



# QHYCCD

## QHY Filter Wheels and Accessories



### Filter Wheels

#### QHYCFW2-S/M

The QHYCFW2-S/M are second-generation color filter wheels. We improved both the mechanical and electrical design over the previous version. The new QHYCFW2-S/M has the following advantages:

- Gear driven disk. Stable and solid.
- Specially designed filter carousel to allow 0.7mm to 7mm thick unmounted filters.
- Motor moved to a corner to increase the work area.
- Increased the precision of filter positioning.
- Supports USB port and powered by USB when connected with computer.
- Supports the 4-pin QHY CFW socket
- Supports the 2-pin socket with QHY9 (requires external power supply).
- Open Source Firmware, Arduino compatible.

#### QHYCFW2-S:

The QHYCFW2-S (small) holds five 36mm unmounted filters or six 1.25-inch mounted filters in threaded cells. The filter wheel is only 15.5mm thick and weighs only 365g.

#### QHYCFW2-M:

The QHYCFW2-M (medium size) filter wheel holds five standard 2-inch filters in threaded cells or five round 50mm unmounted filters. An optional carousel allows the use of seven 36mm unmounted filters. The QHYCFW2-M comes in two versions: QHYCFW2-M-UltraSlim and QHYCFW2-M-Standard. The Ultra-Slim is 17mm thick and weighs 675g. The Standard version is 21.5mm thick and weighs 705g.

#### QHYCFW3-S:

The QHYCFW3-S is a new model filter wheel that holds seven 36mm unmounted filters or eight 1.25-inch mounted filters in threaded cells.



**“A” Series Cameras with Filter Wheels:** The QHY90A, QHY16200A, QHY16803A, QHY695A/814A cameras are “All-In-One” camera systems that include filter wheels. The QHY90A has a 7-position wheel for 36mm unmounted filters. The QHY16200A has either a 5-position or 7-position wheel that accepts both 2” mounted filters and 50mm unmounted filters. The QHY16803A has a 7-position wheel that accepts 50mm square filters. The QHY695A/814A has a 7-position wheel for 36mm unmounted filters, or an 8-position wheel for 1.25” mounted filters.

## Mini-Guide Scope

The miniGuideScope is an ultra-lightweight guide scope for QHY5-II Series Cameras. With small pixels and high QE, you do not need a big guide scope. Smaller pixels can detect the guide error in a shorter focal length scope. And, when the focal length is reduced, the FOV becomes larger, so it is easier to find bright guide stars. QHYCCD's new miniGuideScope is based on just this idea. The QHY5L-II has 74% high QE, 4e- readout noise and small 3.75um pixels. This camera is idea for a short focal length guide scope. The miniGuideScope is a 30mm f/4.3 (130mm FL) ultra-small telescope. It has no complex focal adjust system. Just rotate the front of the OTA and it provides fine focal adjustment. Once focus is achieved, the tube can be locked into position and there is not need to focus again unless the system is moved. The miniGuideScope provides pin-point star images as sharp as any lens in the industry.



Model	QHYOAG-L
Focal length	130mm
Aperture	30mm
F/ ratio	F/4.3
Camera Interface	C/CS mount
OTA diameter	31.6mm (Matches the QHY5-II series)
Focuser	Front portion of OTA rotates with digit mark and locking mechanism
Weight	120g
Focus Range	Infinity to 1.5m
Price	\$99 with no telescope mount adapter, \$119 with adapter, \$399 with QHY5L-II-M standard package and adapter

## OAG

There are three models of QHYOAG: QHYOAG-S, QHYOAG-M, and QHYOAG-L for different size sensors. The QHYOAG is a thin and solid design. The OAG main body is just 10mm thick. Adding an M42 thread or M54 adapter ring adds only 3mm for a total thickness of 13mm. There are six 3mm through holes in the OAG for direct connection to the QHYCFW2 and QHY "A" series cameras. If you do not have a QHYCFW2 or QHY "A" series camera, you can also use this OAG with a third-party adapter ring on the camera side. The QHYOAG comes with a multi-thread 1.25-inch focuser. The focuser has a locking thumbscrew to hold the guide camera fixed after focusing. The prism position can be adjusted and can be locked to fix its position. The prism is 8mm x 8mm size and the aperture between the prism and mirror is 8mm in diameter.



Model	QHYOAG-S	QHYOAG-M	QHYOAG-L
Telescope Adapter Ring	M42/0.75	M54/0.75	M60/0.75
Diameter of 6 x M3 screw locations	54mm	62mm	68mm
Compatible Device	QHY(IC)90A, QHY(IC)695A QHYCFW2-S	QHY(IC)16200A QHYCFW2-M	QHY(IC)16803 QHYCFW2-L
Suitable CCD SIZE	Up to 4/3 inch	APS-C, APS-H, 36x24	36x24mm, 37x37mm, 48x36mm (50100 requires special adapter)
Weight	127g	145g	149g
Price (without Tax)	USD180	USD230	USD450

## Astro Bar

AstroBar1 is the first in a line of astronomy computer products designed specifically for low power consumption and astro-imaging system control. With an Intel CPU and Windows 10 OS, the Astrobar1 supports most astronomy software on the Windows platform. Its compact design weighs only 590g and it consumes a maximum of 4.5 watts in operation. There are eight USB2.0 ports and six of them can be controlled by software for hardware connection/disconnection. Remote ON/Shut Down is accomplished with an opto-coupled power port for both power on and remote shut down. Four 12V DC sockets are connected in parallel. Any one may be used for input and the other three supply 12V out. Users can operate a computer with remote desktop via internet or LAN. You can also connect a monitor directly to AstroBar for ease in setting up programs or for local operation. AstroBar is the Patent Protected Production by Patent CN102932597B 2012.11.



AstroBar1	
CPU	Intel(R) Atom(TM) Z3735F Four Cores, 1.33 to 1.8GHz
RAM	2GB
Hard Disk	32GB eMMC on board
Extend Hard Disk	up to 128GB SD micro card (need to be installed before order)
Power and Consumption	12V, Maximum 4.5 Watts (not including USB output power)
USB PORT	8 x USB 2.0, includes 6 software controllable USB ports
Serial Port	2 x RS232 Standard Port, each with 3-pin socket
WIFI	Yes
Ethernet	10/100/1000Mbps RJ45 ethernet
BlueTooth	Yes
Power Socket	4 x DC (2.1mm) Socket with lock
HDMI output	Yes. Standard Size HDMI Port
Remote Power ON Port	Yes, opto-coupled
Operation System	Windows 10 32-bit Home Edition with OEM License
Weight	597g
Reference Price	\$399. Includes the Win10 OEM License, price does not include 128GB SD card.

## Adapters

QHYCCD makes a variety of adapters for Nikon and Canon camera lenses, filter wheel adapters, OAG adapters, etc. We also are happy to partner with Precise Parts and encourage our users who need any special adapter that we do not have available to contact Precise Parts for their needs.

