TAKEX

Camera Link compliant, 5 Megapixel 150 fps, 3 Megapixel 210 fps

PROGRESSIVE SCAN CAMERA

FCM5MHPL
FSM3MHPL

(Lens optional)

Overview

- Progressive scan camera equipped with a high sensitivity and high-resolution CMOS sensor.
- The FCM5MHPL outputs high-speed and high-resolution progressive image in 150 fps with 5 million pixels. The FCM3MHPL outputs images in 210 fps with 3 million pixels.
- Image output is interfaced with 8/10/12 bit digital signal. (Camera Link format)
- Asynchronous electronic shutter function provides still full progressive images at any timing. (Asynchronous shutter mode)
- The internal set values of the camera are externally controlled with the serial communication via Camera Link.

Features

- Either normal Camera Link board or PoCL (Power over Camera Link) board can be connected.
- Since these products are equipped with a 5 Megapixel-2/3" (FCM5MHPL) or a 3 Megapixel-1/1.8" (FCM3MHPL) CMOS sensor, they are suitable for replacing existing 5 Megapixel or 2 Megapixel CCD cameras.
- The global shutter sensor provides the images without distortion even in shooting of fast-moving objects.
- The Full Configuration (with two Camera Link cables) for the high-speed operation, or the Base Configuration (with single Camera Link cable) for the low-speed operation, can be selected depending on the application.
- Achieves faster speed operation limiting the number of read-out line.

Applications

- Image processing device for image inspection
- Inspection equipment for liquid crystal panel
- Input device of board inspection equipment for automatic chip mounter
- Image input device for ITS
- Other image processing applications requiring high speed and high resolution

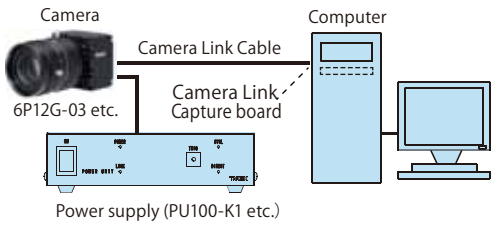
Specifications

Model	FCM5MHPL				FCM3MHPL			
Image sensor	Progressive scanning,Global shutter, Monochrome CMOS Unit cell size : 3.45μm(H)×3.45μm(V)							
	2/3 inch size				1/1.8 inch size			
Number of pixels	5.06 million pixels 2,464(H)×2,056(V)				3.18 million pixels 2,064(H)×1,544(V)			
Readout modes	32fps	Horizontal scanning frequency	fh=67.4 kHz		48fps	Horizontal scanning frequency	fh=76.6 kHz	
		Vertical scanning frequency	fv=32.2 Hz			Vertical scanning frequency	fv=48.7 Hz	
		Driving clock frequency	fclk=84 MHz			Driving clock frequency	fclk=84 MHz	
		Digital output Gradation 8bit/12bit	(Base Config.)			Digital output Gradation 8bit/12bit	(Base Config.)	
	150fps	Horizontal scanning frequency	fh=314.6 kHz		210fps	Horizontal scanning frequency	fh=333.0kHz	
		Vertical scanning frequency	fv=150.2 Hz			Vertical scanning frequency	fv=210.5Hz	
		Driving clock frequency	fclk=80 MHz			Driving clock frequency	fclk=80MHz	
		Digital output Gradation 8bit	(Deca Config.)			Digital output Gradation 8bit	(Deca Config.)	
Video output	8bit	Camera Link format compliant Deca (10TAP) / Full /Medium/Base Configuration)						
	12bit	Camera Link format compliant Medium/Base Configuration						
Electronic shutter	1/59,000 sec. ～							
Asynchronous shutter	Pre-settable fixed exposure							
Scan mode	Full screen / Partial (Specified lines readout) / Binning							
Lens mount	C mount (Fixed flange back)							
Power supply	Camera connector (6Pin)/PoCL：DC12V±10% 250mA or less							
Storage tempurature range	0° C～40° C (with no condensation)							
External dimension	48(W)×45(H)×37(D) (size except the salient)							
Weight	110g							

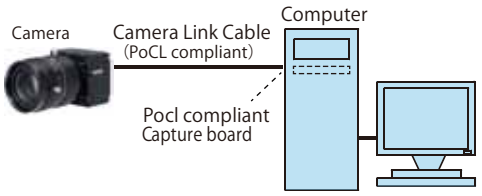
Configuration Diagram

※ All items are sold separately except for camera

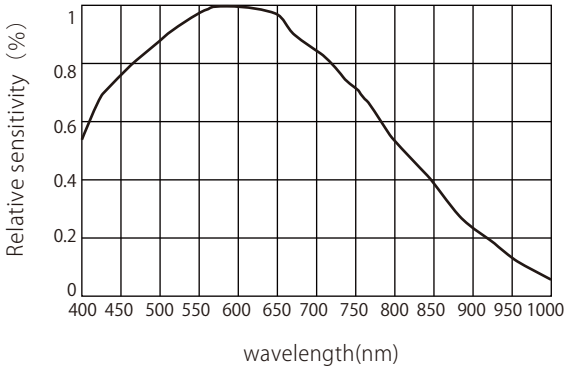
In case of powered from the power supply unit (Non-PoCL)



In case of powered from the capture board of the PC (PoCL)



Spectral Sensitivity



Example of option items

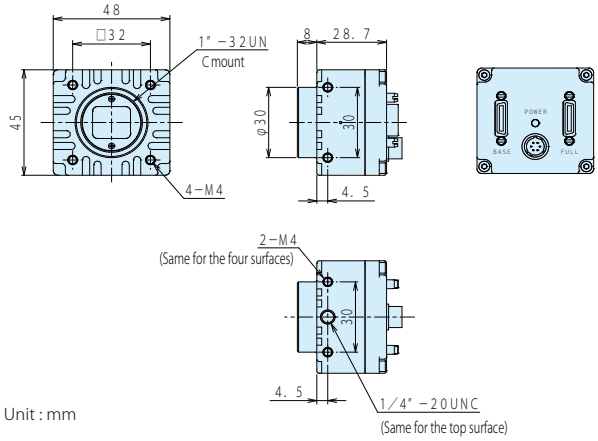
・Power Supply Unit
PU100-K1

・Cable
6P12G-03 (3m)

・Lens
HF165A-1

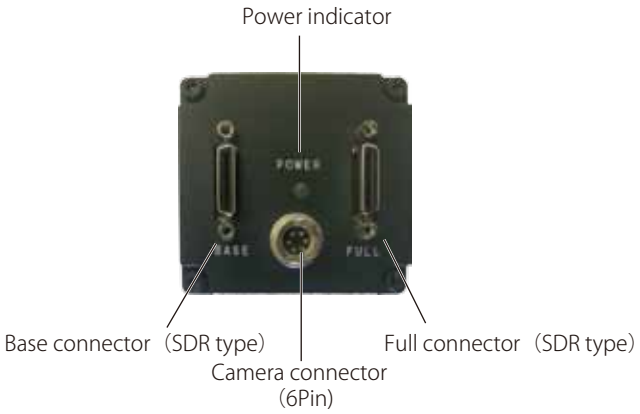
・Camera Link Cable
1SB26-L120-00C-500 (5m)

Dimensional Outline Drawing



Unit : mm

Back panel



- It may be changed without a notice about all items (product name, a model, specifications, external form dimensions, materials, the price)explained by this catalogue.
- We do not take responsibility about any accident damage by an error in the use of deficiency in the construction and deficiency of the maintenance check and this product, the natural disaster (surge, including lightning-induced).
- We do not take responsibility about any damage caused by use of this product or disability of this product (such as loss of business profits, business interruption, change or loss of memory contents, the cost involved in the restoration, etc.) .
- About this product, our expense will be within the price of this product in any case.

TAKEX TAKENAKA SYSTEM CO., LTD.

Headoffice: 86-66, Nomizo-cho, Ohtsuka, Yamashina-ku,
Kyoto City 607-8135, JAPAN
TEL: +81-75-593-9300 FAX: +81-75-593-9790
E-mail: sales @takex-system.co.jp

TAKENAKA SYSTEM URL: http://www..takex-system.co.jp
TAKENAKA SENSOR GROUP URL: http://www.takex.co.jp

※ The contents of this catalog is based on the date of Oct2018 CAT 20181031