

## QHY10 10.2mega pixel cooled APS size Color CCD camera

QHY10 is a compact and light weight one shot APS size CCD camera. With Super HAD technology and its two stage cooling system and the active cooling fan the dark noise of QHY10 is extremely low. The 6.05um\*6.05um pixel size is idea for high resolution and high sensitivity deep sky imaging. The 400g weight and 63mm diameter make QHY10 very suitable for Hyper Star Imaging. The QHY10 is based on QHYCCD's high speed and low readout CCD technology. It will produce high SNR imaging for deep sky imaging.

### New improvement:

1. Improved CCD chamber with connector to silicon tube.  
A removable Silicon gel tube can be connect to the CCD chamber to absorb the rest moisture to prevent any freeze problem on CCD sensor. For non-hyper star imaging the silicon gel tube can always be installed on camera. For hyper star imaging the silicon gel tube can be installed when camera is in storage and removed when capture.
2. Fully airproof CCD chamber with oil proof.
3. New CCD center and tile adjust construction(Patent protecting).  
QHY10 has a CCD center and tile adjust construction to allow user adjust the center and tile of camera very easy.
4. Improved optic window to prevent the moisture form on front of it.



## QHY10 CCD camera spec

CCD sensor	ICX493AQA	
CCD size	Typical 1.8inch(APS size)	
Total pixel	3964*2712 (Note 1)	
Effective pixel	3900*2616	
Pixel size	6.05um*6.05um	
CCD readout Type	2 field(1*1binning) Progressive Scan(2*2,4*4binning)	
Full Well	Approx 45Ke-	
Peak QE	60%@green.50%@red and blue	
Anti Blooming Gate	Yes,-100dB	
Capture Download Speed	18sec(1*1binning) 9sec(2*2binning) 4sec(4*4binning)	
Preview speed	4sec(1*1binning) 2sec(2*2binning) 1sec(4*4binning)	
Support Binning	1*1,2*2,4*4	
Readout speed	600kpixel/s, 3Mpixel/s	
Readout Noise	Typical 8-10e-	
System Gain	0.7e-/ADU	
Dynamic Range	74dB	
CDS	Yes	
ADC	16bit	
Cooling	Two stage TEC	
Fan	Build in Active Fan	
Maximum Delta T	45degree below ambient	
Temperature regular	Yes	
Power consumption(INPUT=12V)	Minimum(TEC OFF)	3.6Watt
	TEC=50%	13Watt
	Maximum(TEC=100%)	30Watt
Input voltage	DC12V(Input to DC201 adapter) Safe Range(11V-13.5V) <b>[Note 2]</b>	
Telescope Interface	M42/0.75 screw & 2inch T ring	
Maximum Center adjustment	+-0.5mm	
Maximum Tile adjustment	1Degree	
CCD sensor to front location surface	20mm(without tile adjust ring) 23mm(with tile adjust ring)	
Weight(Camera body only, without DC201 and cables)	390g(without tile adjust ring) 425g(with tile adjust ring)	
Camera size	Diameter=63mm Length=120mm	
Guide port	Build in Optic isolated guide port	

	RJ11 6pin(ST4 type) (Optional depends on software support)
External removable Silicon tube	Yes

**Note:**

- 1) This is the physical array value. The actual output image size depends on the software.
- 2) If input voltage exceed 12V (eg. Using battery just charged). Check the “TEC protection” options in software.
- 3) -100dB means the over exposure ratio without blooming is 100000times, when exceed this, blooming may occur(eg. Very bright star) . Blooming can be completely avoid by add extra mechanical shutter

**Mechanical Drawing**

