

## ❖ AM-201 CL/AB-201 CL

2-megapixel Progressive Scan

 **Camera Suite**  
Unlimited  
Digital  
Switchability



# PRELIMINARY

- 2-megapixel 2/3-inch progressive scan CCD
- 1920 (h) x 1080 (v) pixel resolution (HD format)
- 5.5 $\mu$ m x 5.5 $\mu$ m square pixels
- 64 fps at full resolution (32 fps for RGB output)
- Programmable exposure to 1/100,000 sec. (10  $\mu$ s)
- Manual or auto gain control from -3 dB to +24 dB (0 to +24 dB for color)
- User programmable partial scanning
- Vertical and horizontal binning (monochrome only)
- 256-point look-up table (LUT) for gamma control
- Pixel blemish and flat-field compensation
- Camera Link interface with 8, 10, or 12-bit monochrome/Bayer output or 8-bit RGB
- Supports C-mount lenses

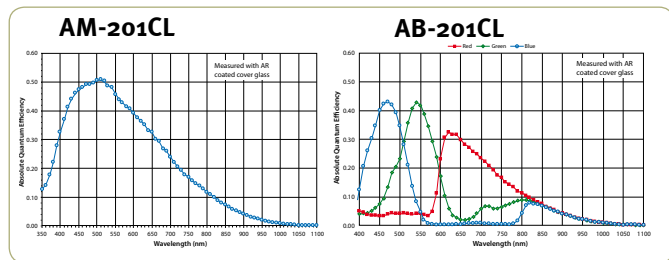


# Specifications for AM-201 CL/AB-201 CL

PRELIMINARY

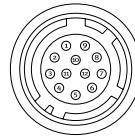
Specifications	AM-201 CL/AB-201 CL
Sensor	2/3" progressive scan CCD (KAI-02150)
Pixel Clock	40 MHz
Frame rate, full frame	64 frames/sec.
Active area	10.56 mm (h) x 5.94 mm (v), 12.12 mm diagonal
Cell size	5.5 μm (h) x 5.5 μm (v)
Active pixels	1920 (h) x 1080 (v)
Horizontal output freq.	34.6 KHz (1H = 28.875 μs, 80 MHz clock)
Read-out modes	Full 1920 (h) x 1080 (v) 64 fps In-camera interpolation 1920 (h) x 1080 (v) 32 fps (AB-201CL) Variable partial scan Variable partial scan (RGB) Binning (HxV) 1 x 2, 2 x 1, 2 x 2 (monochrome only)
Sensitivity (AM-201CL)	0.01 Lux (On sensor, max. gain, 50% video)
Sensitivity (AB-201CL)	0.2 Lux (On sensor, max. gain, 50% green, IR cut filter)
S/N ratio	>57 dB. (0 dB gain)
Video signal output (80 MHz data clock)	Camera Link 8-bit/10-bit/12-bit (monochrome, Bayer) Camera Link 8-bit (RGB)
Auto-iris lens video	0.7Vp-p, with 0.3V horiz. sync
Gain	Monochrome Manual/automatic -3 dB to +24 dB Color Manual/automatic 0 dB to +24 dB
White balance (AB-201CL)	Manual or one-push auto (3200K to 9000K)
Gamma	0.45 to 1.0 or 256-point LUT
Synchronization	Internal
Inputs	Camera Link, TTL/75 Ω
Outputs	Camera Link LVAL, FVAL, DVAL, EEN TTL (Hirose 12-pin) XEEN
Trigger modes	Timed (EPS), trigger width (PWC), edge dump (RCT), PIV, sequence (up to 16X)
Electronic shutter	Timed/PWC exposure 10 μs to 2 sec in 1 μs steps Auto shutter 1/64 to 1/10,000 sec. Exposure sequence Up to 16 different settings
Pre-processing functions	Flat field compensation, pixel blemish compensation, 3 x 3 color interpolation (AB-201CL only)
Control interface	Camera Link serial communication
Operating temperature	-5° C to +50° C
Humidity (operation)	20 - 80% non-condensing
Storage temp./humidity	-25° C to 60° C / 20% - 80% non-condensing
Vibration	10G (20 Hz to 200 Hz XYZ)
Shock	70 G
Regulations	CE (EN 61000-6-2, EN 61000-6-3), FCC part 15 class B, RoHS/WEEE
Power	12V to 24V DC ± 10%. 7.8W typical (full frame @ 12V)
Lens mount	C-mount
Dimensions (H x W x L)	C-mount 55 mm x 55 mm x 69 mm
Weight	C-mount 280 g

## Spectral Response



## Connector pin-out

### DC In / Trigger

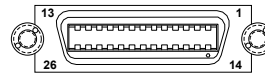


HIROSE HR10A-10R-12PB-01

- | Pin | Signal                |
|-----|-----------------------|
| 1   | Ground                |
| 2   | +12V - +24V DC In     |
| 3   | Ground                |
| 4   | Iris video Out        |
| 5   | Ground                |
| 6   | NC                    |
| 7   | NC                    |
| 8   | Ground                |
| 9   | XEEN Out (TTL)        |
| 10  | Ext. Trigger In (TTL) |
| 11  | +12V - +24V DC In     |
| 12  | Ground                |

### Camera Link Interface

26 pin MDR connector  
3M 10226-1A10L



Port 1 (24bit/30bit/36bit)  
8bit (RGB)

Pin	Signal	Function
1 14	GND	
2 15	-/+ TX0	CL Data out
3 16	-/+ TX1	CL Data out
4 17	-/+ TX2	CL Data out
5 18	-/+ TXclk	CL Clk
6 19	-/+ TX3	CL Data out
7 20	+/- RXD input	
8 21	-/+ TXD output	
9 22	-/+ Trig input*	
10 23	NC	
11 24	NC	
12 25	NC	
13 26	GND	

\* Selectable via Camera Link or Hirose 12-pin by internal switch. Factory default is trigger via Camera Link.

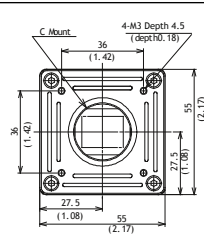
## Ordering Information

AM-201CL-C	Monochrome progressive scan camera with C-mount
AB-201CL-C	Color progressive scan camera with C-mount

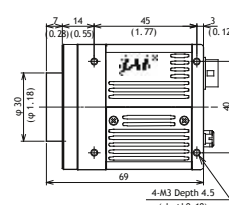
## Dimensions

### C-Mount

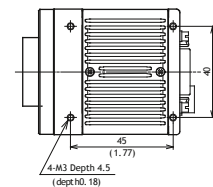
#### Front view



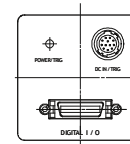
#### Side view



#### Bottom view



#### Rear view



Company and product names mentioned in this datasheet are trademarks or registered trademarks of their respective owners. JAI-A-S 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



Visit our web site on [www.jai.com](http://www.jai.com)

See the possibilities