

4k/8k/16k MONOCHROME LINE SCAN CAMERA

**White-eye Series**

# FCS16KA

4096 / 8192 / 16384 pixels

White-eye series is a high-speed and low noise monochrome line scan camera with max 16384 resolutions and max 680 MHz data rate. This series uses the output data format of Camera Link (Medium/Full/80 bit Configuration) and has various functions such as exposure control and antiblooming to apply for multiple applications.

## Key Features

- ◎ 4k,8k,16k pixels line-up
- ◎ Data rate : 680MHz and line rate : 40.65kHz (FCS16KA)
- ◎ CMOS sensor, antiblooming and exposure control functions
  - Pixel size of 4k,8k : 7.0 $\mu$ m $\times$ 7.0 $\mu$ m
  - Pixel size of 16k : 3.5 $\mu$ m $\times$ 3.5 $\mu$ m
- ◎ M72 lens mount is adopted. (F-mount for 4k camera)
- ◎ All models use Camera Link interface
- ◎ Compact design : M72 mount / 87.0 $\times$ 118.0 $\times$ 29.5mm  
Nikon-F mount / 87.0 $\times$ 118.0 $\times$ 66.4mm

## Functions

- ◎ Noise cancelling function for external sync signal
- ◎ Horizontal binning
- ◎ Switchable scan direction
- ◎ Camera diagnostic and test pattern output
- ◎ Gain and offset control
- ◎ PRNU, FPN correction
- ◎ Camera status monitoring for power supply voltage, internal temperature, etc.
- ◎ Dust proof camera housing

CE **RoHS**



*We are  
sensitive in  
black and white*



# Performance Specifications of White-eye series FC<sup>(\*)</sup>

Physical Characteristics		Units	FCH400A-CF-03	FCH800A-C7-03	FCS16KA-C7
Resolution		pixel	4096	8192	16384
Aperture		mm	28.67	57.34	57.34
Pixel size		μm	7.0×7.0		3.5×3.5
Sensor alignment		—	ΔX=±0.4, ΔY=±0.4, Δθ=±0.4°		
Lens mount		—	Nikon F	M72 (P=0.75)	M72 (P=0.75)
Flange back		mm	9.54 ± 0.4		
Power input connector		—	6Pin, HR10-7R-6P (Hirose)		
Size (excluding lens, lens mount and back-panel parts)		mm	87.0 × 118.0 × 29.5 (W×H×D)		
Weight (excluding lens)		g	450		
Data output format		—	Camera Link Medium / Full / 80bit		Camera Link Full
Data output connector		—	Camera Link 26Pin (MDR)×2, 10226-2200PE(3M)		
External Sync Input Connector		—	Camera Link 26Pin (CC1 and CC2)		
Anti-vibration <sup>(*)2</sup>		m/s <sup>2</sup>	9.8		
Operation Range		Units	FCH400A-CF-03	FCH800A-C7-03	FCS16KA-C7
Line rate	Min	kHz	0.3 (3.3ms)		0.3 (3.3ms)
	Max		72.4 (13.8μs)		40.65 (24.6μs)
Data format		bit	8 / 10		8
Output data rate (Strobe frequency)		MHz	Max : 320	Max : 640	680
Analog gain range		dB	Min : 0 Max : 21.6		
Operating temperature		deg C	Min : 0 Max : 50		
Power supply		DC V	Min : 11 Max : 16 (Typ. 12 ~ 15V)		
Electrical Specifications <sup>(*)3, *)4</sup>		Units	FCH400A-CF-03	FCH800A-C7-03	FCS16KA-C7
Responsibility @0dB Gain (12bit)		DN/nJ/cm <sup>2</sup>	Typ. 75		Typ. 25
Pixel nonuniformity (PRNU ON) @0dB Gain		DN	Typ. 7 Max : 20		Typ. 1 Max : 3
Random noise @0dB Gain		DNrms	Typ. 4		Typ. 0.2
Dynamic range (FPN ON) @0dB Gain		Ratio	Typ. 1000:1		Typ. 470:1
Anti-blooming @0dB Gain		—	Typ. 10x		Typ. 10x
Current consumption @Vin 15V		mA	Typ. 460		Typ. 825
Power consumption		W	Typ. 6.9		Typ. 12.3

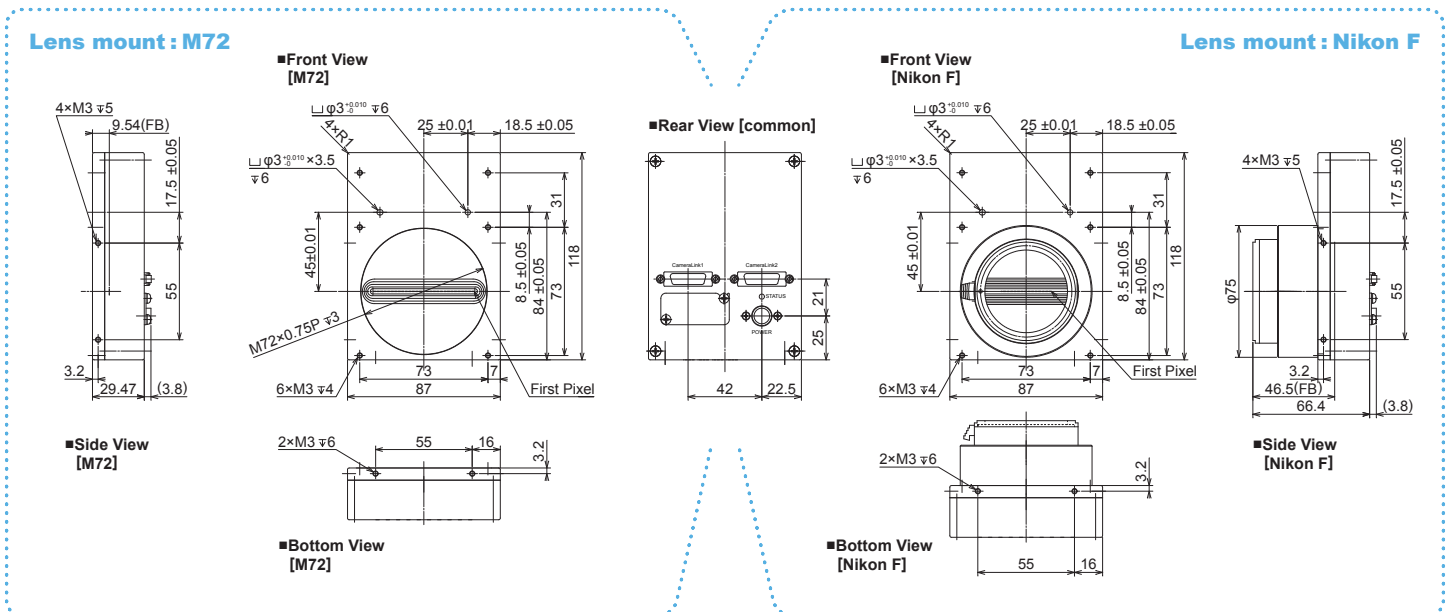
(\*1) This information is subject to change without notice.

(\*2) Measuring environment of vibration test [Excitation acceleration : 9.8m/s<sup>2</sup>, Excitation frequency : 5Hz - 200Hz, Test time : 120 min. each in X, Y, Z direction]

(\*3) All DN and Ratio values are in 12-bit gradation for FCH400A/800A and 8-bit gradation for FCS16KA(excluding Responsibility).

(\*4) Measuring environment of electrical specifications [Line rate : 9KHz, Operating temperature : 25°C]

## Dimensions



In order to bring the best use of your camera, please read the user's manual carefully before operation.



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Note : Please note that this catalog is as of September 2021 and is not for a guarantee of accurate performance and specifications but for offering information about products. CMICRO reserves the right to make changes to this data without notice.

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