

❖ AT-200 GE

3CCD Progressive Scan RGB Color

C₃ Camera Suite
 Unlimited
 Digital
 Switchability



PRELIMINARY

- 3 x 1/1.8" CCD progressive scan RGB color camera for vision applications
- 1624(h) x 1236 (v) effective pixels (4.40 μm square) for each CCD
- Compact RGB prism for C-mount lenses
- Chromatic shading reduction makes lens choice wider
- 15.4 frames per second with full resolution
- Pre-set or variable partial scan also available
- Vertical binning for higher sensitivity and frame rate
- 24-bit or 32-bit RGB output via GigE Vision Streaming Protocol
- Linear matrix circuit with manual control or 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
- Programmable exposure from 1/15 to 1/38500 (25.95 μs)
- Individually programmable shutter/exposure for R, G, and B
- Manual, continuous, one-push auto, or pre-set white balance
- Programmable GPIO with opto-isolated inputs and outputs
- Comprehensive SDK and control tool for Windows XP/Vista/7

GigE™
 VISION



Specifications for AT-200 GE

PRELIMINARY

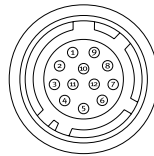
Specifications	AT-200 GE	
Sensor	3 x 1/1.8" progressive scan CCD - ICX274AL	
Pixel Clock	37 MHz	
Frame rate full frame	15.4 frames/second (1236 lines per frame)	
Active area	7.15 (h) x 5.44 (v) mm	
Cell size	4.40 (h) x 4.40 (v) μm	
Active pixels	1624 (h) x 1236 (v)	
Read-out modes	Full 1624 (h) x 1236 (v) 15.40 fps 2/3 partial scan 1624 (h) x 824 (v) 21.87 fps 1/2 partial scan 1624 (h) x 616 (v) 27.69 fps 1/4 partial scan 1624 (h) x 308 (v) 45.67 fps 1/8 partial scan 1624 (h) x 152 (v) 68.11 fps Variable partial Programmable start line & height, 1 to 1236L Vertical binning 1624 (h) x 618 (v) 27.68 fps	
Sensitivity (on sensor)	0.8 Lux, max gain, 50% video	
S/N ratio	>50 dB. (Green ch., 0 dB gain)	
Video output	3 x 8 bit RGB: 24-bit output format 3 x 10 bit RGB: 32-bit output format	
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	
GPIO Module	Input/Output switch Clock generator (one) Pulse generator (two)	Configurable 14-in/10-out switch 12-bit counter based on pixel clock 20-bit counter with programmable length, start point, stop point, repeat
Hardware Trigger modes	Edge Pre-Select, Pulse Width Control, Reset Continuous, Sequential EPS, EPS/PWC delayed readout	
Electronic shutter	0.5L (25.95μs) - 1252L in 1L (51.88μs) steps.	
Programmable exposure	25μs to 64951μs	
Exposure Time Abs	1/15 to 1/250s	
Auto shutter		
White balance	Manual, one-push, continuous, 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)	
Blemish Compensation	Up to 16 pixels	
Control interface	Register based. GigE Vision/GenICam compliant	
Functions controlled via GigE Vision interface	Shutter, gain, black level, trigger mode, readout mode, GPIO setup, ROI (GenICam mandatory functions)	
GigE Vision streaming control	Packet size, delayed (frame) readout, inter-packet delay Default packet size - 1476 bytes. Max - 16020 bytes	
Operating Temperature	-5° C to +45° C	
Humidity (operation)	20 - 80% non-condensing	
Storage temp./humidity	-25° C to 60° 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 ± 10%. 7.32W 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-200GE	1/1.8" 3CCD Progressive Scan RGB Color Camera
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Connector pin-out

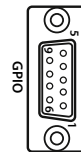
DC In / Trigger



HIROSE HR10A-10R-12PB-01

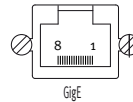
Pin 1	Ground
Pin 2	+12V DC
Pin 3	Ground
Pin 4	Iris video
Pin 5	Ground
Pin 6	—
Pin 7	—
Pin 8	Ground
Pin 9	XEEN out
Pin 10	Trigger in
Pin 11	—
Pin 12	Ground

GPIO Pinout



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

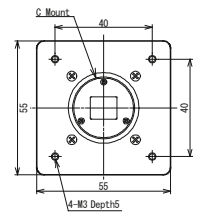
GigE Vision Interface RJ-45 with locking screws



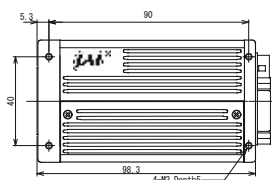
Pin	Pin
1	TRD+(0)
2	TRD-(0)
3	TRD+(1)
4	TRD+(2)
5	TRD-(2)
6	TRD-(1)
7	TRD+(3)
8	TRD-(3)

Dimensions

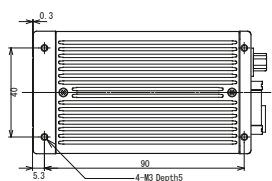
Front view



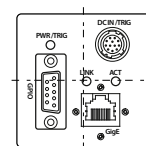
Side view



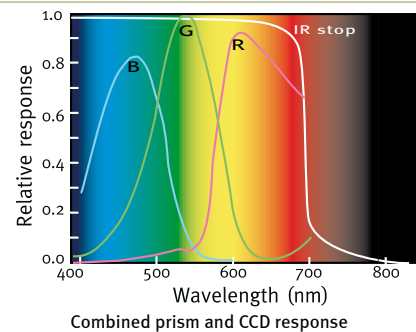
Bottom view



Rear view



Spectral Response



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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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