

General Description

The tmcdc XGV0901 is a 0.9 inch XGA reflective type LCOS (liquid crystal on Silicon) microdisplay device. The liquid crystal is vertically aligned. This VA mode makes XGV0901 higher contrast ratio and faster response time. To maximize the light output, the display chip offers a pixel pitch of $17.6 \mu\text{m}$ and geometric ratio of 92%.

Features

- * Front end and back end processed in 3.3/18V double poly four metal $0.35 \mu\text{m}$ CMOS technology
- * Vertical liquid crystal alignment
- * Analog video data input
- * 4-fold parallellism in column driver
- * Bidirectional 3.3V shift registers in both column and row drivers
- * Low power level shifting
- * Redundant row drivers
- * Digital inputs 3.3V CMOS compatible
- * 8-bit video data per color
- * 32 extra pixels both horizontal and vertical for image alignment

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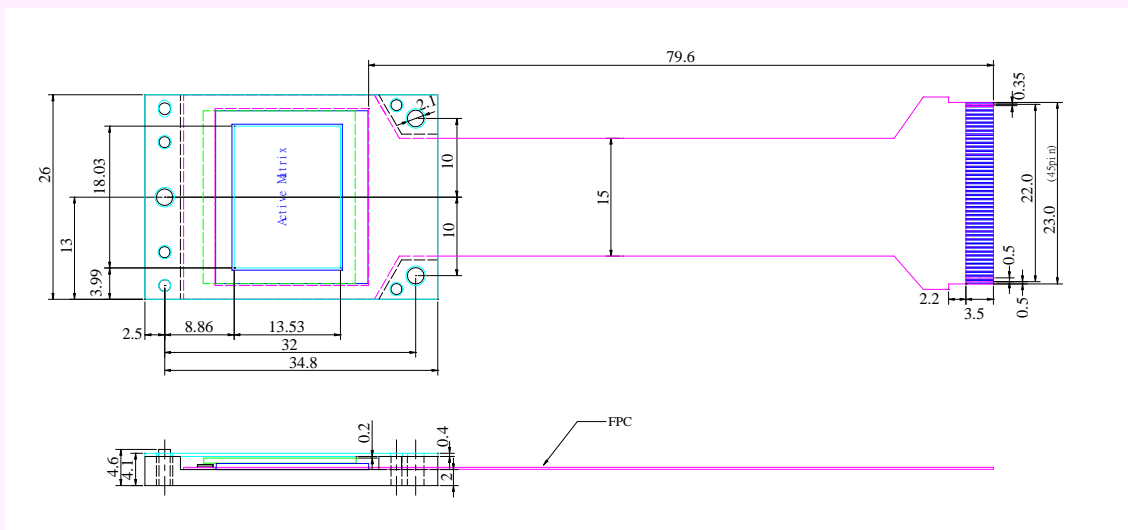
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Specification

Display method	Reflective, active matrix, normally black
Silicon technology	0.35 μ m DRAM(CMOS)
Liquid crystal alignment	Vertical alignment
Chip size(mm)	22.0x19.4
Resolution	1024(+32)x768(+32)XGA
Aspect ratio	4:3
Active display area(mm)	18.02x13.52
Active display diagonal(inch)	0.887
Pixel pitch(μ m)	17.6x17.6
Inter pixel gap(μ m)	0.7
Geometric aperture ratio(%)	92
Contrast ratio	>800:1
Response time(ms)	<20(rise+fall)
Frame rate(Hz)	60
Interface	4-fold analog scanner
Supply voltage	Vcc \pm 5V
	Vdd 18V
Clamping voltage	Vddac -0.5V to Vdd

Dimension



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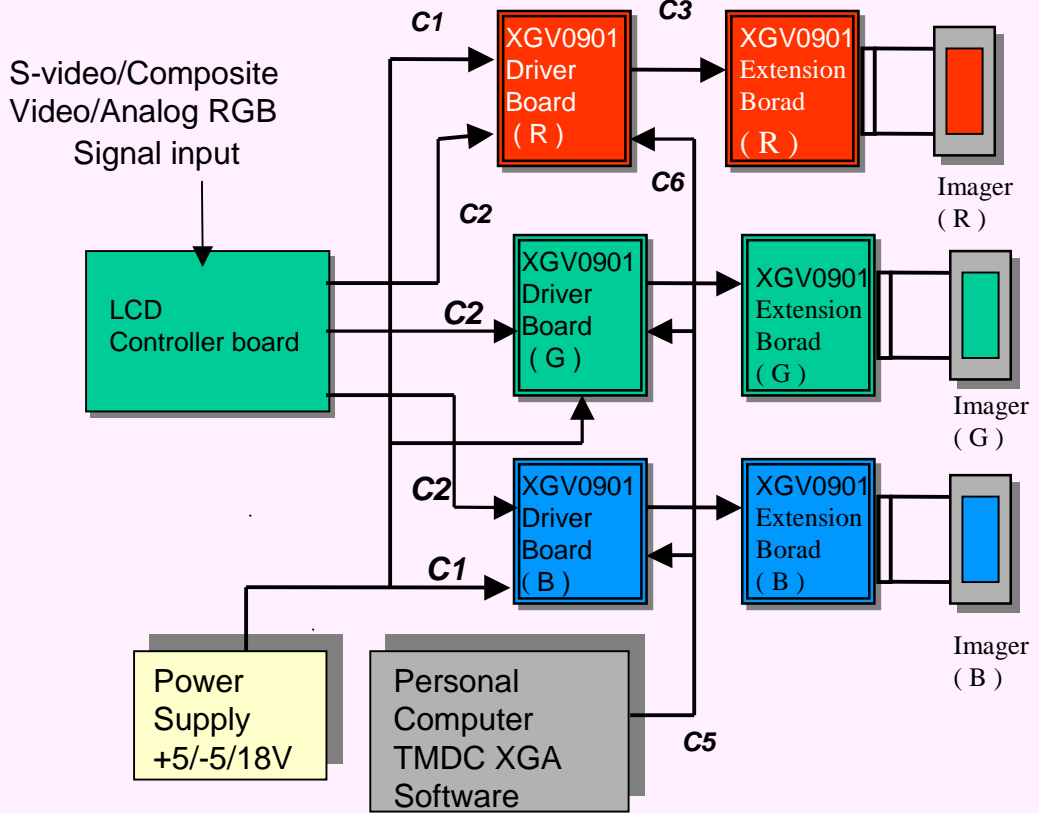
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XGV0901 LCOS microdisplay evaluation kit block diagram



The connection of XGV0901 LCOS microdisplay evaluation kit

