

Line Scan Camera SK4096U3TDI-XL

CCD

Time Delay
Integration

TDi

USB 3.0

96-stages Time Delay and Integration Digital camera with very high sensitivity and high line frequency, gain and offset adjustable by PC, anti blooming



■ Sensor Characteristics

Sensor type:	CCD, TDI
Pixel number:	96x 4096
Pixel size:	13 x 13 μm^2
Active sensor length:	53.2 mm
Pixel frequency:	100 / 50 MHz
Max. line frequency:	22.7 kHz
Min. integration time:	0.01 ms
Max. integration time:	20 ms
Spectral range:	400 - 1000 nm
Dynamic range:	1:2500 (rms)

■ Mechanical data

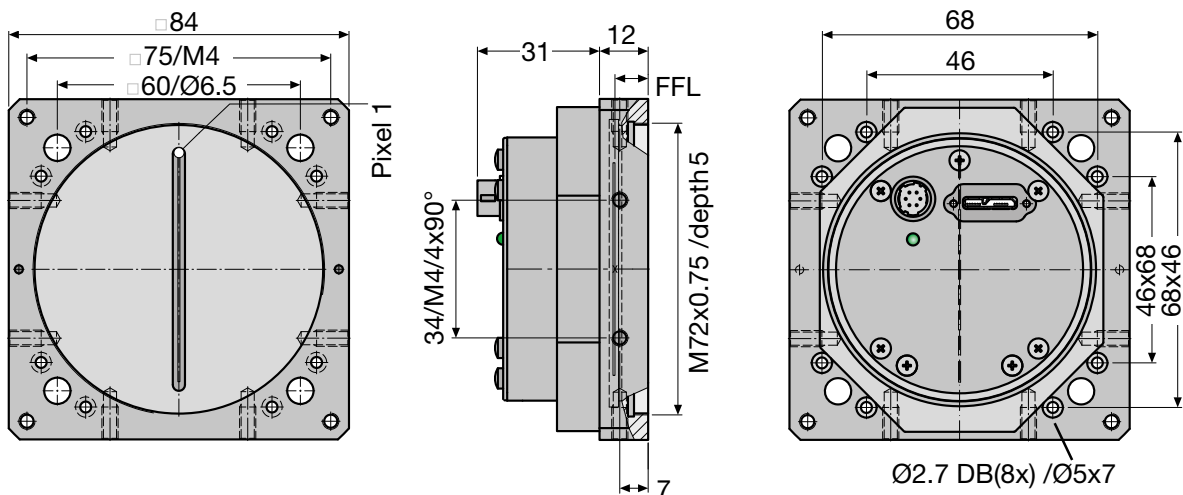
Case type:	CT5
Size:	84 mm x 84 mm x 42.5 mm
Mass:	0.3 kg
Lens mount:	M72x0.75
Flange focal length (FFL):	8.2 mm

■ Functioning Features

Anti blooming:	x
Integration control:	-
Shading correction:	x
Look-up table:	x
Region of interest (ROI):	x
Thresholding:	x
Temperature sensor:	x
External synchronization:	x
Operating temperature:	+5 ... +45°C

■ Connections

Interface:	USB 3.0
Type:	μB , threaded
Video signals:	monochrome 8/12 Bit digital
Power supply:	5VDC, 6.8 W @100 MHz
External synchronization:	TTL
(for power supply and external synchronization)	Hirose 10A, 6-pin, male



Software

Software


SK91USB3-WIN Order Code

SDK from Schäfter + Kirchhoff including the **SKLineScan** operating program, as well as API, C++ class library and examples.

Operating systems:
Windows 7 / 8.1 / 10 - x64 and x86

SK91USB3-LV VI Order Code

VI-Library for LabVIEW®, requires **SK91USB3-WIN**

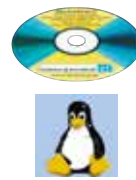


Software

SK91USB3-LX Order Code

SDK from Schäfter + Kirchhoff including the **SKLineScan** operating program, as well as libraries and examples.

Operating systems:
Linux kernel 3.13 or higher



Accessories


USB 3.0 cable SK9020.x

Camera connector: USB 3.0 plug, type micro-B, with safety lock screws

PC connector: USB 3.0 plug, type A (also fits into a USB 2.0 type A socket)

SK9020.x Order Code

└── 3 = 3 m cable length (standard)
 5 = 5 m cable length



Power supply unit PS051515

Input: 100-240 VAC, 0.8 A, 50/60 Hz
IEC 60320 C14 coupler (for IEC C13 power cord)


Output: +5VDC, 2.5 A / +15VDC, 0.5 A / -15VDC, 0.3 A
Cable length: 1 m, with Lumberg connector KV60, female 6-pin

PS051515 Order Code

Power cord IEC 60320 C13, 1.5 m, 10 A, 250 VAC

PC150DE Order Code

└── DE = Europe / US = USA, Canada, Japan /
 UK = United Kingdom




USB 3.0 active extension cable USB3.EXT.AA10

External power supply +5VDC, length 10 m

Connectors:
1x socket USB3.0 socket, type A,
1x plug Power in, 5VDC,
1x plug USB3.0, type A (also fits a USB2.0 type A socket)

USB3.EXT.AA10 Order Code




Combined Synchronization and Power Cable SK9016.1.5

Applicable when a power supply in addition to the USB interface is required. Shielded cable, length 1.5 m.

Connectors: Hirose plug HR10A, female 6-pin, (camera side), Lumberg SV60, male 6-pin connector (for supply voltage), Phoenix 6-pin connector incl. terminal block (for synchronization signals)

SK9016.1.5 Order Code




USB 3.0 active extension cable USB3.EXT.A2Ax...

Hybrid cable (copper/fiber), power supply by another USB-connection, cable length up to 100 m on request.

Connectors:
USB3.0 plug and socket, with locking screws

USB3.EXT.A2Ax Order Code

└── 20 = 20 m cable length
 30 = 30 m
 50 = 50 m
 other lengths up to 100 m on request




Adapter cable for sync signals CAB-ADSync-BNC-1

BNC/SMA (3x) to line scan camera synchronization cable SK9016/SK9024/SK9026.

Shielded cable, length 0.25 m

Connectors:
1x Phoenix 4-pin connector
3x SMA plug (Line Sync A, Line Sync B, Frame Sync)
3x adapter SMA socket (outside threading) to BNC-plug

CAB-ADSync-BNC-1 Order Code




Focus Adapter FA26-Sx

High-precision adapter with linear tracking rods for precise travel of the focussing encasement and for locking focus position. Focussing range 29 mm, 1 turn of the focussing ring corresponds to 10 mm. Screws for focus locking.

FA26-Sx Order Code

└── 45 = thread M45x0.75
 length 40.5 ... 69.5 mm
 55 = thread M55x0.75
 length 51 ... 80 mm

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Lens Adapters and Extension Rings M45x0.75

Lens Adapter M45x0.75 to M39x1/26" (Leica)

Order Code
M39-45

length L=3.7 mm

Adapter M45 x 0.75 46 mm to AM43

Order Code
AM43-M45-S L=20 mm
AM43-M45 L=35 mm

The AM43-M45 accepts the V-groove lens adapter M39x26G-AC43.

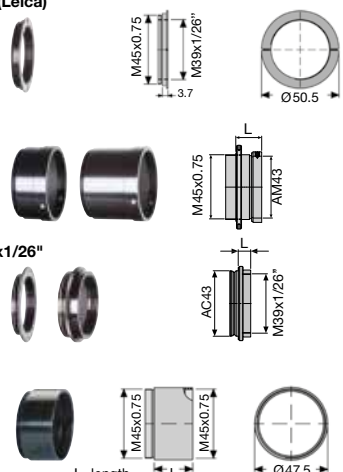
Lens Adapter V-Groove AC43 to M39x1/26"

Order Code
M39x26G-AC43-S L=1.5 mm
M39x26-AC43 L=8.2 mm

Extension Ring M45x0.75

ZR-L... Order Code

15 = length 15 mm
25 = length 25 mm
60 = length 60 mm
87 = length 87 mm



Lens Adapters and Extension Rings M55x0.75

Lens adapter 46 mm V-groove - M55 x 0.75
for macro lens inspec.x L5.6/105

AC46-55 Order Code

The Adapter AC46-55 adds 17.5 mm to the optical tube length. It accepts the AC46 V-groove of the Inspec.x macro lenses.

Extension Ring M55x0.75

ZR55-... Order Code

15 = length 15 mm
25 = length 25 mm
60 = length 60 mm

