World's 1st PMOLED TDDI IC to Transform "Display" Panels into "Touch + Display" Panels

A Ground-breaking Innovation for Today and Tomorrow

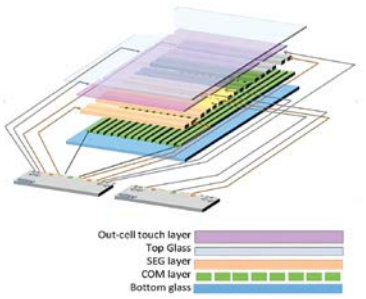
Solomon Systech Limited has been a pioneer and forerunner of both PMOLED and touch technologies. We developed the world's first single chip PMOLED display driver IC in 2001, and has been a global market leader of PMOLED display driver IC.

Aiming to revolutionize PMOLED display technology, both to further enhance end user experience, and extend its applications, Solomon Systech has developed the **"World's 1st" PMOLED Touch and Display Driver Integration (TDDI) IC SSD7317** which integrates touch and display microelectronics into a single chip for use on PMOLED panels.

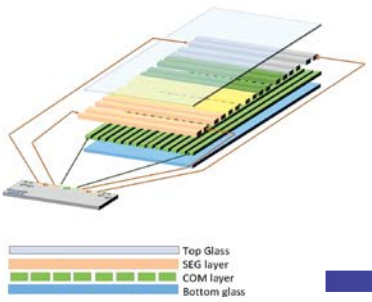
From Out-Cell PMOLED Display Panel to In-Cell "Touch + Display" PMOLED Panel

The SSD7317 transforms the traditional out-cell PMOLED display panel into in-cell "touch + display" panel. It has adopted a proprietary time multiplexing approach for display driving and in-cell touch detection, thereby enables in-cell touch detection on traditional PMOLED display modules with no modifications needed on the existing display module structure.

PMOLED Out-Cell Touch Module Structure



PMOLED In-Cell Touch Module Structure (with SSD7317 TDDI IC)



2018 Hong Kong Awards for Industries – Techological Achievement Award

Applications

Wearables, Smart Home Appliances, IoT Devices, Smart Healthcare Devices, etc.

Key Competitive Advantages

Compared with traditional out-cell touch approach, the key competitive advantages of SSD7317's in-cell touch technology includes:

- Enables better display quality given higher light transmittance
- Enhances touch performance with the proprietary time multiplexing approach reducing display and touch crosstalk
- Lowers the total module costs by reducing the total number of components
- Improves yield rate of final product assembly
- Shortens development cycle
- Enables ultra-slim form factor

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Key Features

Resolution
- 128 x 96 Mono Color

Number of Touch Key Supported
- 1 - 4 In-Cell touch keys
- 8 Out-Cell touch keys

Gestures Supported
- Single tap
- Double tap
- Long tap
- Slide gestures (up/down and left/right)

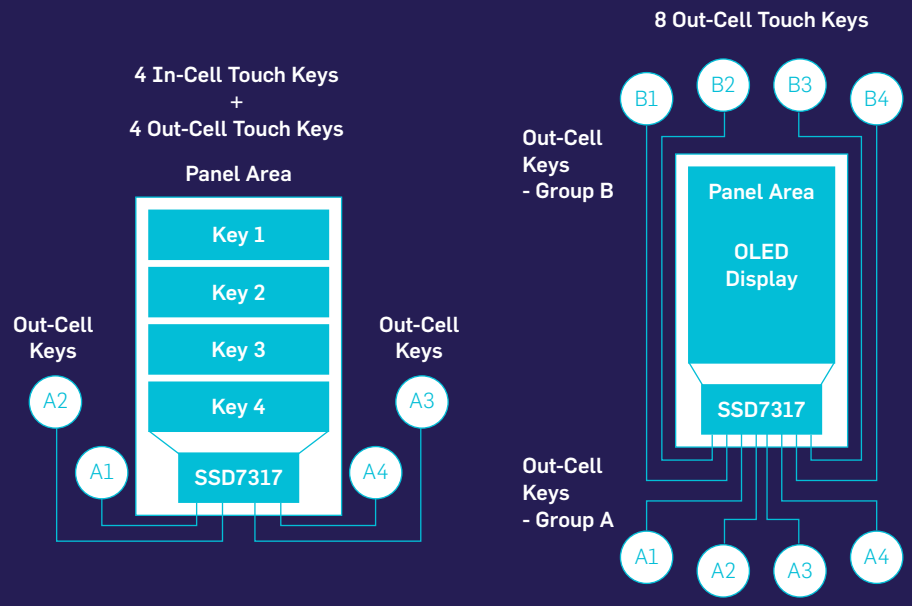
Segment Maximum Source Current
- 600uA

OLED Display High Voltage Supply (VCC)
- 8.0V - 18.0V

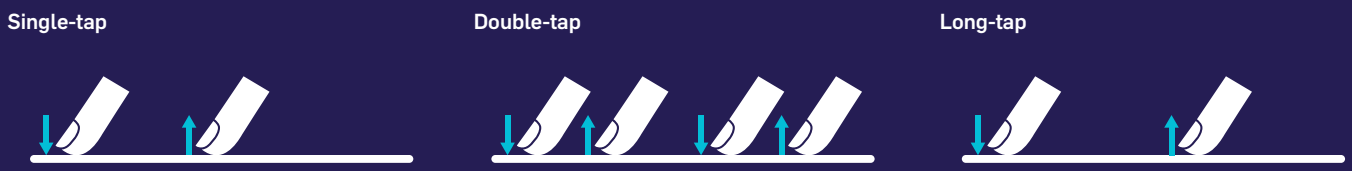
Touch Driving Voltage Supply (VCI)
- 3.0V - 3.5V

Communication Interface
- 8-bit Parallel Interface (display only)
- SPI (display/touch)
- I²C (display/touch)

Application Diagram



Touch Gestures Supported



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