

## ❖ AM-201 GE/AB-201 GE

2-megapixel Progressive Scan



- 2-megapixel 2/3-inch progressive scan CCD
- 1920 (h) x 1080 (v) pixel resolution (HD format)
- 5.5µm x 5.5 µm square pixels
- 38 fps at full resolution (26.6 or 17.7 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

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

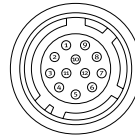
Specifications	AM-201 GE/AB-201 GE
Sensor	2/3" progressive scan CCD (KAI-02150)
Pixel Clock	48 MHz
Frame rate, full frame	38 frames/sec.
Active area	10.56 mm (h) x 5.94 mm (v), 12.12 mm diagonal
Cell size	5.5 μm (h) x 5.5 μm (v)
Active pixels	1920 (h) x 1080 (v)
Horizontal output frequency	42.478 KHz (1H = 23.54 μs)
Read-out modes	
Full monochrome/Bayer	1920 (h) x 1080 (v) 38.3 fps (8-bit)
In-camera YUV interpolation	1920 (h) x 1080 (v) 26.6 fps (AB-201GE)
In-camera RGB interpolation	1920 (h) x 1080 (v) 17.7 fps (AB-201GE)
Variable partial scan	Any start line, any height, in 1L steps
Variable partial scan (RGB)	Any start line, any height, in 2L steps
Binning (HxV)	1 x 2, 2 x 1, 2 x 2 (monochrome only)
Sensitivity (AM-201GE)	0.08 Lux (On sensor, max. gain, f1.4, 50% video)
Sensitivity (AB-201GE)	0.12 Lux (On sensor, max. gain, f1.4, 50% green)
S/N ratio	AM-201GE >57 dB. (0 dB gain) AB-201GE >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 Manual/automatic -3 dB to +24 dB Color Manual/automatic 0 dB to +24 dB
GPIO Module	Includes counter, timer, event and action controls
White balance (AB-201GE)	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	10 μs to 2 sec in 1 μs steps
Trigger width	50 μs minimum
Auto shutter	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-201GE 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-201GE	Monochrome progressive scan camera with C-mount
AB-201GE	Color progressive scan camera with C-mount

## Connector pin-out

### DC In / Trigger



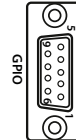
HIROSE HR10A-10R-12PB-01

### 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

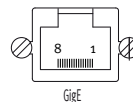
\* Pins 3 and 4 can be configured by internal switch selection

### GPIO Pinout



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

### GigE Vision Interface RJ-45 with locking screws

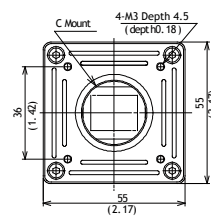


Pin	TRD+(+)	Pin	TRD-(2)
1	TRD+(0)	5	TRD-(1)
2	TRD-(0)	6	TRD-(3)
3	TRD+(1)	7	TRD-(2)
4	TRD+(2)	8	TRD-(3)

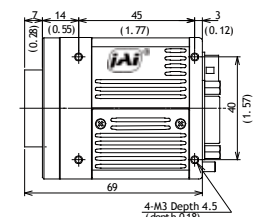
## Dimensions

### C-Mount

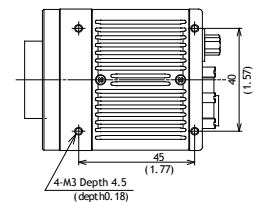
#### Front view



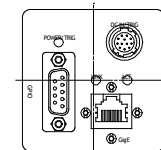
#### Side view



#### Bottom view

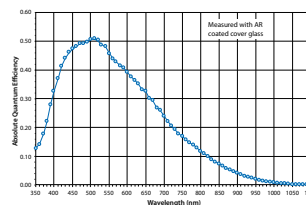


#### Rear view



## Spectral Response

### AM-201GE



### AB-201GE

