

# SKYnyx2-1

High Sensitivity, 1.4 Megapixel CCD USB 2.0  
Astrophotography Camera



## High Resolution Images

Lumenera's SKYnyx2-1 1.4 megapixel CCD digital camera is specifically designed for lunar, solar and planetary imaging, requiring high sensitivity, low noise and fast frame rates. With 1392 x 1040 resolution and on-board processing, the SKYnyx2-1 delivers outstanding image quality.

## No Framegrabber Required

The USB 2.0 digital interface ensures a simple plug-and-play installation – and one standard cable minimizes telescope clutter. No framegrabber required.

## Application

The Lumenera Camera Software Developer Kit (SDK) provides a full suite of features and functions that allow you to maximize the performance of your camera within your application. The SDK is compatible with all USB and GigE-based cameras. Microsoft DirectX/DirectShow, Windows API and .NET API interfaces are provided allowing you the choice of application development environments from C/C++ to VB.NET or C#.NET. Full inline IntelliSense autocompletion and documentation is provided with the .NET API interface and is accompanied by a full API manual describing all the camera functions and properties.

## Superior Technical Assistance Center

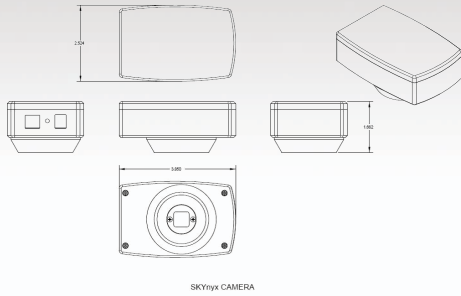
SKYnyx2-1 is supported by an experienced team of technical support and imaging experts. We understand your imaging needs and are here to help you get the most out of your camera. As a Lumenera customer you gain access to the Technical Assistance Center (TAC) group and knowledge base.

## Features

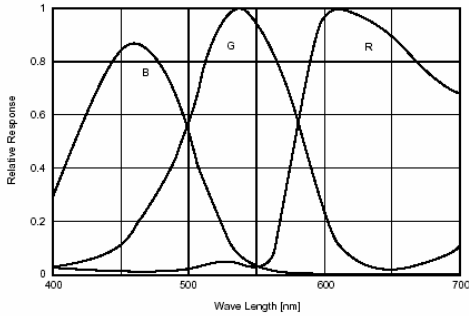
- The excellent sensitivity and low noise characteristics of the SKYnyx2-1 1.4 megapixel CCD image sensor enable users to capture high quality images
- 15 fps at full 1392 x 1040 resolution, with no compression
- Maximum frame rates exceed 30 fps with binning and ROI
- Select 8 and 12-bit pixel data modes
- T-mount for easy installation
- Up to 4096 intensity levels per channel
- The high-speed USB 2.0 interface eliminates a framegrabber and facilitates ease of installation on both laptop and desktop computers
- Both custom design services and Software Developers Kit are available to help with unique design requirements and software integration
- SKYnyx2-1 captures images through our 3<sup>rd</sup> party software partners
- SKYnyx2-1 cameras are software compatible with Windows XP, Windows Vista and Windows 7, 32 and 64-bit operating systems
- Full one (1) year warranty



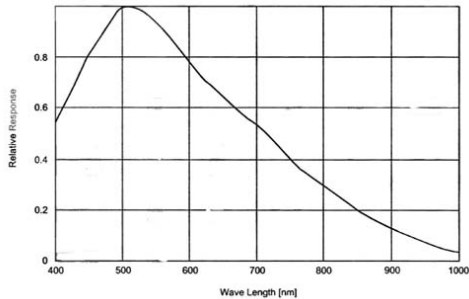
**Mechanical Drawing**



**Color Quantum Efficiency Curve**



**Monochrome Quantum Efficiency Curve**



Ordering Options	
SKYnyx2-1M	1.4 MP CCD Enclosed Monochrome Camera
SKYnyx2-1C	1.4 MP CCD Enclosed Color Camera
LuCAMSW-DVD	DVD with user application software, camera device drivers and documentation (no charge accessory)
LuSDK	Software Developer's Kit (Web download)
LuSDK-DVD	Software Developer's Kit (DVD)
Included with Shipment	
SKYnyx2-1 digital camera for USB 2.0	
CD-ROM with drivers	
2 m USB 2.0 Cable	

Sensor Specifications	
Image Sensor	Sony ICX205, CCD, color or mono progressive scan
Optical Format	1/2"
Active Area	6.5 x 4.8 mm
Pixel Size	4.65 x 4.65 µm
Resolution	1392 x 1040 pixels
Frame Rate	15 fps at full resolution, higher with binning & ROI
Bit Depth	8 or 12-bit
Binning Modes	2 x 2, 3 x 3, 4 x 4
Exposure Control	Manual and automatic control
Gain Range	1.0 to 10 x programmable
White Balance	Manual and automatic control
Camera Characteristics	
Dynamic Range	58 dB
Read Noise	12 e- rms
Dark Current Noise	2 e-/s
Mechanical Specifications	
Data Interface	Standard USB 2.0 high-speed interface
Lens Mount	T-Mount
Dimensions (LxWxH)	64 x 97.78 x 42.67 mm (enclosed) 2.52 x 3.85 x 1.68 inches (enclosed)
Mass	320 g (enclosed)
Operating Temperature	0 to 50 °C
Storage Temperature	-30 to 70 °C
Operating Humidity	5 to 95 %, non condensing
Shock / Vibration	50 g shock, 5 g (2 to 200 Hz) vibration
Camera Software	
Operating Systems	Windows XP, Vista, 7, both 32 and 64-bit
Software Interfaces	Windows API, .NET, DirectX
Power and Emissions	
Power Consumption	~2.5 W
Power Requirement	USB bus power, or external 5 V DC - 500 mA
Emissions Compliances	FCC Class BE, CE Certified
Hazardous Materials	RoHS, WEEE Compliant
Warranty	One (1) year
System Requirements	
Recommended PC Specs	<ul style="list-style-type: none"> <li>Pentium 4, 1.3 GHz or higher</li> <li>512 MB RAM</li> <li>60 MB hard drive free space or more</li> <li>USB 2.0 Port</li> <li>Windows XP, Vista or 7</li> </ul>
Minimum PC Specs	<ul style="list-style-type: none"> <li>600 MHz Processor</li> <li>256 MB of SDRAM</li> <li>20 MB hard drive free space</li> <li>USB 2.0 Port</li> <li>Windows XP 32-bit</li> </ul>

