

❖ AM-201 GE/AB-201 GE

2-megapixel Progressive Scan



PRELIMINARY

- 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

GigETM
VISION



Specifications for AM-201 GE/AB-201 GE

PRELIMINARY

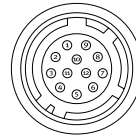
| Specifications | AM-201 GE/AB-201 GE |
|--------------------------------|--|
| Sensor | 2/3" progressive scan CCD (KAI-02150) |
| Pixel Clock | 48 MHz |
| Frame rate, full frame | 38 frames/sec. |
| Active area | 10.56 mm (h) x 5.94 mm (v), 12.12 mm diagonal |
| Cell size | 5.5 μm (h) x 5.5 μm (v) |
| 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



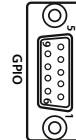
HIROSE HR10A-10R-12PB-01

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 |

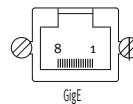
* Pins 3 and 4 can be configured by internal switch selection

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

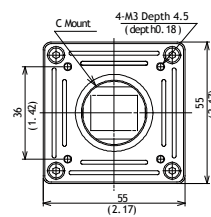


| Pin | TRD+(+) | Pin | TRD-(2) |
|-----|---------|-----|---------|
| 1 | TRD+(0) | 5 | TRD-(1) |
| 2 | TRD-(0) | 6 | TRD-(3) |
| 3 | TRD+(1) | 7 | TRD-(4) |
| 4 | TRD+(2) | 8 | TRD-(5) |

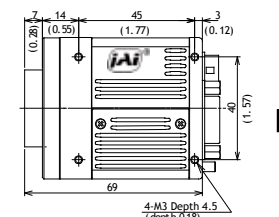
Dimensions

C-Mount

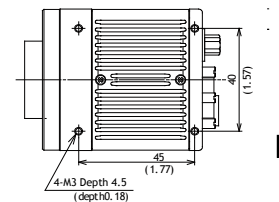
Front view



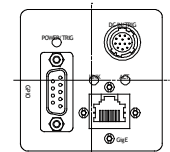
Side view



Bottom view

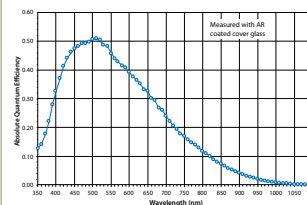


Rear view

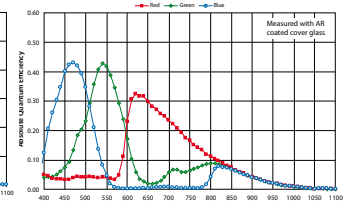


Spectral Response

AM-201GE



AB-201GE



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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



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October 2011