



CV-A33 CL

Digital Quad Speed Progressive Scan Camera



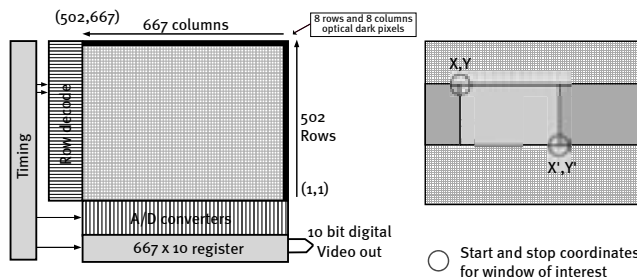
- *1/2" progressive scan monochrome CMOS sensor*
- *659 (h) x 493 (v) 9.9 μ m square pixels*
- *118 frames/second at full resolution*
- *10 bit video output as Camera Link*
- *400 frames/second for 659 (h) x 120 (v) pixels (example)*
- *4953 frames/second for 659 (h) x 3 (v) pixels*
- *Programmable X and Y origin and size for window of interest*
- *Edge pre-select (EPS) and pulse width control (PWC) trigger modes*
- *Global shutter for simultaneous full frame exposure*
- *Programmable shutter from 18.6 μ sec. to 8.3 msec.*
- *A-series platform*
- *Accepts standard C-mount lenses*
- *Short ASCII commands for fast mode setup via serial port*
- *Setup by Windows 98/NT/2000 software via RS 232C or Camera Link*

The leading manufacturer of high performance camera solutions

Specifications for CV-A33 CL

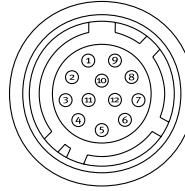
Specifications	CV-A33 CL
Scanning system	Progressive scan
Pixel clock	40 MHz
Line frequency	59.44 kHz (673 pixel clock/line)
Frame rate for full frame	118.4 frames/sec. (502 lines/frame)
CCD sensor	1/2" progressive scan monochrome CMOS image sensor
Sensing area	6.61 (h) x 4.97 (v) mm
Cell size	9.9 (h) x 9.9 (v) μ m
Effective pixels	667 (h) x 502 (v)
Pixels in video output	
Full	659 (h) x 493 (v) 118.4 frames / sec.
Min. window size	2 (h) x 3 (v) 4953 frames / sec.
Sensitivity on sensor	1.2 Lux, Max. gain, 50% video
S/N ratio	>45 dB
Digital video output	10/8 bits in Camera Link
Gain	Remote
Gain range	+0 to +15 dB
Synchronization	Int. X-tal. Ext. random trigger
Inputs	Camera Link TTL Ext. trigger Ext. trigger TTL 4 \pm 2 V
Outputs	Camera Link TTL Pixel clock, LVAL, FVAL, DVAL, EEN EEN
Control interface	TXD and RXD via RS 232C TXD and RXD via Camera Link
Trigger modes	Continuous, Edge pre-select, Pulse width control
Exposure	LVAL-asynchronous
Shutter	Global (simultaneous exposure for all pixels)
Readout modes	Full Partial as user selectable window
Shutter speed (fixed)	1/120 through 1/20,000 seconds
Programmable exposure	1 LVAL to 493 LVAL (16.8 μ sec. to 8.3 msec.)
Pulse width control	>1H to ∞ (>16.8 μ sec.) < 1 sec. recommended
Partial readout window of interest	X origin, Y origin X width, Y height in 1 pixel increments
Functions controlled by RS 232C	Shutter, Trigger, Scanning, Readout, Trigger input, Black level and Gain
Operating temperature	-5°C to +45°C
Humidity	20 - 80% non-condensing
Storage temp./humidity	-25°C to 60°C / 20% - 90%
Power	12V DC \pm 10%. 2.5 W
Lens mount	C-mount
Dimensions	35 x 44 x 58 mm (HxWxD)
Weight	120g

Sensor layout - Window of interest function



Connection Description

DC-IN/TRIGGER

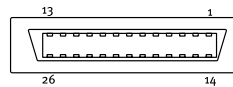


HIROSE HR10A-10R-12PB-01

Pin	Signal
1	Ground
2	+12V DC
3	Ground
4	N/C
5	Ground
6	RXD RS 232C *
7	TXD RS 232C *
8	Ground
9	EEN output
10	Trigger input (TTL)*
11	N/C
12	Ground

Camera Link interface

26 pin MDR connector
3M 10226-1A10JL



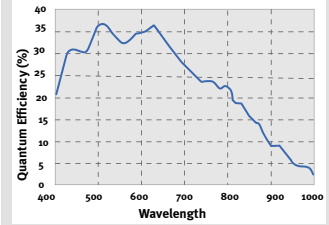
Digital I/O

Pin	Signal	Function	
1	14	GND	
2	15	X0-/X0+	CL Data
3	16	X1-/X1+	CL Data
4	17	X2-/X2+	CL Data
5	18	Xclk-/Xclk+	CL Clk
6	19	X3-/X3+	CL Data
7	20	SerTC-/SerTC+	Serial in*
8	21	SerTFG-/SerTFG+	Serial out*
9	22	CC1-/CC1+	Trigger*
10	23	CC2-/CC2+	Not used
11	24	CC3-/CC3+	Not used
12	25	CC4-/CC4+	Not used
13	26	GND	

Camera Link base configuration.

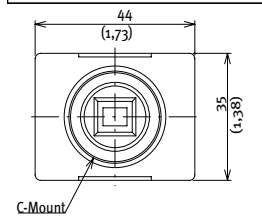
*) In CL or Hirose 12-pin connector

Quantum Efficiency

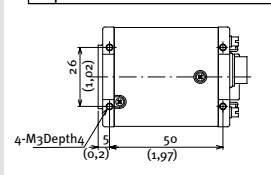


Dimensions

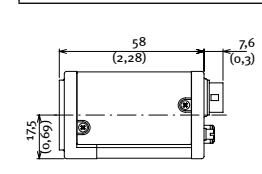
Front view



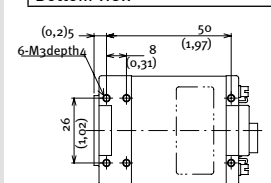
Top view



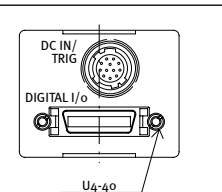
Side view



Bottom view



Rear view



Ordering Information

CV-A33 CL 1/2" Digital Quad Speed Progressive Scan Camera

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