this carousel, otherwise the EFW will be damaged):



4) Align the four screw holes of EFW with these in the four corners of the camera chip as shown below:



5) Tighten the screws at the interface between the EFV and the main camera:

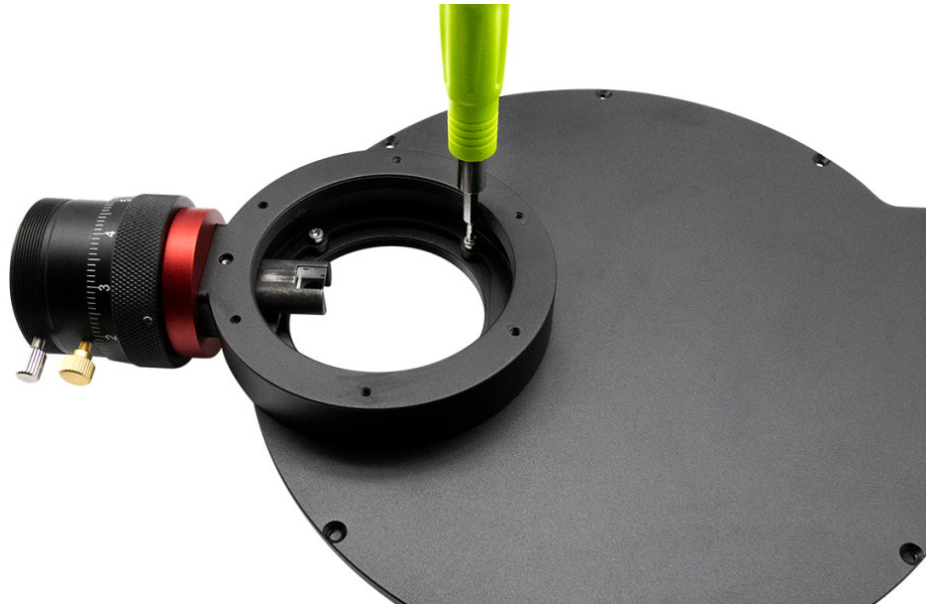


6) Install the filter wheel carousel:

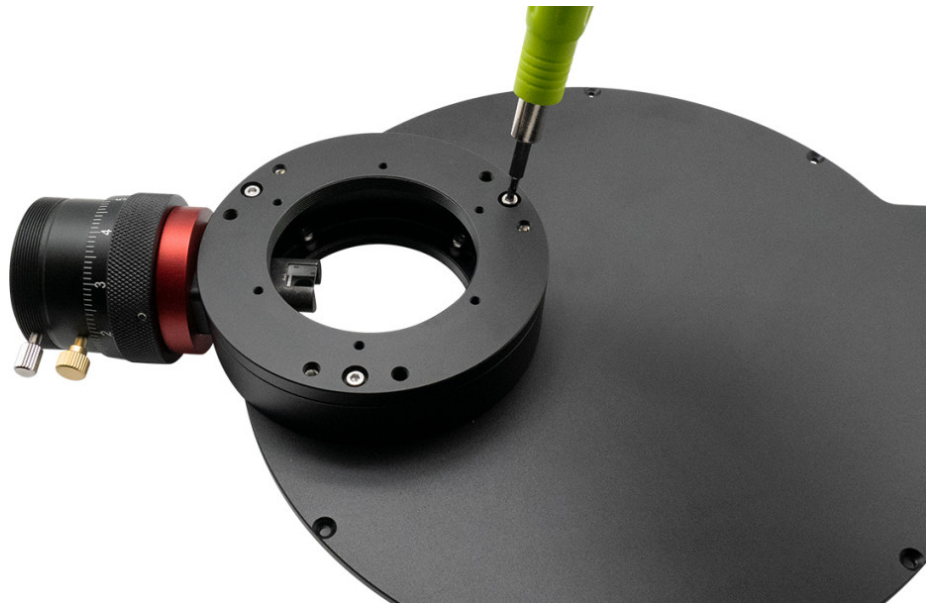


7) Fix the M68 OAG to the back cover of EFW(Note: You may reposition the prism to make sure it would not block the sensor):

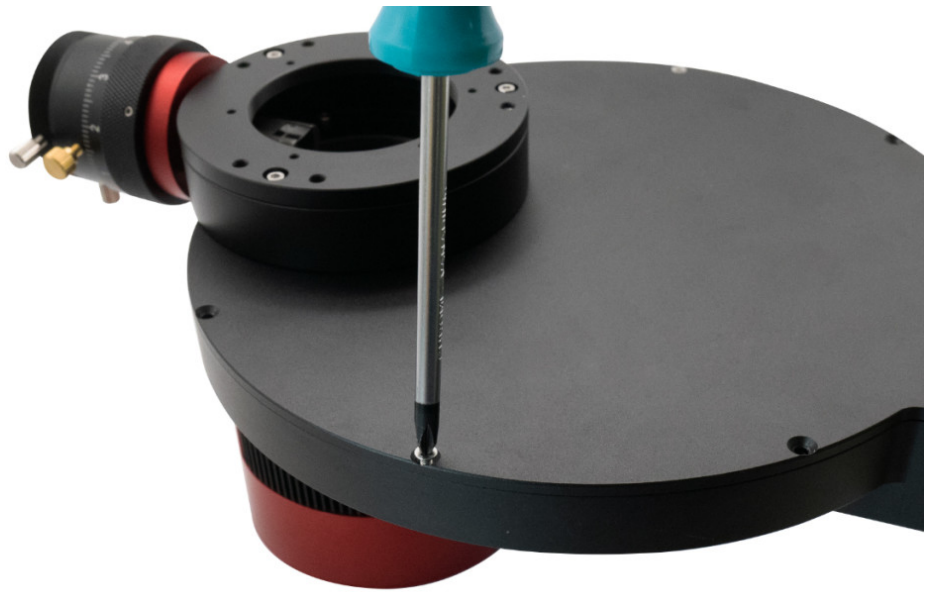
The M2.5\*8 screws used here can be found in the package of M68 OAG.



8) Fix the 5mm sensor tilt adapter to this M68 OAG. If the thread of the telescope side is M42 or M48, then you should use the M54 sensor tilt adapter just removed from the camera. While if the thread of the telescope side is M68, then you should use the new M68 sensor tilt adapter.



9) Attach the back cover of EFW to the front cover:



10) Installation completed.



**Note:** Please make sure the prism does not block the sensor or your telescope.

Adjust the focal length of a guide camera by using the guide knob.

Would be better if you finish the above steps during daytime, as it is very difficult to adjust it accurately at night.

*58 Responses to [ASI6200 Guide] 5 connection methods to get 55mm back focus length*



DL

May 17, 2020 at 4:39 pm Reply



Can you provide the instructions to connect the ASI 2600MC Pro with the 2" Filter Drawer (m54) and the New OAG (M68), How to connect for backspace 55 ? The output of the reducer 0.79x being m48. Can we buy a new m42 to m54 sensor tilt adapter from the ASI 6200MM Pro ? Thank you.

♥ 1    💔 0



**Moson**

May 18, 2020 at 6:03 am    Reply

Sorry the 2" Filter Drawer (m54) was specifically made to match with the full-frame cooled camera ZWO ASI6200MM/MC Pro. It can't connect to the ASI2600MC Pro. And the female thread of the Filter Drawer is M54, it can't connect the M48 reducer. You could use M42 filter drawer and ZWO OAG to connect ASI2600MC. Sorry we don't have M42 to M54 sensor tilt adapter.

♥ 2    💔 0



**Colmic**

May 19, 2020 at 5:22 pm    Reply

Hi,  
I have the same issue.  
I use a Tak FSQ106 with 0.73x reducer.  
With this reducer and at F/3.6, the basic OAG can't cover the APS-C format because of the shadow of the prism.  
Why don't you offer the same options for the ASI2600 than for the ASI6200 ?  
Could we order the ASI2600 with the M54 tilt adapter in place of the M42 one?  
The M54 tilt adapter is not in your Accessories options. Only M42 or M68.  
  
For all telescopes < F/4, your M42 solution isn't correct to cover the APS-C format with the basic OAG.  
Thank you.

♥ 2    💔 0



**Moson**

May 20, 2020 at 2:03 am    Reply

Sorry we don't have M54 tilter. You could try move the prism to reduce the shadow. And the occlusion of the prism will not have much effect on the imaging.

♥ 0    💔 0



**Colmic**

May 20, 2020 at 2:19 pm    Reply

Thank for your answer that not satisfy us 😞

I'm pretty sure that we are many users that need:

- the M68 OAG
- the M54 filter drawer to use ASI2600 with dual-narrowband filter

This M42 solution isn't viable for all the scopes below F/4.

For myself i use a very expensive scope (Tak FSQ106) and i already use the ASI2600 with another scope (AP 130 GTX). I cannot consider to have vigneting or shadows due to the prism because ZWO won't provide just a little M54 adapter (this adapter exists and is standard in the ASI2600).

Can you consider our request and tell your technical department to provide the M54 tilt adapter as a standard solution for the ASI2600MC or as an option solution, in fact we need exactly the same options than for the ASI2600 color one.

This is not a new reference to create or a new adapter to produce, all are still existing.

We just need to have the opportunity to use our expensive setups in the best conditions possible 😊

A big thank you 😊

♥ 2    💚 0



**Moson**

May 21, 2020 at 1:15 am    Reply

Thanks for your feedback, we are considering this, and we will introduce this option on our website as soon as possible.

♥ 2    💚 0



**Colmic**

May 21, 2020 at 9:40 pm

Good news, big thank you 😊

♥ 0    💚 0



**Moson**

May 25, 2020 at 1:22 am

You are welcome.

♥ 0    💚 0



**Barry fialkov**

May 17, 2020 at 4:31 am    Reply

Can I use the 6200mm with an oag and filter wheels connecting to canon ef lenses

♥ 0    💚 0



Moson

May 18, 2020 at 5:36 am Reply

Sorry this connection won't work, but we have an adapter for EFW and EOS lens.  
(<https://astronomy-imaging-camera.com/product/new-eos-lens-adapter-for-efw>)

♥ 0    💚 0



Tobias M

May 5, 2020 at 12:39 pm Reply

I know this is not made for the ASI1600MM. But I already have 2 inch filters from another project.  
Can I plug the M54-M42F Adapter on this Filterwheel as well on my ASI1600MM?

♥ 0    💚 0



Moson

May 7, 2020 at 1:44 am Reply

Yes, you could plug the M54M-M42F Adapter on this Filterwheel.

♥ 0    💚 0



Avik Basak

April 26, 2020 at 8:59 pm Reply

Is there a way you can use the filter drawer and the M68 OAG with the ais6200 mm?

♥ 0    💚 0



Moson

April 27, 2020 at 3:18 am Reply

Yes, you could try the following way: ASI6200(12.5mm) + M54 filter drawer( 20mm) + M68 OAG(17.5mm) + telescope.

Note: If your telescope has M68 threads, it can directly connect with M68 OAG. Otherwise you need to customize an adapter.

♥ 0    💚 0



Vlad Hogendorf

April 25, 2020 at 6:55 pm Reply

Can the EFW be attached to ASI071MC Pro camera? If yes, could you, please send me a diagram with instructions.

Thank you.

♥ 0    💚 0



Moson

April 26, 2020 at 4:04 am Reply

Sorry the 2" EFW can't be attached to ASI071MC Pro camera. But you can try connect ASI071MC with filter drawer.

♥ 0    💚 0





Jon

April 18, 2020 at 10:08 pm Reply

Hi,

Can I use an SX Lodestar II guide camera on the OAG with this camera?

Also, could I use a 6mm camera rotator between the FW and Camera without causing vignetting?

Thanks

Jon

♥ 0    💚 0



Moson

April 20, 2020 at 2:39 am Reply

Yes, you can use Lodestar II guide camera on the OAG. The vignetting might be caused by shelter, filter hole, interface or large sensor.

Could you tell me what 6mm camera rotator looks like? And how to connect with EFW and camera?

♥ 0    💚 0



DPNEU

April 13, 2020 at 11:14 am Reply

Hi, I wonder if the new ASI071MC PRO will have the same housing and 55mm backfocus, so does the 071MC PRO can be combined with in the same way with the ZWO 2" EFW as well? Thx

♥ 0    💚 0



Moson

April 14, 2020 at 3:31 am Reply

The backfocus is depend on your telescope, instead of camera.

Sorry, the 071MC PRO can not be combined with the ZWO 2" EFW in the same way.

♥ 0    💚 0



Jeremy

March 23, 2020 at 5:25 pm Reply

Is there a way to connect a Nikon lens directly to the EFW with the proper backfocus? The available M54 Nikon adapter works great with just the camera, but does not provide proper back focus when used with the EFW. Thanks

♥ 0    💚 0



Katherine Tsai

March 24, 2020 at 2:38 am Reply

Sorry, currently we do not have this adapter but we are considering this. Thanks for your feedback!

♥ 0    💚 0



Fabrizio

March 18, 2020 at 7:12 am Reply

Hi. I do not have an OAG, so I'll just use the configuration ASI6200+tilt adapter+2"EFW+M54-M48 adapter+M48-M48 16.5MM adapter. My problem is that the M54-M48 adapter is loose (it doesn't have a position where it stops rotating inside the M54 thread of the EFW exit hole) and therefore the 16.5MM adapter and everything that is connected to it (other adapters and coma corrector) is not securely tightened to the EFW. What am I doing wrong ? How can I make everything securely tight ?

♥ 1    💔 0



Katherine Tsai

March 19, 2020 at 4:37 am Reply

Sorry about this problem, our devs are looking into this.

♥ 0    💔 0



Ryu

February 28, 2020 at 12:04 pm Reply

Can I use EFW and M68 OAG on ASI094MC just like ASI6200?

♥ 0    💔 0



Katherine Tsai

March 3, 2020 at 9:21 am Reply

Sorry it cannot.

♥ 0    💔 0



Ryu

March 5, 2020 at 9:39 am Reply

Thank you very much. Last question. Is it due to the location of the 094MC screw?

♥ 0    💔 0



Katherine Tsai

March 6, 2020 at 7:08 am Reply

Yes.

♥ 0    💔 0



Avik

February 25, 2020 at 3:35 am Reply

Can this setup be connected as is to a canon 100-400L IS lens? Or do we need additional connectors? What other accessories will i need to mount the camera and the lens together

♥ 0    💔 0



Katherine Tsai

February 25, 2020 at 8:38 am Reply

We have M54-Canon adapter.

♥ 0    💙 0



Avik Basak

February 25, 2020 at 8:21 pm    Reply

you mean the EOSM54 adapter will sit in front of the sensor tilt adapter?

♥ 0    💙 0



Katherine Tsai

February 27, 2020 at 4:26 am    Reply

Yes.

♥ 0    💙 0



Konstantin v. Poschinger

February 8, 2020 at 5:05 pm    Reply

Hi,

Will you build an Adapter for Canon Lenses in combination with ASI6200 and Filter wheel.

♥ 0    💙 0



Katherine Tsai

February 11, 2020 at 2:14 am    Reply

Thank you for the feedback. We will consider this.

♥ 0    💙 0



Konstantin v. Poschinger

April 15, 2020 at 3:34 pm    Reply

Will a Canon Adapter for the 2" Filter wheel be available in the next time?

Konstantin

♥ 0    💙 0



Moson

April 16, 2020 at 2:19 am    Reply

I will convey your feedback to our devs and they will consider this.

♥ 0    💙 0



Bill S.

January 31, 2020 at 8:06 pm    Reply

Are all the threads from the camera to the scope 42mm?

♥ 0    💙 0



Katherine Tsai

February 5, 2020 at 2:17 pm Reply

The thread of ASI6200 is M54, please refer to the detail page of ASI6200.

♥ 0    💚 0



Norm McCall

January 24, 2020 at 3:11 pm Reply

How does this filter wheel connect to the ASI294MC Pro?

♥ 0    💚 0



Katherine Tsai

February 5, 2020 at 5:57 pm Reply

ASI294 does not need to use 2"EFW.

♥ 0    💚 0



Don Kilberg

April 17, 2020 at 4:41 pm Reply

Couldn't EFW be used to hold a dark frame filter? Using it that way, what is the best way to attach it?

♥ 0    💚 0



Moson

April 20, 2020 at 4:11 am Reply

Could you tell me what is dark frame filter?

♥ 0    💚 0



Don Kilberg

April 20, 2020 at 5:54 pm Reply

It is a filter that is completely opaque so you don't have to go out to a remote observatory and put your lens cap on the telescope to make dark frame exposures for calibrations.

♥ 0    💚 0



Moson

April 21, 2020 at 2:58 am Reply

We are sorry that we haven't used it like this, but you can try it. And you could pay attention to the light leakage during the test. Will you share the result with us if it can be used. Thanks in advanced!

♥ 0    💚 0



CY

January 22, 2020 at 7:28 am Reply

How is the connection without the OAG? If the EFW is fixed with screw to the ASI6200 directly, what would the connection be on the telescope side (M48) without the OAG? How would the tilt adapter fit in?

♥ 0    💚 0



Katherine Tsai

February 5, 2020 at 6:01 pm Reply

ASI6200+tilt adapter+2"EFW+M54-M48 adapter+M48-M48 16.5MM adapter

♥ 0    💚 0



Andre Carrier

January 12, 2020 at 7:24 pm Reply

Will this Configuration also work with the ASI2600MC Pro? Can you provide the same instructions to connect the ASI2600MC Pro with the 2" Filter Wheel and the New OAG? Thanks in advance 😊 I have ordered the ASI2600MC Pro and will need instructions for this.

♥ 0    💚 0



Katherine Tsai

February 5, 2020 at 6:02 pm Reply

Yes.

♥ 1    💚 0



Dominique

February 11, 2020 at 9:38 pm Reply

Katherine: yes, but how? 😊 I have the same question.

We would use the ASI2600MC with the 2" fw and new OAG, how to connect for backspace 55... Thanks.

♥ 0    💚 0



Katherine Tsai

February 12, 2020 at 9:38 am Reply

You can remove the sensor tilt like ASI6200 and then follow the steps given by this article.

♥ 1    💚 0



COTTIER

January 12, 2020 at 12:27 pm Reply

If I may tell something : it will be interesting to put the sensor chip 90° the position you show on your picture. Doing that, it is easier to balance on a newtonian telescope, et and you can do the right orientation for delta and alpha (alpha on the long side of the sensor, delta on the small one. If I explain badly, don't hesitate to ask. But your solution is also very cool!

♥ 0    💙 0



Katherine Tsai

February 5, 2020 at 6:08 pm    Reply

Thanks for your feedback and I will sent your message to our devs.  
When you connect the camera to the scope, the orientation of the camera won't always be fixed as it is shown in the picture.

♥ 0    💙 0



Alex

January 10, 2020 at 2:19 am    Reply

Can sensor tilt adapter be skipped? it seems like it can cause some vignetting.

♥ 0    💙 0



Katherine Tsai

February 5, 2020 at 5:50 pm    Reply

It will not and cannot be removed if you do not have other adapter to replace it.

♥ 0    💙 0



Michael

January 9, 2020 at 4:33 pm    Reply

ASI6200MM Pro, 2" EFW and M68 OAG – assuming all the filter wheel positions are utilized, what is the approximate weight of this assembly?

♥ 0    💙 0



Katherine Tsai

February 5, 2020 at 9:39 am    Reply

1.6-1.8KG.

♥ 0    💙 0



David Kerber

December 31, 2019 at 6:04 pm    Reply

Does this filter wheel have adapters to connect to other cameras, such as a DSLR?

♥ 0    💙 0



Katherine Tsai

January 3, 2020 at 11:08 am    Reply

Sorry we did not make filters dapters for DSLR.

♥ 0    ♥ 0

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