

❖ AT-200 CL

3CCD Progressive Scan RGB Color

C3 Camera Suite
 Unlimited
 Digital
 Switchability



- 3 x 1/1.8" CCD progressive scan RGB color camera for vision applications
- 1628(h) x 1236 (v) effective pixels for each CCD (4.40 μm square)
- Compact RGB prism for C-mount lenses
- Chromatic shading reduction makes lens choice wider
- 20.3 frames per second with full resolution
- Pre-set or variable partial scan also available
- Vertical binning for higher sensitivity and frame rate
- 24-bit RGB output via single port Camera Link base configuration
- 30-bit or 36-bit output via dual port Camera Link medium configuration
- Linear matrix circuit with manual control or with sRGB or Adobe RGB pre-sets
- Knee function available for knee-point and knee-slope settings
- Edge pre-select and pulse width control trigger modes
- Pre-set shutter from OFF(1/20) to 1/51000 in 12 steps
- Individually programmable shutter/exposure for R, G, and B
- Manual, continuous, one-push auto, or pre-set white balance
- Setup by Windows 2000/XP software via RS 232C



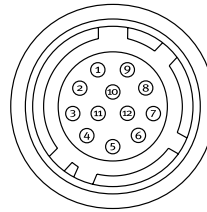
Specifications for AT-200 CL

Specifications	AT-200 CL
Sensor	3 x 1/1.8" progressive scan CCD - ICX274AL
Pixel Clock	50 MHz
Frame rate full frame	20.31 frames/second (1236 lines per frame)
Active area	7.16 (h) x 5.43 (v) mm
Cell size	4.40 (h) x 4.40 (v) μ m
Active pixels	1628 (h) x 1236 (v)
Read-out modes	Full 1628 (h) x 1236 (v) 20.31 fps 2/3 partial scan 1628 (h) x 825 (v) 28.42 fps 1/2 partial scan 1628 (h) x 621 (v) 35.27 fps 1/4 partial scan 1628 (h) x 311 (v) 55.896 fps 1/8 partial scan 1628 (h) x 155 (v) 79.23 fps Variable partial Programmable start line & height, 1 to 1236L Vertical binning 1628 (h) x 618 (v) 35.93 fps
Sensitivity (on sensor)	1.0 Lux, max gain, 50% video
S/N ratio	>50 dB. (Green ch., 0 dB gain)
Video output	3 x 8 bit RGB: single port Camera Link base 3 x 10 bit RGB: dual port Camera Link medium 3 x 12 bit RGB: dual port Camera Link medium
Auto-iris lens video	0.7 V p-p, 75 Ω NUM luminance signal w/o sync
Gain, manual	Manual for all 3 colors Master -3 to +12 dB R and B -6 to +6 dB
Synchronization	Int. X-tal
Inputs	Camera Link Ext. trigger, (LVDS) TTL Ext. trigger 4 Vpp \pm 2 V. (TTL or 75 Ω)
Outputs	Camera Link RGB 8/10/12 bit video output. Do - D9 Pixel clock, DVAL, LVAL, FVAL and EEN (LVDS) TTL XEEN output 4 Vpp from 75 Ω source (TTL)
Trigger modes	Continuous, Edge Pre-Select, Pulse Width Control, Reset Continuous
Electronic shutter	Pre-set shutter 1/20 (off) to 1/51,000 sec. in 12 steps. All or R, G, B individually
Programmable exposure	1L - 1252L in 1L (39.32 μ s) steps. All or R, G, B individually
Pulse Width Control	2L (78.64 μ s) to 50080L (2 sec.)
White balance	Manual, one-push auto, continuous auto, Preset(4000K, 4600K, 5600K) Note: 7800K is Factory default setting
Tracking range	-6 to +6 dB. (4000K to 9000K)
Gamma	1.0 (OFF), 0.6, 0.45 or LUT (Look Up Table)
Knee function	Knee point and knee slope for R, G, and B channel
Linear Matrix	Manual for R, G and B / Preset (sRGB, Adobe RGB)
Functions controlled by Camera Link	Trigger, shutter, scanning, readout, polarity, gain, set-up, white balance, Gamma, knee point and slope, linear matrix, shading compensation
Operating Temperature	-5 $^{\circ}$ C to +45 $^{\circ}$ C
Humidity (operation)	20 - 80% non-condensing
Storage temp./humidity	-25 $^{\circ}$ C to 60 $^{\circ}$ C / 20% - 80 % non-condensing
Vibration	3G (15 Hz to 200 Hz XYZ)
Shock	50 G
Regulations	CE (EN 61000-6-2, EN 61000-6-3), FCC part 15 class B, RoHS
Power	12V to 24V DC \pm 10%. 6.8W typical (full frame @ 12V)
Lens mount	C-mount (Max 4.0 mm thread)
Dimensions (H x W x L)	55 mm x 55 mm x 98.3 mm
Weight	320 g

Ordering Information	
AT-200CL	1/1.8" 3CCD Progressive Scan RGB Color Camera

Connector pin-out

DC In / Trigger



HIROSE HR10A-10R-12PB-01

Pin	Signal
1	Ground
2	+12V DC
3	Ground
4	Iris video
5	Ground
6	—
7	—
8	Ground
9	XEEN out
10	Trigger in
11	—
12	Ground

Camera Link Interface

26 pin MDR connector 3M 10226-1A10L

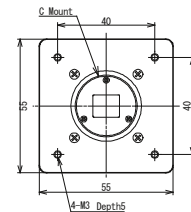


Pin	Signal	Function	
1	14	GND	
2	15	Xo-/Xo+	CL Data out
3	16	X1-/X1+	CL Data out
4	17	X2-/X2+	CL Data out
5	18	Xclk-/Xclk+	CL Clk
6	19	X3-/X3+	CL Data out
7	20	SerTC+/SerTC-	Serial in*
8	21	SerTFG-/SerTFG+	Serial out*
9	22	CC1-/CC1+	Trigger*
10	23	CC2+/CC2-	Reserved
11	24	CC3-/CC3+	Not used
12	25	CC4+/CC4-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

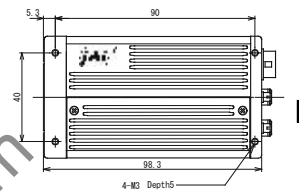
* Via Camera Link or 12-pin Hirose Information shown is for Port 1. For Port 2, which is used when providing 30-bit or 36-bit output via Camera Link medium configuration, pinout is similar, except pins 7-12 and 20-25 are not used.

Dimensions

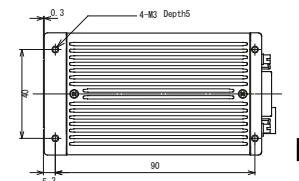
Front view



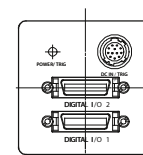
Side view



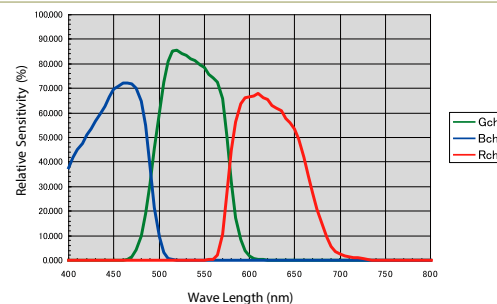
Bottom view



Rear view



Spectral Response



Company and product names mentioned in this datasheet are trademarks or registered trademarks of their respective owners. JAI-A-5 cannot be held responsible for any technical or typographical errors and reserves the right to make changes to products and documentation without prior notification.

Europe, Middle East & Africa
Phone +45 4457 8888
Fax +45 4491 3252

Asia Pacific
Phone +81 45 440 0154
Fax +81 45 440 0166

Americas
Phone (Toll-Free) 1 800 445 5444
Phone +1 408 383 0300

