

sCMOS 16MP Camera



High resolution Imaging

The camera offers up to 36.8mm x 36.8mm active area and 16 megapixel resolution and very good sensitivity thanks to high quantum efficiency peaking at 70%.

Array versions with multiple modules are also available, delivering up to 64 megapixel resolution. The 16MP sCMOS detector delivers up to 9.5 fps full resolution and allowing real time acquisition routine.

A built in shutter allows smear free, shutterless acquisition even with exposure time down to millisecond range. Frame rate of >30 fps can be achieved when used in binning 2x2 mode and in local sub area mode or line scan mode.

A device server driver control allows remote acquisition through existing GUI interface. The cameras have a native 16-bit acquisition mode.

Applications

Orbital Debris Detection
Solar Astronomy
Near Earth Object (NEO)

Key Features

- | Input sizes : single module
36.8mm x 36.8mm
- | Very low noise
4.5 electrons RMS
- | High Dynamic Range
Full Well Capacity up to 70,000 electrons
15,000:1 typical
- | Simultaneous integration / readout enabling
100% duty cycle acquisition
- | OEM versions available

Photometry
Wavefront Sensing
Photovoltaic Inspection

sCMOS 16MP Camera

Characteristics	sCMOS 16MP
Resolution	4096 x 4096
Input Size (mm)	36.86 x 36.86
Input Size (μm)	9 x 9
Frame Rate	9.5 fps at full resolution (camera link) / 4.5fps (Gigabit Ethernet version)
Full Well Capacity	70,000 electrons
Read Out Noise	4.5 electrons rms
Dark Current	<0.25 electron/pixel/second
Sensor Temperature ($^{\circ}\text{C}$)	Operating at -20°C with air cooling
Digitization	16-bit
Peak QE	69.8% at
Exposure	50 microseconds up to 1 minute
Drivers	Windows and Linux (on demand)
Camera Interface	Camera link / Gigabit Ethernet (Genicam compliant)
Cooling option	Deep cooling down to -40 degree C with water cooling

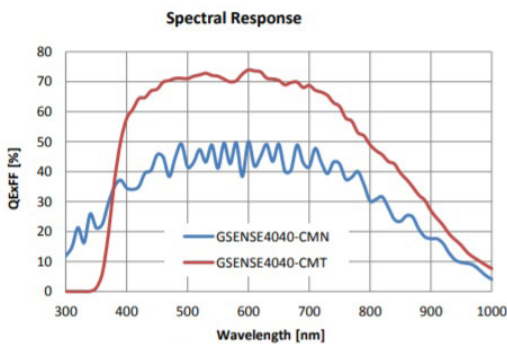
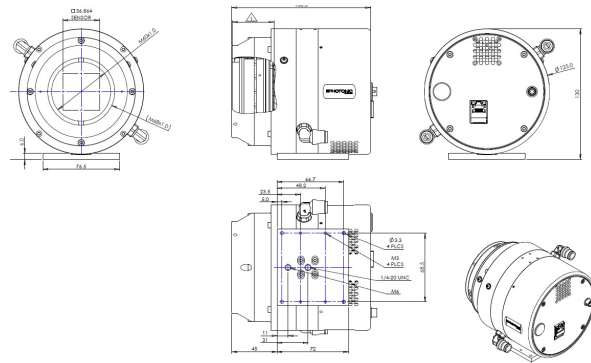


Figure 12: Spectral response



QE curve

Camera drawing