

❖ TM-6740 CL / TMC-6740 CL

Progressive Scan CCD



- 1/3" progressive scan IT CCD imager (KAI-0340)
- 640(H) x 480(V) @ 200 fps
- 7.4 μm square pixels
- Digital Camera Link dual-tap output (8-bit/10-bit selectable) plus analog output
- Partial scan and binning modes up to 3205 frames per second
- Full-frame shutter to 1/64,000 sec.
- Asynchronous reset, no-delay shutter
- GUI interface or serial commands for camera control
- Built-in pattern generator
- Read-out-inhibit control for multiple camera applications
- Monochrome or color



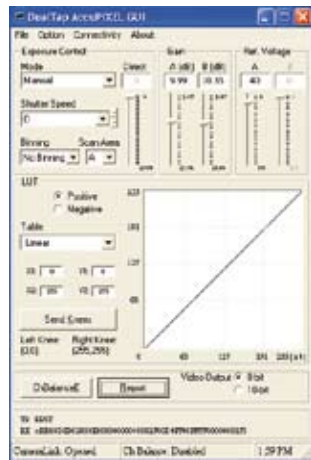
Specifications for TM-6740CL/TMC-6740CL

Specifications	TM-6740CL/TMC-6740CL								
Sensor	1/3" progressive scan interline transfer CCD								
Active area	4.74mm x 3.55mm								
Active pixels	640 (H) x 480 (V)								
Cell size	7.4 μm x 7.4 μm								
Readout modes	<table border="0"> <tr> <td>A</td> <td>640 (H) x 480 (V) @ 200 Hz (full image)</td> </tr> <tr> <td>B</td> <td>640 (H) x 160 (V) @ 540 Hz (partial scan)</td> </tr> <tr> <td>C</td> <td>224 (H) x 480 (V) @ 500 Hz (partial scan)</td> </tr> <tr> <td>D</td> <td>224 (H) x 160 (V) @ 1250 Hz (partial scan)</td> </tr> </table>	A	640 (H) x 480 (V) @ 200 Hz (full image)	B	640 (H) x 160 (V) @ 540 Hz (partial scan)	C	224 (H) x 480 (V) @ 500 Hz (partial scan)	D	224 (H) x 160 (V) @ 1250 Hz (partial scan)
A	640 (H) x 480 (V) @ 200 Hz (full image)								
B	640 (H) x 160 (V) @ 540 Hz (partial scan)								
C	224 (H) x 480 (V) @ 500 Hz (partial scan)								
D	224 (H) x 160 (V) @ 1250 Hz (partial scan)								
Synchronization	Horizontal and vertical 2x and 4x binning independently selectable								
Synchronization	Internal/External auto switch HD/VD, 4.0 Vp-p impedance 4.7K Ω VD = frame rates ± 2%, non-interlace HD = 100 kHz/200 kHz ± 2%								
Pixel clock	40.00 MHz								
S/N ratio	>50 dB								
Sensitivity	<table border="0"> <tr> <td>Mono</td> <td>1.4 lux f=1.4 (no shutter) @ 200 fps,</td> </tr> <tr> <td>Color</td> <td>11.0 lux f=1.4 (no shutter) @ 200 fps,</td> </tr> </table> Pixel sensitivity: 30 μV/e-	Mono	1.4 lux f=1.4 (no shutter) @ 200 fps,	Color	11.0 lux f=1.4 (no shutter) @ 200 fps,				
Mono	1.4 lux f=1.4 (no shutter) @ 200 fps,								
Color	11.0 lux f=1.4 (no shutter) @ 200 fps,								
Video output	<table border="0"> <tr> <td>Analog</td> <td>714 mV, 75 Ω (650 mV white clip)</td> </tr> <tr> <td>Digital</td> <td>software selectable</td> </tr> </table> 8-bit x 2-tap Base Camera Link 10-bit x 2-tap Base Camera Link	Analog	714 mV, 75 Ω (650 mV white clip)	Digital	software selectable				
Analog	714 mV, 75 Ω (650 mV white clip)								
Digital	software selectable								
Color (RMC/TMC-6740 only)	Raw Bayer output for host-based interpolation								
Gamma	Programmable LUT (1.0 std)								
Lens mount	C-mount (use 1/3" format lenses)								
Power	12V DC ± 10%, 270 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)	51 mm x 51 mm x 74 mm								
Weight	162 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-6740CL camera:

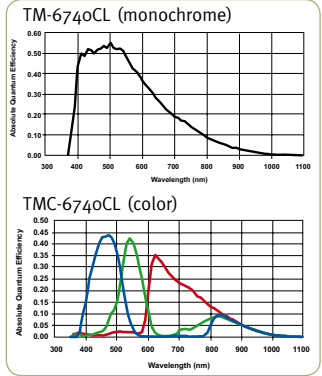
- Shutter control for manual async. and pulse-width control
- Gain control
- Offset control
- Save settings
- Load settings
- Report settings
- LUT setting and graphic display
- Scanning mode selection and option selections
- Channel auto balancing



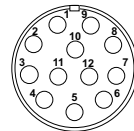
Camera parameters can be uploaded from the PC to the camera. Once these parameters are stored in EEPROMs, an instantaneous change from one setting to another can be done with a delay of few frames in between.

Software available for download at www.jai.com

Spectral Response



Connector Pin-out



12-Pin Connector

- | | |
|-----------------|--------------|
| 1 GND | 7 NC/VD in* |
| 2 +12V DC | 8 Strobe out |
| 3 GND (analog) | 9 NC/HD in* |
| 4 Video out | 10 NC |
| 5 GND (digital) | 11 NC/INTEG* |
| 6 NC/VINIT in* | 12 NC |

*Option 25-2 TTL inputs on 12-pin

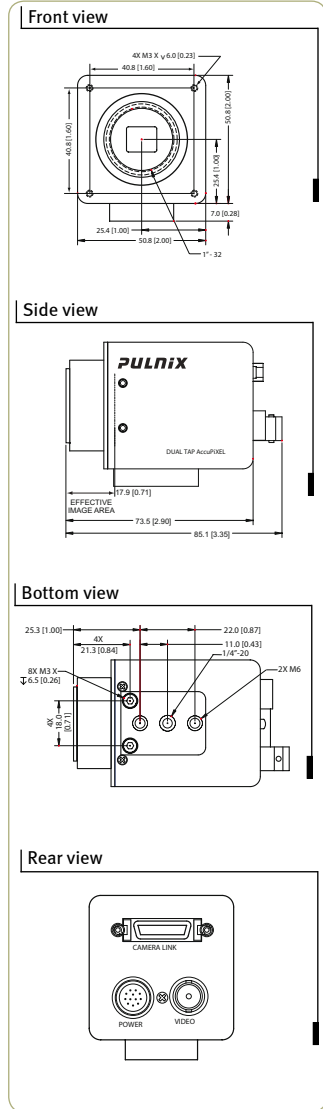
Shutter Speed

	Manual	Async
0	1/frame rate	no shutter
1	1/250	1/64,000
2	1/500	1/32,000
3	1/1,000	1/16,000
4	1/2,000	1/8,000
5	1/4,000	1/4,000
6	1/8,000	1/2,000
7	1/16,000	1/1,000
8	1/32,000	1/500
9	1/64,000	pulse width control

Ordering Information

Camera	
Lead Processing	TM-6740CL (mono), TMC-6740CL (color)
RoHS Compliant	RM-6740CL (mono), RMC-6740CL (color)
Optional Functions	
Internal IR Cut Filter Added	OP3-1
Optical Filter Removal	OP3-2 (color only)
Glassless CCD Imager	OP21
Ultraviolet Imager (quartz window)	OP21-QUV (monochrome only)
TTL Inputs on 12-pin	OP25-2
Optional Accessories (must be ordered separately)	
I/O	26CL-02-26
Power Cable	12P-02S
Power Supply	PD-12UUP (includes power connector)

Dimensions



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See the possibilities

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