

❖ SW-2001Q-CL

4 CCD RGB/NIR Line Scan Camera



- 4 CCD 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 pixel size
- 28.7 mm sensor scanning width
- Scan rate up to 19048 lines per second at 40 MHz pixel clock
- Supports 4 x 8-bit or 4 x 10-bit output over Camera Link interface
- No-shutter, shutter select, and pulse width (PWC) trigger modes
- One-push auto white balance
- Flat field correction (pixel gain) and shading correction
- LUT/gamma correction
- Available with M52 mount or Nikon F-mount

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Specifications for SW-2001Q-CL

Sweep+ Series

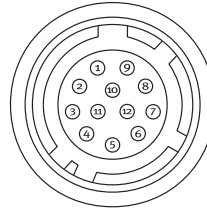
Specifications	SW-2001Q-CL
Scanning system	CCD line sensors with internal clock
Pixel clock	40.00 MHz
Line rate	No shutter mode: 19 kHz - 18.6 Hz Shutter select mode: 18.6 kHz - 18.6 Hz
Sensor scanning width	28.672 mm
Cell size	14 μm x 14 μm
Active pixels	4 sensors: 4 x 2048 (h) mounted on RGB/NIR beam splitter prism
Object illuminance (std.)	RGB: 2800 lx (7800K white LED light) (Gain 0 dB, 600 μs line rate, f2, 100% video on G) NIR: 20 μW/cm ² @ 800 nm
Responsivity	56 V/μJ/cm ² (@ 600 nm)
S/N ratio	58 dB on green with gain = 0 dB
Video output	4 x 8-bit or 4 x 10-bit through Camera Link medium configuration
Gain	Master mode: G: -3 dB to +12 dB R/B/NIR: -6 dB to +6 dB Individual mode: R/G/B/NIR: -9 dB to +18 dB
White balance	Manual, preset, or one-push Adjustable range: 4000 K to 9000 K Preset: 4000 K, 4600 K, 5600K
Image correction	Flat-field (PRNU/DSNU), flat shading, color shading, LUT/gamma correction, noise reduction
Input signal	Trigger (Camera Link, TTL/75Ω)
Output signal(s)	LVAL, FVAL, DVAL, EEN, XEEN (TTL)
Synchronization	Internal clock
Trigger modes	No-shutter, shutter select, and pulse width control
Programmable exposure	50 ns to 53.76 ms in 25 ns increments
Pulse width control	1.2 μs - 2 sec (via Camera Link) 50 μs - 2 sec (via 12-pin connector)
Control interface	Camera Link RS-232C
Lens mount	M52-mount or Nikon F-mount
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	CE (EN61000-6-2, EN61000-6-3) IEC61000-4-2 Conforming level 4 FCC Part 15 Class B, RoHS/WEEE
Power	12V to 24V DC ± 10%. 1300 mA typical at +12V
Power consumption	15.6 W typical at +12V
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

SW-2001Q-CL-M52	4 CCD RGB/NIR Line Scan Camera. M52 mount.
SW-2001Q-CL-F	4 CCD RGB/NIR Line Scan Camera. F-mount.

Connection Pin-out

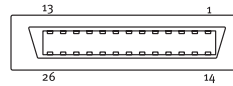
DC In / Trigger



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

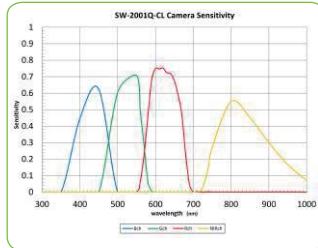
Camera Link Interface



Pin	Signal	Function	
1	14	GND	
2	15	X0-/X0+	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	CC3-/CC3+	Not used
12	25	CC4-/CC4-	Not used
13	26	GND	

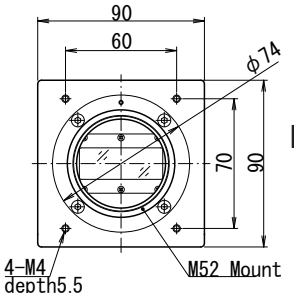
* In Camera Link or 12 pin Hirose
Note:
Camera Link base configuration shown.
For medium configuration refer to Camera Link specifications or operation manual.

Spectral Response

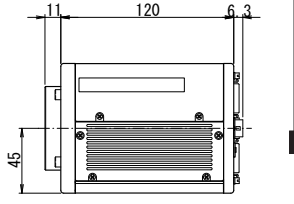


Dimensions

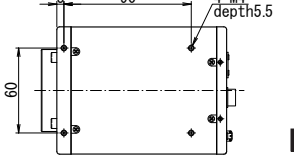
Front view



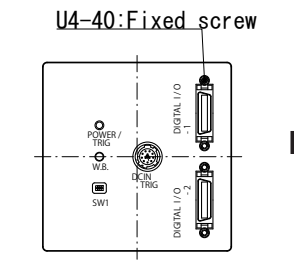
Side view



Bottom view



Rear view



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