AD-080 CL

2 CCD Multi-spectral camera

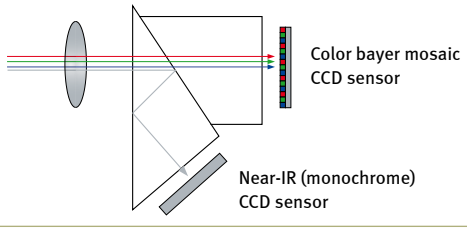
C3 Camera Suite
Unlimited
Digital
Switchability

- *Multi-spectral 2-channel CCD camera*
- *Advanced series 2 x 1/3" progressive scan camera*
- *Simultaneously captures Visible and Near-IR through the same optical path*
- *1024 (h) x 768 (v) active pixels per channel*
- *4.65 µm square pixels*
- *30 frames/second with full resolution*
- *Increased frame rate with partial scan*
- *Programmable exposure from 20µs to 33ms*
- *Pre-select and Pulse width trigger modes*
- *LVAL Synchronous/-asynchronous operation (auto-detect)*
- *Auto-iris lens video output allows a wider range of light*
- *RGB 24-bit or Raw Bayer 10 or 8-bit output for visible*
- *10 or 8-bit output for Near-IR*
- *Setup by Windows NT/2000/XP via serial communication*

Specifications for AD-080 CL

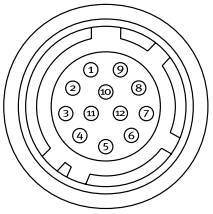
Specifications	AD-080 CL
Sensor Visible Near-IR	1/3" color Bayer mosaic IT CCD 1/3" Monochrome interline transfer CCD
Pixel Clock	33.75 MHz
Frame rate full frame	30 frames/sec.
Active area	4.76 (h) x 3.57 (v) mm
Cell size	4.65 (h) x 4.65 (v) µm
Active pixels	1024 (h) x 768 (v)
Color visible	Raw Bayer output, or RGB 24-bit
Read-out modes Full 1/2 partial scan 1/4 partial scan 1/8 partial scan	 1024 (h) x 768 (v) 30 fps 1024 (h) x 384 (v) 48 fps 1024 (h) x 192 (v) 68 fps 1024 (h) x 96 (v) 86 fps
Sensitivity Visible	1.4 Lux (On sensor, max. gain, shutter off, 50% video)
Sensitivity Near-IR	0,1µW/cm2 at 800nm (On sensor, max. gain, shutter off, 50% video)
S/N ratio	>54dB (Gain 0 dB, shutter off)
Video output Visible Near-IR	24-bits RGB or raw Bayer output 8 or 10 bit
Auto-iris lens video	0.7 Vp-p
Gain	-3dB to +12dB
Synchronization	Int. X-tal or ext. trigger
Inputs Camera Link TTL	Ext. trigger, LVDS, (CC 1) Ext. Trigger 4V ±2V
Outputs Camera Link TTL	Clk., FVAL, LVAL, Data, EEN XEEN
Trigger modes	Pre Select, Pulse Width
Electronic shutter Pre-set shutter Programmable exposure Pulse Width Control	 1/30 to 1/50,000 sec. in 12 steps 0.5L to 792L (1LVAL unit) 1,5L to 60 frames
White balance	Only for RGB 24-bits output Gain range: -3dB to +6dB Manual: 3000K to 6500K One-push: 3000K to 6500K
Knee function	For 24-bit output (visible) Near-IR 8 or 10 bit Knee point, Knee slope
Control interface	Camera Link
Functions controlled by serial communication	Gain, shutter, trigger modes, read-out modes, bit depth
Indicators on rear panel	LED for power and trigger input
Operating Temperature	-5°C to +45°C
Humidity (operation)	20 - 80% non-condensing
Storage temp./humidity	-25°C to +60°C / 20 to 80%
Vibration	3 G (15Hz to 200 Hz XYZ)
Shock	50G
Regulations	CE (EN 61000-6-2, EN-61000-6-3), FCC part 15 class B, RoHS/WEEE
Power	12V DC ± 10%. 4 W
Lens mount	C-mount (use 3CCD type with no IR filter)
Dimensions (H x W x L)	55(H) x 55(W) x 80(D) mm
Weight	400 g

2CCD Prism



Connector pin-out

DC In / Trigger

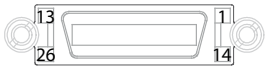


HIROSE HR10A-10R-12PB-01

Pin		
	1	Ground
	2	+12V DC
	3	Ground
	4	Auto Iris lens video output
	5	Ground
	6	XEEN 1 out
	7	XEEN 2 out
	8	Ground
	9	Not used
	10	Trigger 1 in
	11	Trigger 2 in
	12	Ground

Camera Link Interface

26 pin MDR connector 3M 10226-1A10JL

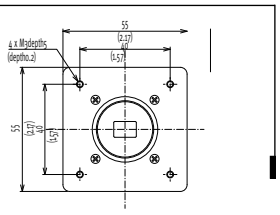


Pin		Signal	Function
1	14	GND	
2	15	+/-Tx0	CL Data
3	16	+/-Tx1	CL Data
4	17	+/-Tx2	CL Data
5	18	+/-Txclk	CL clk
6	19	+/-Tx3	CL Data
7	20	SerTC+/SerTC-	Serial in*
8	21	SerTFG+/SerTFG-	Serial out*
9	22	CC1-/CC1+	Ext. trig*
10	23	CC2+/CC2-	Not used
11	24	CC3-/CC3+	Not used
12	25	CC4+/CC4-	Not used
13	26	GND	

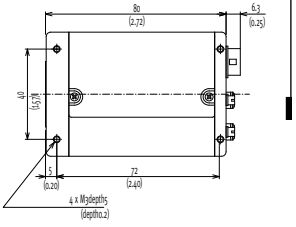
Camera Link medium configuration.
*) Camera Link

Dimensions

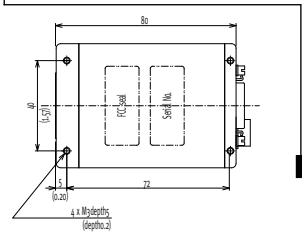
Front view



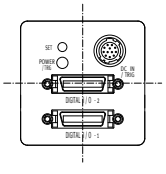
Side view



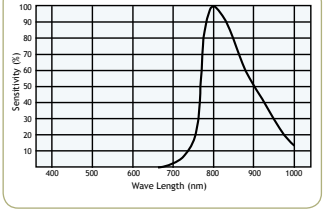
Bottom view



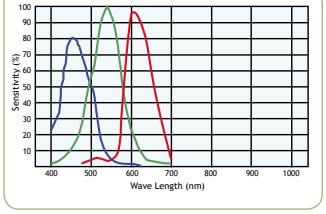
Rear view



Near-IR Response AD-080 CL



Visible Response AD-080 CL



Ordering Information

AD-080CL	Digital 2CCD Progressive Scan Multi-Spectral Camera

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