AM-200 GE/AB-200 GE

2-megapixel Progressive Scan

- *2-megapixel 2/3-inch progressive scan CCD*
- *1600 (h) x 1200 (v) pixel resolution (4:3 format)*
- *5.5µm x 5.5 µm square pixels*
- *40 fps at full resolution (28.8 or 19.2 fps for interpolated output)*
- *Programmable exposure to 1/100,000 sec. (10 µs)*
- *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)*
- *512-point look-up table (LUT) for gamma control*
- *Pixel blemish and flat-field compensation*
- *GigE Vision interface with 8, 10, or 12-bit monochrome/Bayer output or 8-bit RGB/YUV output*
- *Supports C-mount lenses*

GiGE VISION

Specifications for AM-200GE/AB-200GE

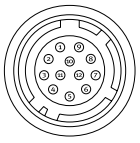
Specifications	AM-200GE/AB-200GE
Sensor	2/3" progressive scan CCD (KAI-02050)
Pixel Clock	48 MHz
Frame rate, full frame	40 frames/sec.
Active area	8.8 mm (h) x 6.6 mm (v), 11 mm diagonal
Cell size	5.5 µm (h) x 5.5 µm (v)
Active pixels	1600 (h) x 1200 (v)
Horizontal output frequency	49.896 KHz (1H = 20.04 µs)
Read-out modes Full monochrome/Bayer In-camera YUV interpolation In-camera RGB interpolation Variable partial scan Variable partial scan (RGB) Binning (HxV)	 1600 (h) x 1200 (v) 40.6 fps (8-bit) 1600 (h) x 1200 (v) 28.8 fps (AB-200GE) 1600 (h) x 1200 (v) 19.2 fps (AB-200GE) Any start line, any height, in 1L steps Any start line, any height, in 2L steps 1 x 2, 2 x 1, 2 x 2 (monochrome only)
Sensitivity (AM-200GE)	0.12 Lux (On sensor, max. gain, f1.4, 50% video)
Sensitivity (AB-200GE)	0.25 Lux (On sensor, max. gain, f1.4, 50% green)
S/N ratio AM-200GE AB-200GE	>57 dB. (0 dB gain) >55 dB. (0 dB gain)
Video signal output	GigE Vision 8-/10-/12-bit (monochrome, Bayer) GigE Vision 8-bit (RGB or YUV)
Auto-iris lens video	0.7Vp-p, with 0.3V horiz. sync
Gain Monochrome Color	Manual/automatic -3 dB to +24 dB Manual/automatic 0 dB to + 24 dB
GPIO Module	Includes counter, timer, event and action controls
White balance (AB-200GE)	Manual, one-push auto, or continuous (3200K to 9000K)
Gamma	Adjustable 0.45 to 1.0, or 512-point LUT
Synchronization	Internal
Acquisition modes	Continuous, single frame, multi-frame (1-255)
Trigger modes	Timed, Smearless, Trigger Width, PIV, Pre-Dump (RCT)
Electronic shutter Timed exposure Trigger width Auto shutter	 10 µs to 2 sec in 1 µs steps 50 µs minimum 1/10 to 1/100,000 sec.
Auto level control (ALC)	Integrated auto shutter, auto gain, and auto-iris with tracking speeds, metering window, and min-max values adjustable
Pre-processing functions	Flat field compensation, pixel blemish compensation, 3 x 3 color interpolation (AB-200GE only)
Control interface	Register based GigE Vision/GenICam compliant
GigE Vision streaming protocol	Packet size, delayed (frame) readout, inter-packet delay. Default package size: 1476 bytes. Max: 16020 bytes
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%. 8.16W typical (full frame @ 12V)
Lens mount	C-mount
Dimensions (H x W x L)	55 mm x 55 mm x 69 mm
Weight C-mount	320 g

Ordering Information

AM-200GE	Monochrome progressive scan camera with C-mount
AB-200GE	Color progressive scan camera with C-mount

Connector pin-out

DC In / Trigger



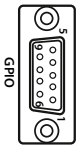
HIROSE HR10A-10R-12PB-01

Connector Pin-out

Pin		
1	GND	
2	+12V to + 24V DC input	
3	Opto in 2(-)*/GND	
4	Opto in 2(+)*/Auto iris lens	
5	Opto in 1(-)	
6	Opto in 1(+)	
7	Opto out 1(-)	
8	Opto out 1(+)	
9	Opto out 2(-)	
10	Opto out 2(+)	
11	+12V to + 24V DC input	
12	GND	

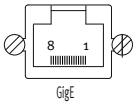
* Pins 3 and 4 can be configured by internal switch selection

GPIO Pinout



Pin	I/O		Pin	I/O	
1	I	LVDS In 1–	6		NC
2	I	LVDS In 1+	7		NC
3	I	TTL In 1	8	O	TTL Out 2
4	O	TTL Out 1	9		GND
5		GND			

GigE Vision Interface RJ-45 with locking screws

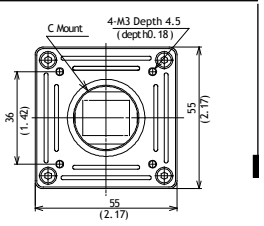


Pin		Pin	
1	TRD+(0)	5	TRD–(2)
2	TRD–(0)	6	TRD–(1)
3	TRD+(1)	7	TRD+(3)
4	TRD+(2)	8	TRD–(3)

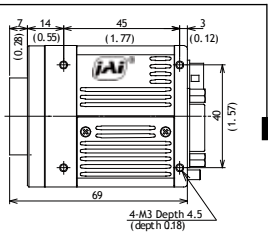
Dimensions

C-Mount

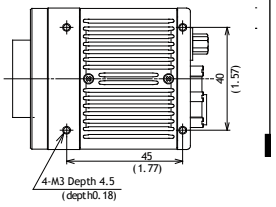
Front view



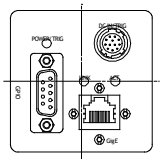
Side view



Bottom view

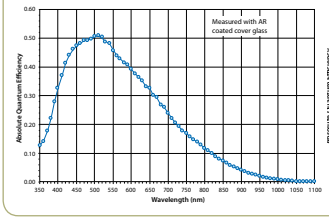


Rear view

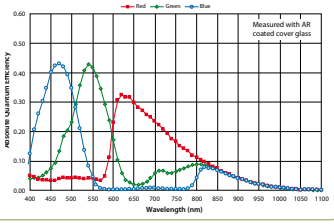


Spectral Response

AM-200GE



AB-200GE



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

See the possibilities

October 2011