

## ❖ **TM-1325 CL / TMC-1325 CL** Progressive Scan CCD



- *2/3" high resolution progressive scan IT CCD imager (ICX285AL/ICX285AQ)*
- *1392(H) x 1040(V) @ 30/15 fps*
- *6.45  $\mu$ m square pixels*
- *Compact 44 x 44 x 63 mm housing*
- *LVDS versions: order TM-1325 and TMC-1325*
- *Digital output and analog output*
- *Maximum dynamic range control with built-in look-up table (LUT)*
- *Full frame integration for long exposures*
- *Image center partial scan (500, 250 lines)*
- *Full-frame shutter to 1/16,000 sec.*
- *Asynchronous reset, no-delay shutter with pulse-width exposure control*
- *Read-out-inhibit control for multiple-camera applications*
- *RS-232 external control*
- *Near IR sensitivity and high gain CCD output*
- *Monochrome or color*



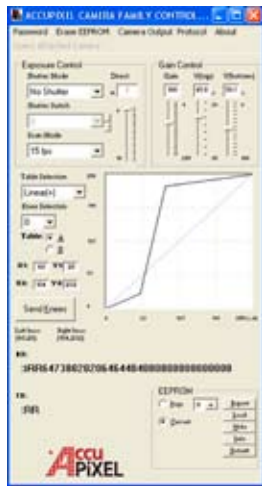
# Specifications for TM-1325CL/TMC-1325CL

Specifications	TM-1325CL/TMC-1325CL
Sensor	2/3" progressive scan interline transfer CCD
Active area	8.7mm x 6.9mm
Active pixels	1392 (H) x 1040 (V)
Cell size	6.45 μm x 6.45 μm
Readout modes	1392 (H) x 1040 (V) @ 30/15 Hz (full image) 1392 (H) x 500 (V) @ 58 Hz (partial scan) 1392 (H) x 250 (V) @ 100 Hz (partial scan)
Synchronization	Internal/External auto switch HD/VD, 4.0 Vp-p impedance 4.7K Ω VD = 15/30 Hz ± 2%, non-interlace HD = 15.99 / 31.98 kHz ± 2%
Pixel clock	55.00/27.50 MHz
S/N ratio	>50 dB
Sensitivity	Mono 0.5 lux f=1.4 (no shutter) @ 30 fps, Color 4.0 lux f=1.4 (no shutter) @ 30 fps
Video output	Analog 714 mV, 75 Ω (900 mV white clip) Digital Camera Link (Base configuration)
Color (RMC/TMC-1325 only)	Raw Bayer output for host-based interpolation
Gamma	Programmable LUT (1.0 std)
Lens mount	C-mount (use >2/3" format lenses)
Power	12V DC ± 10%, 430 mA (typical at 25° C)
Operating temperature	-10° C to 50° C
Vibration	7 Grms (10 Hz to 2000 Hz) Random
Shock	70 G, 11 ms, half-sine
Dimensions (H x W x L)	44.5 mm x 44.5 mm x 63 mm
Weight	140 g (without tripod)

## GUI Interface

A user-friendly GUI (graphical user interface) is provided. This interface allows users to control the following functions of the TM-1325CL camera:

- Shutter control for manual async. and pulse-width control
- Gain control
- Offset control
- Save settings
- Load settings
- Report settings
- LUT setting and graphic display
- Scanning mode selection and Option selections
- Channel auto balancing

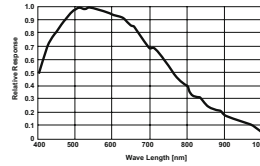


Camera parameters can be uploaded from the PC to the camera. Once these parameters are stored in EEPROMs, an instantaneous change from one setting to another can be done with a delay of few frames in between.

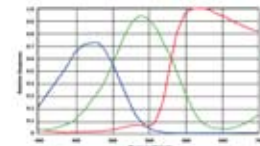
Software available for download at [www.jai.com](http://www.jai.com)

## Spectral Response

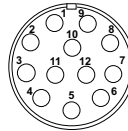
TM-1325CL (monochrome)



TMC-1325CL (color)



## Connector Pin-out



12-Pin Connector

1 GND	7 VD in
2 +12V DC	8 GND
3 GND	9 HD in
4 Video out	10 NC
5 GND	11 INTEG/ROI
6 NC	12 NC

## Shutter Speed

	Manual	Async
0	no shutter (1/30)	no shutter (1/30)
1	1/60	1/16,000
2	1/125	1/8,000
3	1/250	1/4,000
4	1/500	1/2,000
5	1/1,000	1/1,000
6	1/2,000	1/500
7	1/4,000	1/250
8	1/8,000	1/125
9	1/16,000	pulse width control

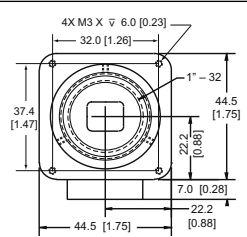
(For 15 fps mode, the shutter speed doubles)

## Ordering Information

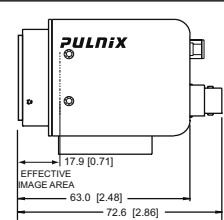
Camera	
Lead Processing	TM-1325CL (mono), TMC-1325CL (color)
RoHS Compliant	RM-1325CL (mono), RMC-1325CL (color)
Optional Functions	
Internal IR Filter Added	OP3-1
Optical Filter Removal	OP3-2
Strobe Output	OP8o
10-Bit Output	OP93-1
Optional Accessories (must be ordered separately)	
I/O	26CL-02-26 digital output cable
Power Cable	12P-02S
Power Supply	PD-12UUP (includes power connector)

## Dimensions

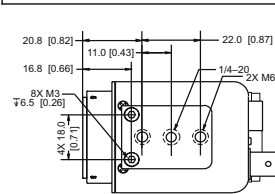
Front view



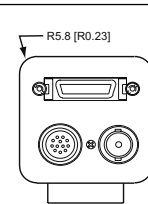
Side view



Bottom view



Rear view



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