QHYCCD

QHY5-II Series
USB 2.0 Guiding and Planetary Cameras

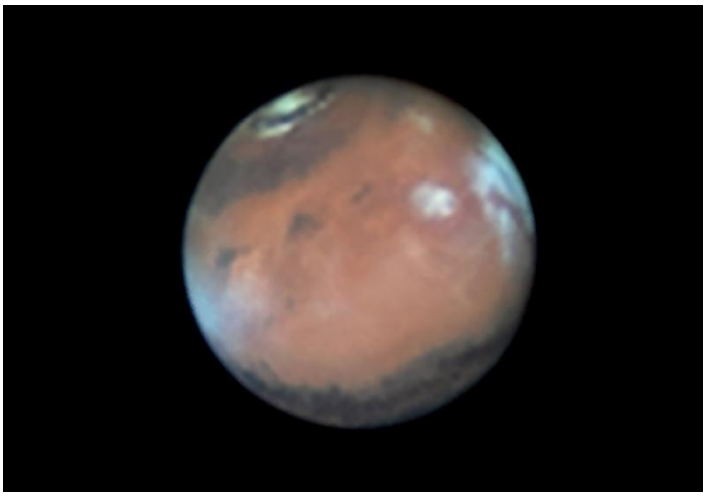
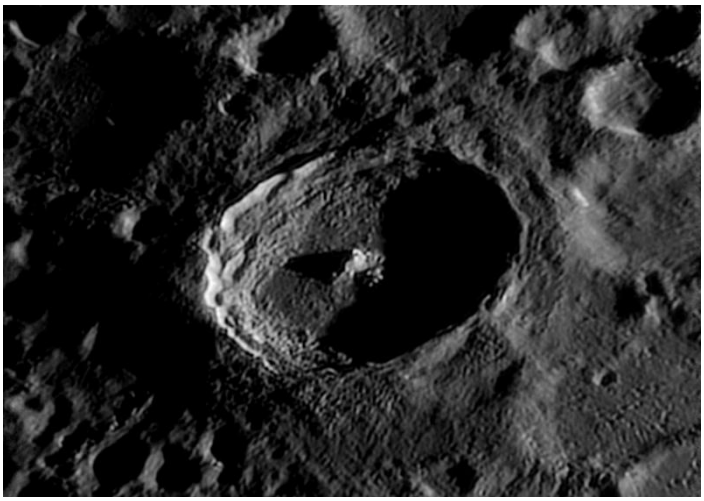
QHY5-II series cameras fit in a standard 1.25-inch eyepiece holder and have an adjustable location ring for confocality with an eyepiece. They are ideal for use as low-weight autoguiders. QHY5-II series cameras come in very small but powerful packages! The improved thermal design allows the heat generated by the CMOS sensor to be transferred externally to the telescope's eyepiece tube.

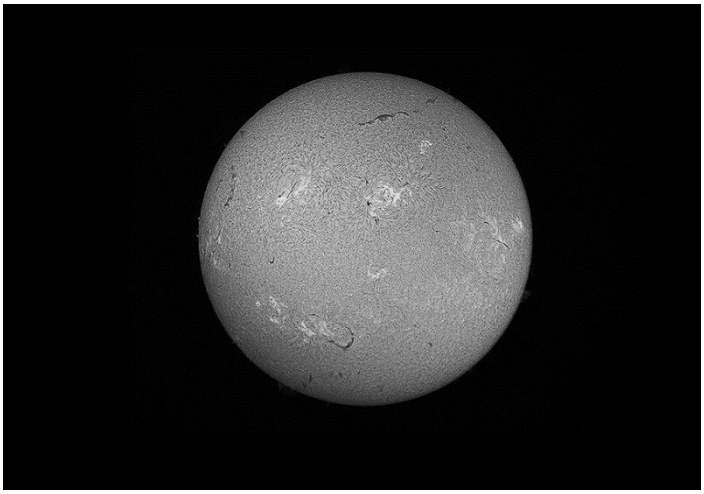
QHY5R-II is our entry-level model, ideal for beginners. This camera is only USD99 but still offers the high-sensitivity, low-noise Aptina Color CMOS ASX340 sensor. The sensor is 1/4-inch with 720x576 resolution and a sensitivity of 16.5 V/lux-sec. Available in color only.

QHY5-II uses On Semiconductor's MT9M001, 1/2-inch, 1.3 Megapixel monochrome sensor with 5.6um pixels providing 1280x1024 images. It can output 1280x1024@30fps and 320x240@320FPS. Mono only.

QHY5P-II has 5.0 megapixels. Available in both color and monochrome versions. The pixel size is 2.2um and the image sensor size is 1/2.5-inch. With its very high resolution, this camera is ideal for personal solar telescope imaging. Its 1.25-inch diameter allows it to be used in the eyepiece tube of a PST while solving the confocality issue common to them. The small pixel size provides high-resolution images even without a Barlow lens.

QHY5L-II has high sensitivity and low noise (a highlight of the QHY5-II series). With an exceptional 74% QE, the QHY5L-II's sensitivity is even better than many CCD cameras. It is said that the QHY5L-II's image quality meets or exceeds that of ICX618-based cameras. The read noise is remarkably low (as few as 4 electrons). The sensor's on-chip FPN (Fixed Pattern Noise) calibration function solves one of the major problems of CMOS technology, resulting in images that are clear and uniform, even under high gain. With these advantages, the QHY5L-II provides outstanding image quality for planetary imaging, autoguiding, deep-sky and all-sky imaging. Available in both color and monochrome versions. The sensor has 1280 x 960 pixels at 3.75um and the camera is capable of 30 frames per second in high resolution mode, 106 FPS in VGA mode.



All images taken with QHY5L-II camera. Mars image courtesy Fábio and Gabriela Carvalho

Model	QHY5R-II	QHY5-II	QHY5P-II	QHY5L-II
Sensor	ASX340	MT9M001	MT9P006/P031	MT9M034
Total Pixels	0.4 Megapixels	1.3 Megapixels	5.0 Megapixels	1.2 Megapixels
Pixel Size	5.6um	5.6um	2.2um	3.75um
Pixel Array	720 x 576	1280 x 1024	2592 x 1944	1280 x 960
Optical Format	1/4 inch	1/2 inch	1/2.5 inch	1/3 inch
FPS @ 640 x 480	100	106	63	106
FPS @ Full Resolution	100	30	7	30
Peak QE	60%	56%	63%	74%
A/D Resolution	10-bit	10-bit	12-bit	12-bit
Shutter	Electronic	Electronic	Electronic	Electronic
Dynamic Range	N/A	68.2 dB	67.74 dB	>115 dB HDR Mode
Weight	45g	51g	43g	Color 45g, Mono 43g
Reference Price	$99	$199	Color $239, Mono $299	Color $249, Mono $299

For more information please visit http://www.qhyccd.com