

High-Resolution 1.3MP CMOS Monochrome
Machine Vision Camera with CameraLink



Key Features

1.3 MEGAPIXEL CMOS sensor delivers 1240 x 1024 resolution at 22 FPS for high-speed imaging success

GLOBAL SHUTTER MODE exposes all pixels simultaneously, assures clear images of fast moving subjects with little or no blurring

RANDOM TRIGGER SHUTTER MODE starts light exposure in sync with external trigger signal, enables capture at any given timing

CAMERALINK® enables fast, cost-effective set-ups, sends images to a PC, and allows operator to control camera functions from the PC

WINDOWS OF INTEREST (WOI) enables higher frame rate speeds by narrowing in on up to 16 user-selected areas within image

WIDE DYNAMIC RANGE with multi-slope integration mode makes it possible to capture both high and low intensity subjects at the same time despite difference in contrasts

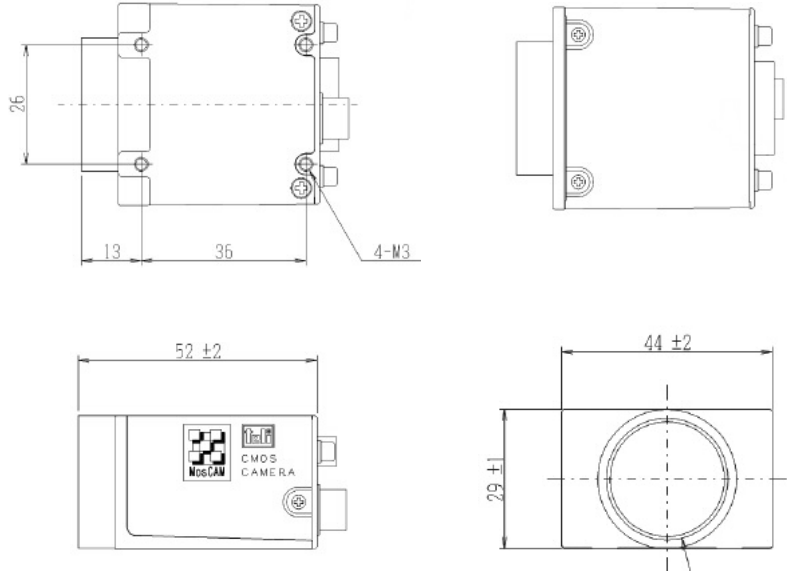
ESB1100CL-10

SPECIFICATIONS

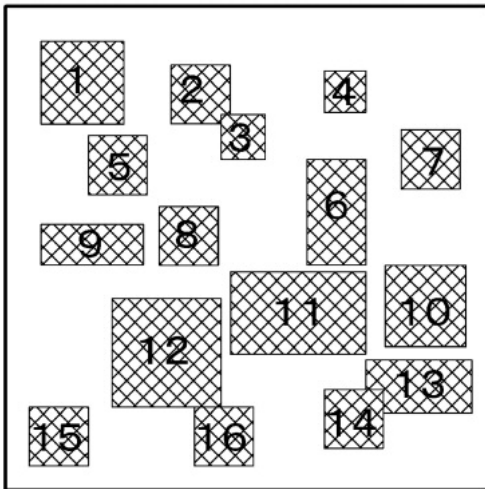
Image Sensor	2/3 Type CMOS Sensor
Scanning System	Progressive Scan
Total Pixels	1280(H) x 1024(V)
Active Pixels	1240(H) x 1024(V)
Pixel Size	6.7(H) x 6.7(V) micron m
Frame Rate	22 FPS
Sync System	Internal Synch
Aspect Ratio	5:4
Subject Illumination	2600 lux@F5.6, 3100K
Interface	CameraLink (LVDS, 10bit, Pixel Clock 33.3333MHz)
Baud Rate	9600, 19200, 38400
Video Mode	Format 7/Special Format (in WOI) Mono 8bit
Signal-to-Noise Ratio	47dB (p-p)/rms
Input Signal	TRIG (Shutter Trigger) 3.3V CMOS level
Grabbing Timing	Falling edge detentation
Pulse Width	Minimum: 1 micro sec, Max: no limit
Electronic Shutter	1 to 4000 Shutter Speed (preset)
Shutter Mode	Global Shutter
Random Trigger	RTS available by external trigger input.
Mode 0	Shutter speed preset mode
Mode 1	Shutter speed controlled via shutter trigger pulse width
Power Supply	DC12V ±10%
Power Consumption	1.4W
Lens Mount	C-Mount
Flange Back	17.526 mm
Dimensions	44mm(W) x 29mm(H) x 52mm(D)
Weight	120g
Operating Conditions	-5 to 45°C, 20 to 80% Humidity

Typical Applications

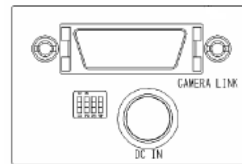
Video image capture applications for the CSB1100CL-10 include high-speed machine vision, inspection, high contrast image, quality control, factory automation, microscopy and many others.



WINDOWS OF INTEREST (WOI)



Up to 16 Windows of Interest (WOI) can be set by the user in one screen, resulting in increased frame rate suitable for high-speed image processing. Only arbitrary area can be read out by the designation of horizontal and vertical address.



DIP Switch

(1)	(2)	BAUD RATE
OFF	OFF	9600
ON	OFF	19200
OFF	ON	38400
(3)	(4)	MEMORY
OFF	OFF	1
ON	OFF	2
OFF	ON	3
ON	ON	4

DC IN

Connector (Camera): HR10A-7R-6PB*

Plug (Cable): HR10A-7P-6S*

Pin Number	Signal Name
1	N.C.
2	N.C.
3	GND
4	N.C.
5	N.C.
6	+12V

*manufactured by Hirose Denki

Data In/Out Connection

Camera Side: 3M 10226-2210VE

Cable Side: 3M 10126-6000

Pin Number	I/O	Signal Name
1	-	GND
2	OUT	TxOUT0-
3	OUT	TxOUT1-
4	OUT	TxOUT2-
5	OUT	Tx CLK OUT-
6	OUT	Tx OUT3-
7	IN	Ser TC (Rx D) +
8	OUT	Ser TFG (Tx D) -
9	IN	Trig-
10	IN	EXT AFR+
11	IN	EXT SP-
12	IN	EXT VR+
13	-	GND
14	-	GND
15	OUT	Tx OUT0+
16	OUT	Tx OUT1+
17	OUT	Tx OUT2+
18	OUT	Tx CLK OUT+
19	OUT	Tx OUT3+
20	IN	Ser TC (Rx D)-
21	OUT	Ser TFG (Tx D)+
22	IN	Trig+
23	IN	EXT AFR-
24	IN	EXT SP+
25	IN	EXT VR1
26	-	GND



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