



# ***CV-A70 CL***

## ***Digital Progressive Scan Color Camera***



- *Compact 1/2" digital progressive scan color camera*
- *RGB primary color mosaic filter (Bayer) for host based RGB decoding*
- *Color version of CV-A10CL*
- *782 (h) x 582 (v) 8.3µm square pixels*
- *60 fps with full resolution*
- *250 fps with 1/8 partial scan*
- *8 or 10 bit output via Camera Link*
- *High speed shutter from 1/60 to 1/300,000 second*
- *Edge pre-select, pulse width and sensor gate trigger modes*
- *Programmable exposure, auto shutter and smearless readout*
- *LVAL synchronous or asynchronous accumulation*
- *Reset Continuous Trigger (RCT)*
- *Iris video output, auto shutter and AGC allow a wider light range*
- *Setup by Windows NT/2000/XP software via RS 232C or Camera Link*

***The leading manufacturer of high performance camera solutions***

# Specifications for CV-A70 CL

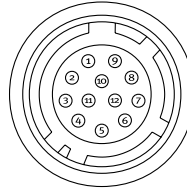
Specifications	CV-A70 CL
Scanning system	Progressive scan
Pixel clock	36.15 MHz
Line frequency	37.5 kHz (964 pixel clock/line)
Frame rate for full frame	60 frames/sec. (625 lines/frame)
CCD sensor	1/2" progressive scan color
Sensing area	6.4 (h) x 4.8 (v) mm
Cell size	8.3 (h) x 8.3 (v) $\mu$ m
Effective pixels	782 (h) x 582 (v)
Pixels in video output	Full 768 (h) x 576 (v) 60 fps 1/2 partial 768 (h) x 287 (v) 112 fps 1/4 partial 768 (h) x 143 (v) 177 fps 1/8 partial 768 (h) x 71 (v) 250 fps
Sensitivity on sensor	1.3 Lux (Max. gain, 50% video)
S/N ratio	>54 dB
Video output.	Digital 8 or 10 bits in Camera Link
Auto iris lens video output	0.7 Vpp
Gain	Manual -3 to +12 dB Automatic -3 to +9 dB
Gamma	1.0
Synchronization	Int. X-tal. Ext. HD/VD or random trigger
Ext HD/VD input (Normal mode only)	4 V $\pm$ 2 V. TTL or 75 $\Omega$ terminated
Inputs	Camera Link TTL Ext. trigger TTL Ext. trigger TTL 4V $\pm$ 2 V
Outputs	Camera Link Pixel clock, LVAL, FVAL, DVAL, EEN TTL XEEN
Trigger modes	Continuous, Edge pre-select, Pulse width control, Sensor gate control and Reset continuous trigger
Accumulation	LVAL synchronous or asynchronous
Shutter speed EPS	1/60 to 1/300,000 second
Programmable exposure	1/8 line to 625 lines. (3.3 $\mu$ s to 16.7 ms)
Pulse width control	2 lines to 120 frames. (66.7 $\mu$ s to 2 s)
Auto shutter range	1/60 to 1/25,000
Readout modes	Partial scan. Full, 1/2, 1/4, 1/8 Smearless
Control interface	RS 232C or Camera Link
Functions controlled by CL serial or RS 232C	Shutter, Trigger, Scanning, Readout, Polarity, Black level, Gain
Operating temperature	-5°C to +45°C
Humidity	20 - 80% non-condensing
Storage temp./humidity	-25°C to +60°C/ 20% to 90%
Vibration	10G (20Hz to 200Hz XYZ)
Shock	70G
Regulations	CE (EN50081-1 and EN50082-1), FCC part 15 class B
Power	12V DC $\pm$ 10%. 4 W
Lens mount	C-mount
Dimensions	35 x 44 x 80 mm (HxWxD)
Weight	150g

## Ordering Information

CV-A70 CL 1/2" Digital Progressive Scan Color CCD Camera

## Connection Description

### DC-IN/TRIGGER

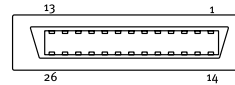


HIROSE HR10A-10R-12PB-01

Pin	Function
1	Ground
2	+12V DC
3	Ground
4	Auto iris lens video output
5	Ground
6	HD input/RXD RS 232C *
7	VD input/TXD RS 232C *
8	Ground
9	XEEN output
10	Trigger 1 input (TTL)*
11	N/C
12	Ground

### Camera Link interface

26 pin MDR connector  
3M 10226-1A10JL

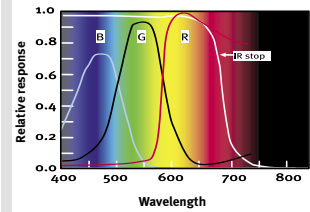


Pin	Signal	Function
1	14	GND
2	15	X0-/X0+
3	16	X1-/X1+
4	17	X2-/X2+
5	18	Xclk-/Xclk+
6	19	X3-/X3+
7	20	SerTC+/SerTC-
8	21	SerTFG-/SerTFG+
9	22	CC1-/CC1+
10	23	CC2-/CC2+
11	24	CC3-/CC3+
12	25	CC4-/CC4+
13	26	GND

Camera Link base configuration.

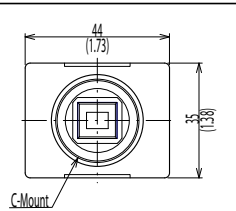
\* In Camera Link or 12 pin Hirose

## Spectral Sensitivity

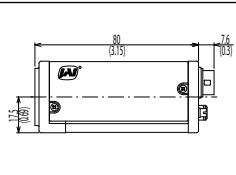


## Dimensions

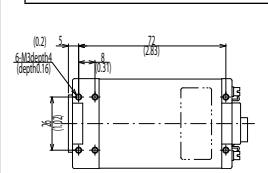
### Front view



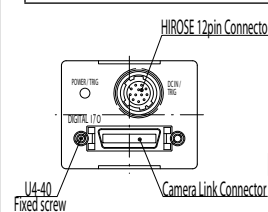
### Side view



### Bottom view



### Rear view



JAI A-S, Denmark  
Phone +45 4457 8888  
Fax +45 4491 3252  
www.jai.com

JAI Corporation, Japan  
Phone +81 45 440 0154  
Fax +81 45 440 0166  
www.jai-corp.co.jp

JAI PULNiX, Germany  
Phone +49 (0) 6055 9379 10  
Fax +49 (0) 6055 9379 11  
www.jai.com

JAI PULNiX Inc., USA  
Phone (Toll-Free) +1 800 445 5444  
Phone +1 408 747 0300  
www.jai.com



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