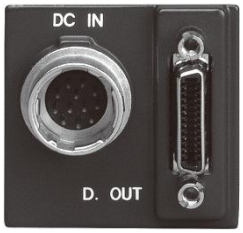
KP-F200SCL KP-FR200SCL KP-F80SCL KP-FR80SCL KP-F39SCL KP-FR39SCL KP-F30SCL KP-FR30SCL



Main Features

Mini CL (Mini Camera Link)

By adopting a Camera Link digital interface, higher speed video data transfer is possible. Furthermore, by adopting the small connector (SDR) of a Mini Camera Link standard, the size of the camera has been reduced.

PoCL (Power over Camera Link)

The PoCL version is connected by a single (PoCL) Mini Camera Link cable directly to a frame grabber supporting PoCL. Simple systems construction is possible.

High Resolution & High Speed

High resolution combined with high frame rates are possible with this series of cameras. Can be used for high-precision and high-speed image processing in many applications.

KP-F200SCL / KP-FR200SCL	2.01 Megapixel	15 fps
KP-F80SCL / KP-FR80SCL	0.81 Megapixel	36 fps
KP-F39SCL / KP-FR39SCL	0.33 Megapixel	91 fps
KP-F30SCL / KP-FR30SCL	0.33 Megapixel	60 fps

Frame shutter

Higher resolution in the vertical direction is ensured for moving object.

Multi-step Shutter

A multi-step electric shutter along with a variable speed electric shutter is standard with a minimum shutter speed of 1/100,000 second.

Frame on Demand

A one trigger and fixed shutter mode of frame-on-demand are provided allowing precise timing and exposure for image capture.

Selectable bit depth

10- / 8- bit	KP-F200SCL / KP-FR200SCL / KP-F80SCL / KP-FR80SCL / KP-F39SCL / KP-FR39SCL / KP-F30SCL / KP-FR30SCL /

Remote Control

Through the Camera Link interface, various setting such as shutter, mode, gain, partial scan, bit depth, etc can be adjusted.

Partial Scan

The start position and height of the image can be adjusted. Higher frame rates are possible by using partial scan mode.

Raw Data Output (KP-FR200SCL / KP-FR80SCL / KP-FR39SCL / KP-FR30SCL)

The FR series of cameras use a CCD with an RGB primary color mosaic filter, outputting the image data in a RAW format with minimal processing in order to achieve higher frame rates as compared to a normal color camera. External image processing and software is required to produce a proper color picture.

Light Porch International Inc.

Specification

	KP-F200SCL	KP-FR200SCL	KP-F80SCL	KP-FR80SCL
Imaging device	1/1.8-inch interline CCD		1/3-inch interline CCD	
Total pixels	1688 (H) x 1248 (V)		1077 (H) x 788 (V)	
Effective pixels	1628 (H) x 1236 (V)		1034 (H) x 779 (V)	
Pixel size	4.4 µm (H) x 4.4 µm (V) (square lattice)		4.65 µm (H) x 4.65 µm (V) (square lattice)	
Color filter	—	RGB primary color mosaic filter	—	RGB primary color mosaic filter
Sensing area	7.16 mm (H) x 5.44 mm (V)		4.76 mm (H) x 3.57 mm (V)	
Scanning system	Progressive			
Aspect ratio	4 : 3			
Frame rate	15 frames per second (full pixel readout)		36 frames per second (full pixel readout) .	
Horizontal drive frequency	36.0000 MHz			
Horizontal scanning frequency	18.75 kHz		28.346 kHz	
Vertical scanning frequency	14.97 Hz		35.79 Hz	
Sync system	Internal			
Lens mount	C mount (Flange focal distance = 17.526 mm)			
Video output	Digital output (Camera Link) Base configuration : 36.0000 MHz (Maximum cable length : 10 m) Output imagesize : 1628 (H) x 1236 (V) (full pixel readout)		Digital output (Camera Link) Base configuration : 36.0000 MHz (Maximum cable length : 10 m) Output imagesize : 1024 (H) x 768 (V) (full pixel readout)	
Resolution	Horizontal / Vertical : 1200TV lines		Horizontal / Vertical : Approx. 800TV lines	
Sensitivity	400 lx, F4, 3200K	2000 lx, F8, 3200K	400 lx, F2.8, 3200K	2000 lx, F4, 3200K
Minimum illumination	1.0 lx (F1.4, MAX GAIN . without IR cut filter)	5.0 lx (F1.4, MAX GAIN)	1.0 lx (F1.4, MAX GAIN . without IR cut filter)	20 lx (F1.4, MAX GAIN)
Signal noise to ratio	50 dB			
Electric shutter	OFF , 1 / 15 , 1 / 60 , 1 / 125 , 1 / 250 , 1 / 1000 , 1 / 2000, 1 / 10000, 1 / 50000 second OFF is normal exposure (frame rate) or changeable by variable shutter (Minimum 1 / 00000 second)		OFF , 1 / 36 , 1 / 60 , 1 / 125 , 1 / 250 , 1 / 1000 , 1 / 2000, 1 / 10000, 1 / 50000 second OFF is normal exposure (frame rate) or changeable by variable shutter (Minimum 1 / 00000 second)	
Gamma	γ = 1			
Frame on demand				
Mode	(A) Fixed shutter mode (8 steps or variable) (B) ONE trigger mode (C) VD reset mode			
Trigger input	Camera Link (CC1) *When Reset control mode CC1 and CC2 are used			
Partial scan	Selectable start position and height of picture grabbing in 1H step.			
Power supply voltage	12 ± 1 VDC			
Current consumption	Approx. 170 mA (Approx. 2.1 W)		Approx. 120 mA (Approx. 1.5 W)	
Ambient temperature				
Performance	0 to +40 °C (+32 to +104 °F) , less than 90 % RH			
Operation	10 to +50 °C (+14 to 122 °F) , less than 90 % RH			
Storage	–20 to +60 °C (–4 to 140 °F) , less than 70 % RH (without dew condensation)			
Vibration endurance	98 m / s2 (Acceleration: constant) 10 to 200 Hz. sweep : 10 minutes. XYZ 30 minutes			
Shock endurance	686 m / s^2 (Drop test, once each top, under, left and right)			
External dimensions	29 (W) x 29 (H) x 29 (D) mm (Not including protrusions)			
Mass	Approx. 50 g			

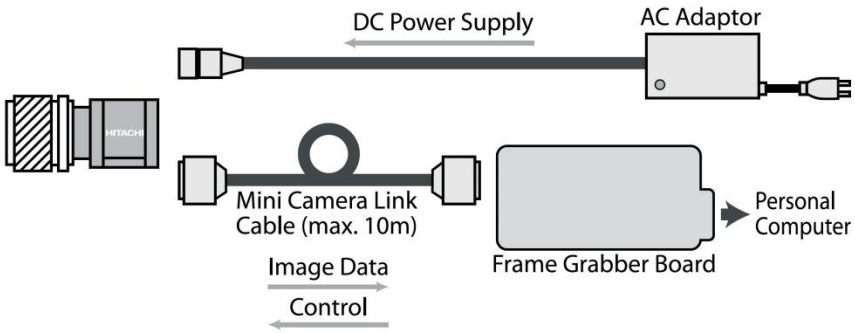
	KP-F39PCL	KP-FR39PCL	KP-F30PCL	KP-FR30PCL
Imaging device	1/3-inch interline CCD			
Total pixels	692 (H) x 504 (V)			
Effective pixels	659 (H) x 494 (V)			
Pixel size	7.4 µm (H) x 7.4 µm (V) (square lattice)			
Color filter	—	RGB primary color mosaic filter	—	RGB primary color mosaic filter
Sensing area	4.88 mm (H) x 3.66 mm (V)			
Scanning system	Progressive			
Aspect ratio	4 : 3			
Frame rate	91 frames per second (full pixel readout)		60 frames per second (full pixel readout)	
Horizontal drive frequency	36.0000 MHz		25.5454 MHz	
Horizontal scanning frequency	46.875 kHz		31.468 kHz	
Vertical scanning frequency	91.73 Hz		59.94 Hz	
Sync system	Internal			
Lens mount	C mount (Flange focal distance = 17.526 mm)			
Video output	Digital output (Camera Link) Base configuration : 36.0000 MHz (Maximum cable length : 10 m) Output imagesize : 659 (H) x 494 (V) (full pixel readout)		Digital output (Camera Link) Base configuration : 24.5454 MHz (Maximum cable length : 10 m) Output imagesize : 659 (H) x 494 (V) (full pixel readout)	
Resolution	Horizontal : 500TV lines / Vertical : 490TV lines			
Sensitivity	400 lx, F2.8, 3200K	2000 lx, F4, 3200K	400 lx, F4, 3200K	2000 lx, F5.6, 3200K
Minimum illumination	2.0 lx (F1.4, MAX GAIN. without IR cut filter)	20 lx (F1.4, MAX GAIN)	1.0 lx (F1.4, MAX GAIN. without IR cut filter)	10 lx (F1.4, MAX GAIN)
Signal noise to ratio	50 dB			
Electric shutter	OFF , 1 / 91 , 1 / 250 , 1 / 500 , 1 / 1000 , 1 / 2000 , 1 / 4000 , 1 / 10000, 1 / 50000 second OFF is normal exposure (frame rate) or changeable by variable shutter (Minimum 1 / 00000 second		OFF , 1 / 60 , 1 / 250 , 1 / 500 , 1 / 1000 , 1 / 2000 , 1 / 4000 , 1 / 10000, 1 / 50000 second OFF is normal exposure (frame rate) or changeable by variable shutter (Minimum 1 / 00000 second)	
Gamma	γ = 1			
Frame on demand				
Mode	(A) Fixed shutter mode (8 steps or variable) (B) ONE trigger mode (C) Reset control mode (D) VD reset mode			
Trigger input	Camera Link (CC1) *When Reset control mode CC1 and CC2 are used			
Partial scan	Selectable start position and height of picture grabbing in 1H step.			
Power supply voltage	12 ± 1 VDC			
Current consumption	Approx. 150 mA (Approx. 1.8 W)		Approx. 120 mA (Approx. 1.5 W)	
Ambient temperature				
Performance	0 to +40 °C (+32 to +104 °F) , less than 90 % RH			
Operation	10 to +50 °C (+14 to 122 °F) , less than 90 % RH			
Storage	–20 to +60 °C (–4 to 140 °F) , less than 70 % RH (without dew condensation)			
Vibration endurance	98 m / s2 (Acceleration: constant) 10 to 200 Hz. sweep : 10 minutes. XYZ 30 minutes			
Shock endurance	686 m / s^2 (Drop test, once each top, under, left and right)			
External dimensions	29 (W) x 29 (H) x 29 (D) mm (Not including protrusions)			
Mass	Approx. 50 g			

System configuration

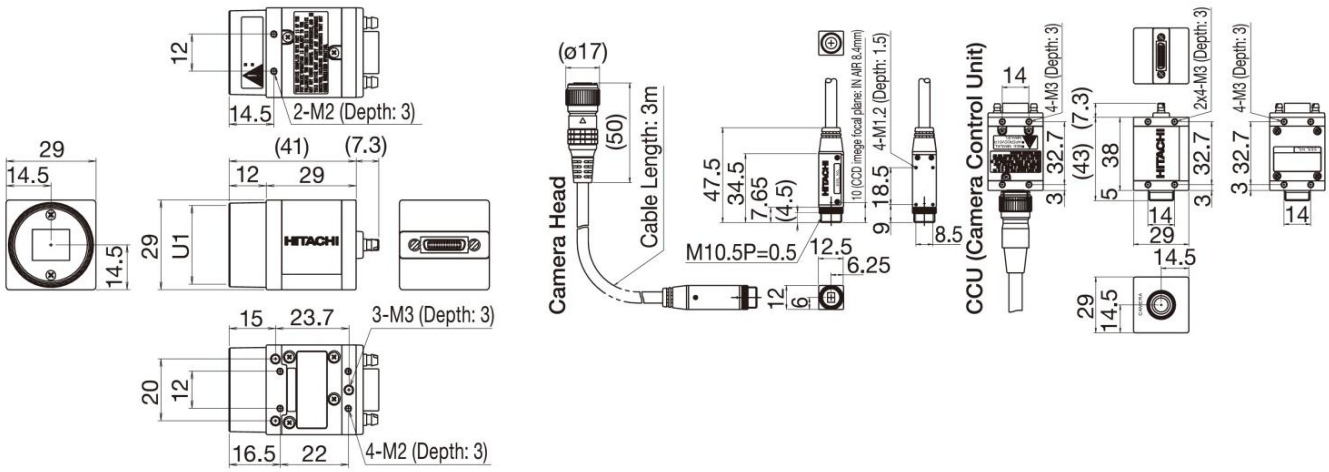
Non-PoCL System

Base Configuration

KP-F200SCL KP-FR200SCL
KP-F80SCL KP-FR80SCL
KP-F30SCL KP-FR30SCL



Dimenson



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