

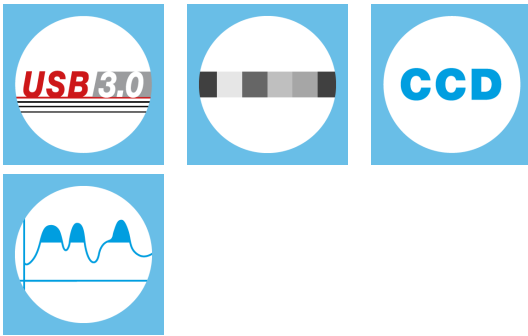
SK2048U3HA

Monochrome Line Scan Camera, USB 3.0



FEATURES

- Pixel number: 2048
- Pixel dimensions: $8 \times 8 \mu\text{m}^2$
- Max. line frequency: 52.63 kHz
- Spectral range: 200 - 1000 nm
- Anti-blooming
- Shading correction
- Lookup table



DESCRIPTION

The monochrome SK2048U3HA line scan camera is equipped with a 2048 pixel CCD sensor. The maximum line frequency is 52.63 kHz.

Features

All lenses show some vignetting as a function of the field angle. Hence, even with homogeneous object illumination, the signal intensity of the image decreases with increasing image height. Shading correction (or flat field compensation) is used to compensate for lens vignetting as well as for inhomogeneity in the illumination. The sensor has a blooming protection against over exposure. The integration control / electronic shutter function enables to control the exposure time independently from the line frequency.

Synchronization

Line scan cameras have to be externally synchronized in order to obtain distortion-free images. There are two different synchronization functions that can be applied together or individually:

1. Line Synchronization triggers each individual exposure of the sensor line by line. Several operating modes are available for this: Free run, Line Start, Exposure Active, Exposure Start.
2. Frame Synchronization is the recording of a set of lines (frame) representing a two dimensional image. The trigger is activated by an external control signal.

Lenses and Adapters

The lens or tube attachment is C-Mount. Adapters are available for other dimensions, see Accessories.

Software and SDK

S+K provides software for Windows und Linux. SKLineScan is an operation program with a grafical user interface for system setup and simple scanning tasks. It is free for use and is applicable both for optimal adjustment of the optical system and for parameterization of the camera.

The software development kit (SDK) SK91USB3-WIN is based on C++ and includes examples for C/C++ with Visual Studio. Supported operating systems are Windows 10 (32- or 64-bit), Windows 11.

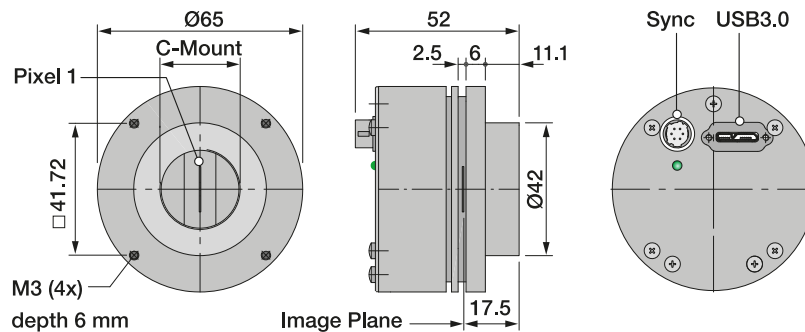
The Linux variant SK91USB3-LX requires at least kernel 3.13.

TECHNICAL DATA

SK2048U3HA

Order Code	SK2048U3HA
Sensor type	CCD monochrome sensor
Pixels	2048
Pixel size	8 x 8 μm^2
Active sensor length	16.4 mm
Max. pixel frequency	120 MHz
Max. line frequency	52.63 kHz
Anti-blooming	x
Integration control	x
Shading correction	x
Spectral range	200 - 1000 nm
Dynamic range	1:500 (rms)
Min. exposure time	0.01 ms
Max. exposure time	20 ms
Video signal	monochrome 8/12 Bit
Interface	USB 3.0

Power supply	USB (800 mA)
Dimension	65 x 65 x 52.4 mm ³
Case type	AT1
Weight	0.2 kg
Lens mount	C-Mount
Flange diameter	42 x 11.1 mm
Flange focal length	17.5 mm
Operating temperature	+5 ... +45 °C
Dimensions (for a complete dimensional drawing please refer to the downloads section)	



DOWNLOADS



[SK2048U3HA_DS-E_web.pdf](#)



[SK2048U3HA_E_web.pdf](#)

This is a printout of the page <https://sukhamburg.com/products/details/SK2048U3HA> from 1/13/2026

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