

❖ LT-400 CL

3 CMOS RGB Line Scan Camera



- 3 CMOS line scan camera with Camera Link output
- Dichroic RGB beam splitter prism with 3 sensors
- 3 sensors with 4096 pixels, 7 μm x 7 μm
- Low-noise operation (S/N: 55 dB) providing superior image quality
- 28.672 mm sensor scan width
- 3 x 8 bits or 3 x 10 bits output through Camera Link interface
- Line rate up to 16180 lines per second at 80 MHz pixel clock
- One-push auto white balance
- Flat field correction and color shading correction
- Knee and binning functions for extended dynamic range and sensitivity
- Sub-sampling and windowing readout
- Set-up and installation aid with built-in test generator
- Available with M52 mount (standard) or Nikon F-mount
- Short ASCII commands for set-up via RS 232C or Camera Link
- Setup by Windows XP software



Specifications for LT-400 CL

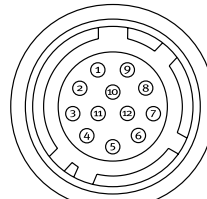
Specifications		LT-400 CL
Scanning system	Line sensor with internal clock	
Pixel clock	80.00 MHz	
Line rate	Standard	61.8µs (Full resolution/binning/internal trigger)
	Programmable	61.8µs~15.02ms, 12.5ns increments
Sensor	3 CMOS line sensors mounted on RGB beam splitter prism	
Sensor scanning width	28.672 mm	
Cell size	7 (h) x 7 (v) µm	
Active pixels	3 x 4096 (h)	
	3 x 2048 (h) with 2:1 binning	
Sensor sensitivity	Radiometric: 64V/µJ/cm ²	
Sensitivity on sensor	2800 Lux (7800K, gain=low, shutter=OFF, 100% video)	
S/N ratio	55 dB on green with gain = 0 dB	
Video output	24 bit (3 x 8) in CL base configuration 30 bit (3 x 10) in CL medium configuration	
Gain	Master tracking	Master: 0 dB to +8 dB R/B: -3 dB to +6 dB Analog gain= Low (0dB) or High (+6dB)
	Individual mode	R/G/B: -3 dB to +14 dB Analog gain= Low (0dB) or High (+6dB)
White balance	Manual, fixed or one-push Adjustable range 4000 K to 9000 K Fixed: 4000 K, 4600 K or 5600 K	
Knee function	Individual RGB knee point and slope	
Shading correction	Individual RGB flat or RB to G	
Flat-field correction	Two point pixel-to-pixel correction	
Synchronization	Internal X-tal or external trigger	
Trigger modes	No-shutter, shutter-select and pulse width control	
Programmable exposure	60µs to 14.9 msec. in 12.5 ns increments	
Functions controlled by RS 232C or CL	Trigger modes, scan rate, exposure time, gain/black level, shading correction, flat-field correction, white balance, knee-function, diagnostics	
Diagnostics	Test pattern generator. (Color bar, gray pattern and white) LED for power	
Lens mount	M-52 mount. (Standard) Nikon F-mount. (Factory option)	
Sensor alignment	Better than ±0.1 pixel	
Operating temperature	-5°C to +45°C/20 – 80% non-condensing	
Storage temp./humidity	-25°C to +60°C/20 – 80% non-condensing	
Vibration	3G (20Hz to 200Hz, XYZ direction)	
Shock	50G	
Regulations	Emission: CE CISPR Pub. 22 (EN55022) Immunity: CISPR Pub. 24 IEC61000-4-2 Conforming level 4 FCC Part15 Class B RoHS	
Power	12V DC to 24V DC ± 10%.	
Dimensions (H x W x D)	90 mm x 90 mm x 90 mm (without connector and lens mount protrusion)	
Weight	830 g	

Ordering Information

LT-400 CL-M52	3 CMOS RGB Line Scan Camera. P-mount (M52)
LT-400 CL -F	3 CMOS RGB Line Scan Camera. F-mount

Connection Pin-out

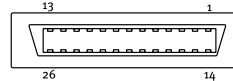
DC In / Trigger



HIROSE HR10A-10R-12PB-71

- Pin 1 Ground
 2 +12V to +24V DC
 3 Ground
 4 Reserved
 5 Ground
 6 RXD RS 232C*
 7 TXD RS 232C*
 8 Ground
 9 XEEN output
 10 Trigger input (TTL)*
 11 NC
 12 Ground

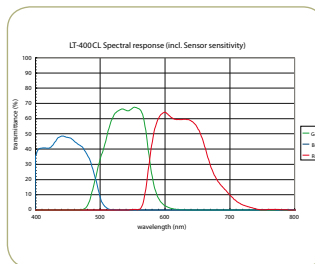
Camera Link Interface



Pin	Signal	Function
1	14	GND
2	15	Xo-/Xo+
3	16	X1-/X1+
4	17	X2-/X2+
5	18	Xclk-/Xclk+
6	19	X3-/X3+
7	20	SerTC+/SerTC- Serial in *
8	21	SerTFG-/SerTFG+ Serial out *
9	22	CC1-/CC1+ Trigger *
10	23	CC2-/CC2+ Reserved
11	24	CC3-/CC3+ Not used
12	25	CC4-/CC4+ Not used
13	26	GND

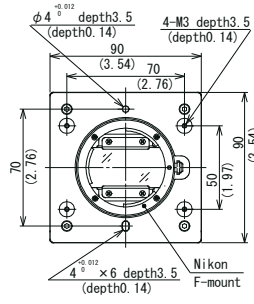
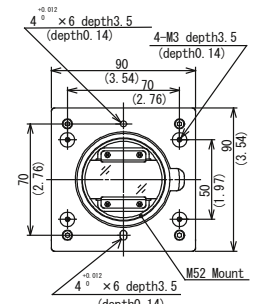
* In Camera Link or 12 pin Hirose
Note:
 Camera Link base configuration shown.
 For medium configuration refer to Camera Link specifications or operation manual.

Spectral Response

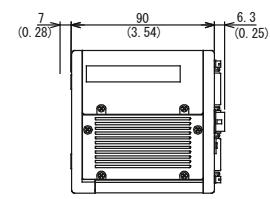


Dimensions

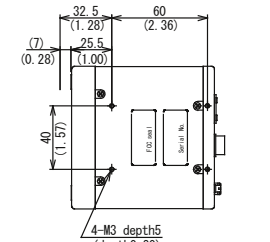
Front view



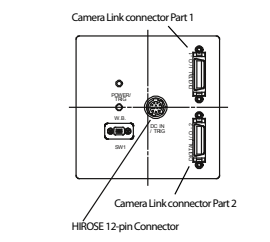
Side view



Bottom view



Rear view



Company and product names mentioned in this datasheet are trademarks or registered trademarks of their respective owners. JAI-A-5 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

