Advanced Display | PMOLED Home Appliance & AloT Devices

Passive Matrix OLED Driver for Home Appliance and AloT Devices

The Ideal Human-Machine Interface and Display Solution for AloTs

Solomon Systech's PMOLED driver is the market leading solution for small to midsized OLED displays. We offer drivers ranging from icon, dot matrix to character OLED panels, which support mono, grayscale and color displays. To support prerequisite OLED panel orientation, our OLED driver can be in either portrait or landscape orientation. Incorporated with highly integrated features, the driver operates in low input voltage level with low-power consumption.

Another distinctive feature is that PMOLED TDDI driver is capable of supporting touch detection on display panels. The technological advancement of display panel and Human-Machine Interfaces (HMI) help in integrating humans into complex technological systems for modern smart home appliance and AIoT applications.



*The image is for reference only

Key Benefits of PMOLED for Home Appliance and AloT Devices



Power Saving

 Self-emission nature of PMOLED eliminate the need of backlight and reduce power consumption



Thin Display Panel Thickness

- Portrait driver available to support curve and bendable display
- PMOLED display panel could be available with thickness in mm order
- Good fit for AIoT application which has limited space available for panel



Display Quality

- Maximum 18V HV voltage, 600uA segment current to support high brightness display
- Proprietary driving scheme available for cross-talk compensation and display quality enhancement
- Mono, Grayscale and Color available
- Transparent display available



Highly Integrated Features

- TDDI PMOLED driver available to recognize touch and slide gestures
- Integrated charge bump option available, saving cost of external component
- Advanced graphic command available (e.g. content scrolling)





Landscape IC Panel Resolution

660 x 80 Note Single IDM (DV) (DV) Dial (DV) (DV) Dial (DV) (DV) Dial (DV) (DV) Dial (DV) (DV) Dial (DV) (DV) 460 X 64 (Pr) control (DV) Crossovielle (Pr) control (DV) SS01322 (Pr) control (DV) SS01321 (Pr) control (Pr) contro (Pr) control (Pr) contro (Pr) control (Pr) contro (Pr)	640 X 160	Gravscale/	SSD1363 Dual chip-	SSD1363 Dual chip-		Colour		SSD1357 Single Chin	SSD1352 Single
440 X 44 (409 x 12) Souther (1) Souther (1) Souther (1) Conversite/ (1) Conversite/ (1) Souther (1) Souther (1) Souther (1) Souther (1) Conversite/ (1) Conversite/ (1) Souther (1) Souther (1) Souther (1) Conversite/ (1) Souther (1) Conversite/ (1) Souther (1)	640 x 80	Mono	Single COM	Dual COM (up to 80 COM)	128 x 128	Cotour		Single COM	Single COM
460 x 1.23 Mono Surger Dual (200 (200) Dual (200) (200) Dual (200) (200) <th< th=""><th>480 X 64</th><th>Grayscale/</th><th>SSD1322 Single Chip</th><th>SSD1322 Single Chip</th><th></th><th>Grayscale/ Mono</th><th></th><th>SSD1327 Single Chip Single COM</th><th></th></th<>	480 X 64	Grayscale/	SSD1322 Single Chip	SSD1322 Single Chip		Grayscale/ Mono		SSD1327 Single Chip Single COM	
230 x 64 x 200 x 128 x 200 x 12	480 x 128	Mono	Single COM	Dual COM (up to 64 COM)				SSD1357 Single	
320 x 64 (1) (1		Colour Single COM	SSD1333 Dual chip- split	SSD1352 Dual chip- cascade		Colour		Chip Single COM	
320 x 160 Grayscalle/ Mano Single Single CoM Single CoM	320 x 64 320 x 128	(up to 128 COM)	(up to 88 COM) SSD1363	(up to 64 COM)	128 x 96	Grayscale/ Mono		SSD1327 Single Chip Single	
LLM COM Com Single Com Single Com Single Com 256 x 32 Cheur SSD1551 SSD1863 SSD1863 SSD1863 256 x 44 Single Com SSD1863 SSD1863 Single Com 256 x 128 Grayscale/ Mono SSD1863 Single Com Single Com 256 x 128 Grayscale/ Mono Single Com Single Com Single Com 256 x 128 Grayscale/ Mono Single Com Single Com Single Com 192 x 54 Grayscale/ Mono Single Com Single Com Single Com 192 x 54 Grayscale/ Mono Single Com Single Com Single Com 192 x 128 Grayscale/ Mono Single Com Single Com Single Com 192 x 128 Grayscale/ Mono Single Com Single Com Single Com Single Com Single Com Single Com Single Com Single Com 192 x 128 Grayscale/ Mono Single Com Single Com Single Com 190 x 64 Colour Single Com Si	320 x 160	Grayscale/ Mono	Single Chip Single	Single Chip Dual COM (up to 80			SSD1317	COM	
Z56 x 32 Z56 x 32 Z56 x 32 Z56 x 36 Z56 x 36 Z56 x 128 Colour Subject constraints (up b64 COM Subject constrai			CUM SSD <u>1351</u>	COM) SSD1352	16	Mono only	Single Chip Single COM		
256 x 64 CUM Cu	256 x 32	Cotour	Dual chip- split Single COM (up to 64	Dual chip- cascade Dual COM (up to 64				SSD1357 Single	SSD1352 Single
256 x 128 Grayscale/ Mono Single Chip Single CoM Single C	256 x 64 256 x 96		COM) SSD1363	COM) SSD1363		Colour		Single COM	Dual COM
192 x 32 Colour SSD1357 SSD1352 192 x 32 Colour Single COM Dual chip- split 192 x 64 SSD1352 192 x 128 Grayscale/ Grayscale/ Single COM Mono Single COM SSD1333 SSD1363 Single COM Single COM Single COM	256 x 128	Grayscale/ Mono	Single Chip Single COM	Single Chip Dual COM (up to 64 COM)	128 x 16 128 x 32 128 x 64	Grayscate/ Mono		SSD1327 Single Chip Single	
192 x 32 Single CM Dual COM Up 64 (up to 64 COM) Single COM Single CM Single CM<		Colour	SSD1357 Dual chip- split	SSD1352 Dual chip- cascade	120 104	Mono antiv	SSD1306B/ SSD1315	SSD1309	-
192 x 128 Grayscale/ SSD1363 SSD1363 SSD1363 Single Chip Single Chip Dual COM (up to 64 COM) Dual COM (up to 64 COM) Colour Single Chip Single Colour 160 x 32 Sclour Single Chip Single COM	192 x 32 192 x 64		Single COM (up to 64 COM)	Dual COM (up to 64 COM)		Mono onty	Chip Single COM	Chip Single COM	
160 x 32 SSD1333 SSD1333 SSD1352 Single Chip Single Single <th>192 x 128</th> <th>Grayscale/ Mono</th> <th>SSD1363 Single Chip Single COM</th> <th>SSD1363 Single Chip Dual COM (up to 64 COM)</th> <th></th> <th>Colour</th> <th>)</th> <th>SSD1357 Single Chip Single</th> <th></th>	192 x 128	Grayscale/ Mono	SSD1363 Single Chip Single COM	SSD1363 Single Chip Dual COM (up to 64 COM)		Colour)	SSD1357 Single Chip Single	
SSD1363 SSD1363 SSD1363 SSD1363 SSD1306B/ SSD1309 I60 x 128 Grayscale/ Mono Single Chip Single COM Single Chip Sing	160 x 32 160 x 64	Colour Single Chip	SSD1333 Single Chip Dual COM (up to 88 COM)	SSD1352 Single Chip Dual COM (up to 64 COM)	96 x 16 96 x 32	Grayscale/ Mono		SSD1327 Single Chip Single COM	
	160 x 128	Grayscale/ Mono	SSD1363 Single Chip Single COM	SSD1363 Single Chip Dual COM (up to 64 COM)		Mono only	SSD1306B/ SSD1315 Single Chip Single COM	SSD1309 Single Chip Single COM	

 higher brightness larger panel size

Portrait IC Panel Resolution

512 x 32						SSD1362						SSD1333	
512 x 40	Grayscale/ Mono					split		Colour				Chip	
512 X 04						5-6-5						(C<->S)	
	Colour				SSD1333 Dual chip- split Virtual (C<->S) (up to 176 line)		160 x 160	Grayscale/ Mono			SSD1320 Single Chip S-C-S SSD1319		
320 x 64 320 x 128 320 x 160	Grayscale/ Mono			SSD1363 Dual chip- split	SSD1320 Dual chip- split			Mono only			Single Chip S-C-S		
320 x 320				Virtual (C<->S) SSD1310	(up to 160 line) SSD1319			Colour				SSD1333 Single Chip Virtual (C<->S)	
	Mono			S-C-S (up to 72 line)	S-C-S (up to 160 line)		160 x 64 160 x 72 160 x 80	Grayscale/ Mono			SSD1320 Single Chip S-C-S		
	Colour			SSD1352 Dual chip- split Virtual (C<->S) (up to 160 line)	SSD1333 Dual chip- split Virtual (C<->S) (up to 176 line)			Mono only			SSD1310 Single Chip S - C - S (up to 72 line)		
256 x 32 256 x 64 256 x 96 256 x 128 256 x 256	Grayscale/ Mono		SSD1362 Single Chip S - C - S (up to 64 line)	SSD1363 Dual chip- split Virtual (C<->S)	SSD1320 Dual chip- split S - C - S (up to 160 line)		128 x 16	Colour			SSD1351 Single Chip Virtual (C<->S)	SSD1357 Single Chip Virtual (C<->S)	
256 x 320	Mono only	SSD1316/ SSD1307 Dual chip- split S-C-S	SSD1315 Dual chip- split S-C-S	SSD1310 Dual chip- split S-C-S	SSD1317 Dual chip- split S-C-S	SSD1319 Dual chip- split S-C-S	128 x 32 128 x 64 128 x 72	Grayscale/ Mono			Single Chip Virtual (C<->S)		
-		(up to 32 line)	(up to 64 line) SSD1357	(up to 72 line) SSD1352	(up to 96 line) SSD1333	(up tp 160 line)	128 X 90	Mono only	SSD1316/ SSD1307 Single Chip S-C-S (up to 32	SSD1312 Single Chip S-C-S (up to 64	SSD1310 Single Chip S-C-S (up to 72	SSD1317 Single Chip S-C-S (up to 96	
	Colour		Dual chip- split Virtual (C<->S) (up to 128 line)	Dual chip- split Virtual (C<->S) (up to 160 line)	Dual chip- split Virtual (C<->S)			Colour		une)	SSD1351 Single Chip	SSD1357 Single Chip	
192 x 32 192 x 64 192 x 128 192 x 160	Grayscale/ Mono			SSD1362 Single Chip S-C-S (up to 64 line)	SSD1320 Dual chip- split S-C-S		96 x 16 96 x 32 96 x 64	Grayscale/ Mono			Virtual (C<->S) SSD1327 Single Chip Virtual	virtual (C<->S)	
	Mono only	SSD1316/ SSD1307 Dual chip- split S-C-S (up to 32	SSD1315 Dual chip- split S-C-S (up to 64	SSD1310 Dual chip- split S-C-S (up to 72	SSD1317 Dual chip- split S-C-S (up to 96	SSD1319 Dual chip- split S-C-S (up tp 160 Lipo)	96 x 72 96 x 96	Mono only	SSD1316/ SSD1307 Single Chip S-C-S (up to 32	SSD1312 Single Chip S-C-S (up to 64	(C<->S) SSD1310 Single Chip S - C - S (up to 72	SSD1317 Single Chip S-C-S (up to 96	
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Panel Layout Illustration

Landscape IC

Single Chip Single COM	COM SEG COM	
Single Chip Dual COM	COM SEG COM	
Dual chip-cascade Dual COM	COM SEG	SEG COM
Dual chip-split Single COM	Dual chip cascade	SEG COM

Portrait IC

	SEG	
Single Chip		
S-C-S		
	SEG T	
Circula Oltin	СОМ 🚽	
Single Chip	→ SEG	
Virtual (C<->S)	COM	
	050	
Dual chip-split	SEG 🚽	SEG
Dual chip-split	SEG ↓ -► COM	SEG
Dual chip-split S - C - S	SEG ↓ <mark>-≻ COM</mark> SEG ↑	↓ SEG COM ◀- ▲ SEG
Dual chip-split S-C-S	SEG ↓ ► COM SEG	↓ SEG COM ◀- SEG
Dual chip-split S-C-S	SEG ↓ ► COM SEG	↓ SEG COM → SEG
Dual chip-split S-C-S	SEG COM	↓ SEG COM → SEG ↓ COM
Dual chip-split S - C - S Dual chip-split	SEG ↓ COM SEG ↓	↓ SEG COM ← SEG ↓ COM
Dual chip-split S - C - S Dual chip-split Virtual (C<->S)	SEG COM COM SEG SEG	↓ SEG COM ← SEG ↓ COM SEG ←



