LQ-201CL
4 CMOS RGB/NIR Line Scan Camera

CAMERA Link®

- *4 CMOS line scan camera with Camera Link output*
- *Dichroic RGB/NIR beam splitter prism with 4 sensors*
- *4 sensors with 2048 pixels, 14 μm x 14 μm*
- *Low-noise operation (S/N: 55 dB) providing superior image quality*
- *28.672 mm sensor scan width*
- *4 x 8 bits or 4 x 10 bits output through Camera Link interface*
- *Line rate up to 33014 lines per second at 84 MHz pixel clock*
- *One-push auto white balance*
- *Flat field correction and color shading correction*
- *Binning function for extended sensivity*
- *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*
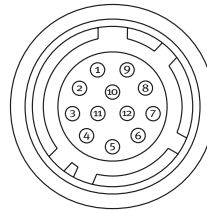- *Setup by Windows software*

SERIAL INTERFACE
RS 232C
CONTROL TOOL

jAi®

See the possibilities

Specifications for LQ-201CL

Specifications

Specifications	LQ-201CL
Scanning system	Line sensor with internal clock
Pixel clock	84.00 MHz
Line rate Standard Programmable	30.29µs (Full resolution/binning/internal trigger) 30.29µs~15.0ms, 11.9ns increments
Sensor	4 CMOS line sensors mounted on R/G/B/NIR beam splitter prism
Sensor scanning width	28.672 mm
Cell size	14 µm x 14 µm
Active pixels	4 x 2048 (h) 4 x 1024 (h) with 2:1 binning
Sensor sensitivity	Radiometric: 64nJ/cm^2
Sensitivity	2800 Lux (7800K, Line rate= 600µs, gain=0 dB, shutter=OFF, Lens iris=F2 100% video)
S/N ratio	55 dB on green with gain = 0 dB
Video output	4 x 8 bit in CL base configuration 4 x 10 bit in CL medium configuration
Gain Master tracking Individual mode	Master: 0 dB to +8 dB R/B/NIR −4 dB to +6 dB Analog gain= Low (0dB) or High (+6dB) R/G/B/NIR −4 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
Shading correction	Individual R/G/B/NIR flat or R/B/NIR to G
Flat-field correction	PRNU Correction: Built-in DSNU Correction: Built-in
Synchronization	Internal X-tal or external trigger
Trigger modes	No-shutter, shutter-select and pulse width control
Programmable exposure	9.52 µs to 14.99 msec. in 11.9 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, 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 (at center)
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 120 mm (without connector and lens mount protrusion)
Weight	1050 g

Ordering Information

LQ-201 CL-M52	4 CMOS RGB/NIR Line Scan Camera. M52-mount
LQ-201 CL -F	4 CMOS RGB/NIR Line Scan Camera. F-mount

Connection Pin-out

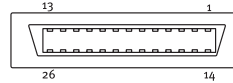### DC In / Trigger

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	DC in +12V to +24V
12	Ground

Camera Link Interface

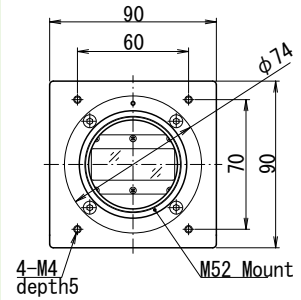| Pin		Signal	Function
1	14	GND	
2	15	Xo-/Xo+	CL Data
3	16	X1-/X1+	CL Data
4	17	X2-/X2+	CL Data
5	18	Xclk-/Xclk+	CL Clk
6	19	X3-/X3+	CL Data
7	20	SerTC+/SerTC-	Serial in *
8	21	SerTFG-/SerTFG+	Serial out *
9	22	CC1-/CC1+	Trigger *
10	23	CC2-/CC2+	Reserved
11	24	N.C.	Not used
12	25	N.C.	Not used
13	26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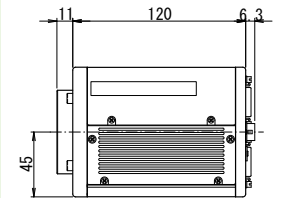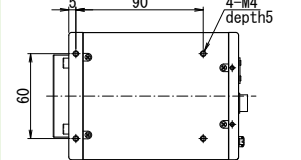
Spectral Response

LQ-201CL CAMERA Sensitivity

Dimensions

Front view

90 / 60 / φ74 / 70 / 90 / 4–M4 depth5 / M52 Mount

Side view

11 / 120 / 6.3 / 45

Bottom view

5 / 90 / 4–M4 depth5 / 60

Rear view

U4–40:Fixed screw / POWER/TRIG / W.B. / SW1 / DC IN TRIG / DIGITAL I/O -1 / DIGITAL I/O -2

Visit our web site on www.jai.com

JAI®

See the possibilities