

LT-200-CL

Technical Datasheet



See the possibilities

N/A



Apex Series

JAI's Sweep Series includes both monochrome and trilinear color line scan cameras with line rates that are among the fastest available for their type and resolution.

The Sweep SW-4000TL trilinear models deliver outstanding color line scan images for applications that don't require the ultimate image precision provided by the Sweep+ Series.

Specification Highlights


SENSOR: N/A
FORMAT: 28.67 mm
PIXEL SIZE: 14.0 x 14.0 μ m
LENS MOUNT: F-Mount
SPECTRUM: Color (Visible)

SHUTTER: Global Shutter
FRAME RATE: 30 kHz
INTERFACE: Camera Link
RESOLUTION MP: N/A
RESOLUTION WxH: 2048 x 1 px

Specifications		LT-200 CL
Scanning system		Line sensor with internal clock
Pixel clock		80.00 MHz
Line rate	Standard	32.9µs (Full resolution/binning/internal trigger)
	Programmable	32.9µs to 16.844ms, 12.5ns increments
Sensor		3 CMOS line sensors mounted on RGB beam splitter prism
Sensor scanning width		28.672 mm
Cell size		14.0 (h) x 14.0 (v) µm
Active pixels		3 x 2048 (h) 3 x 1024 (h) with 2:1 binning
Sensitivity (sensor)		Radiometric: 27nJ/cm ²
Sensitivity (standard)		2800 Lux (7800K, gain = low, shutter = OFF, G = 0 dB, F2.8, 100% video)
S/N ratio		57 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		
Ref. set	Master tracking	Analog gain= Low (0dB) or High (+6dB) Master: 0 dB to +8 dB R, B: -2 dB to +6 dB
Individual mode		R/G/B: -2 dB to +14 dB
White balance		Manual, fixed or one-push Adjustable range 5000 K to 9000 K Fixed: 4000 K, 4600 K or 5600 K
Knee correction		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		25.8µs to 13.209 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 mm
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 -10% to 24V DC +10% 450 mA (Typical) - 480 mA (Max.)
Dimensions		90 mm (H) x 90 mm (W) x 90 mm (D) (without connector and lens mount protrusion)
Weight		830 g
Ordering Information		
LT-200 CL-M52		3 CMOS RGB Line Scan Camera. M52-mount (Standard)
LT-200 CL -F		3 CMOS RGB Line Scan Camera. F-mount (Optional)

Connection Pin-out

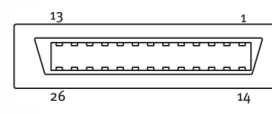
DC In / Trigger



HIROSE HR10A-10R-12PB-71

Pin	Signal
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 out
10	Trigger IN (TTL)*
11	-
12	Ground

Camera Link Interface



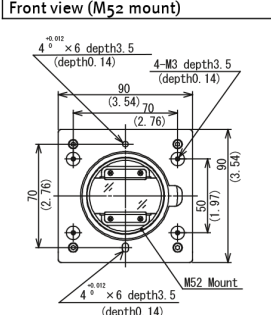
Pin	Signal	Function	
1	14	GND	
2	15	Xo-/Xo+	CL Data
3	16	X1-/X1+	CL Data
4	17	X2-/X2+	CL Data
5	18	Xclk-/Xclk+	CL Clk
6	19	X3-/X3+	CL Data
7	20	SerTC+/SerTC-	Serial in*
8	21	SerTFG-/SerTFG+	Serial out*
9	22	CC1-/CC1+	Trigger*
10	23	CC2-/CC2+	Reserved
11	24	CC3-/CC3+	Not used
12	25	CC4-/CC4+	Not used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

* In Camera Link or 12 pin Hirose

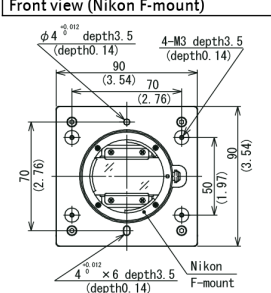
Note:
Camera Link base configuration shown. For medium configuration refer to Camera Link specifications or operation manual.

Dimensions

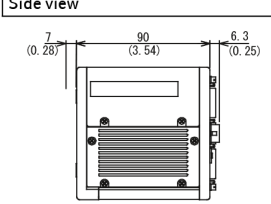
Front view (M52 mount)



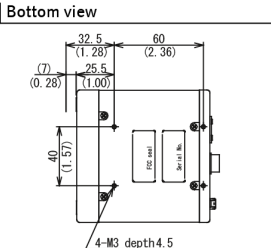
Front view (Nikon F-mount)



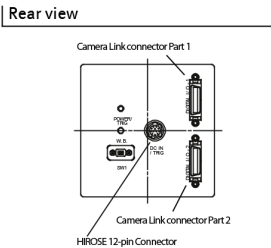
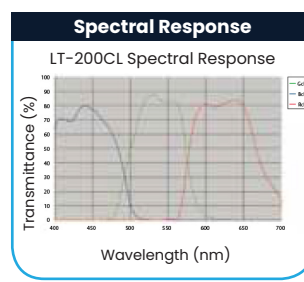
Side view



Bottom view



Rear view

Product Highlights

- 3 CMOS line scan camera with Camera Link output
- Dichroic RGB beam splitter prism with 3 sensors
- 3 sensors with 2048 pixels, 14.0 μm x 14.0 μm
- Low-noise operation (S/N: 57 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 30383 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/Vista/Windows 7 software

Additional Product Images



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