



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



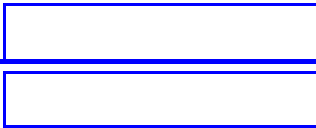
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S4E5B001B000A00 Monochrome EPD Controller Module November 2012

EPSON's EPD Controller Module is a complete, high performance, easy to use solution for E Ink EPDs (Electronic Paper Displays). The module includes all the necessary digital and analog power circuitry for driving an E Ink panel. The module consists of Epson's S1D13522 EPD controller, an on-board 26MHz crystal clock source, a 4 Mbit flash memory for command/waveform storage, and a power management IC (PMIC) with built in temperature sensor.

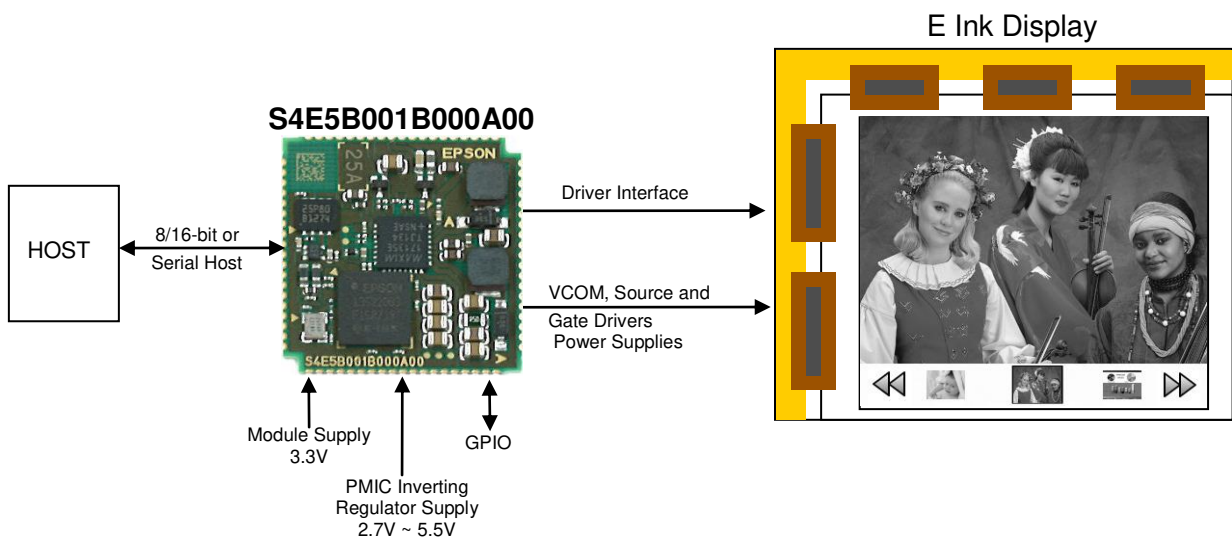
The module was developed to remove the complexities of board design from our customers thus reducing time to market and opening a variety of applications.

The S4E5B001B000A00 EPD Controller Module is the ideal choice for new EPD designs and design upgrades.

■ Features

- Epson S1D13522 EPD Controller
- Targeted for popular display resolutions from E Ink: 800x600, 1024x768 and 1200x825 (www.eink.com)
- Multi-Regional updates for smooth drawing
- Rotation support for Host Writes
- Low Host overhead
- 8/16-bit Indirect or Serial Host Support
- Automatic temperature compensation with onboard Thermal Sensor
- Optional auto boot display support and customizable boot screen
- Programmable Power Management
- Picture-in-Picture and Cursor functions with separate buffers
- No external clock source required
- Four regulated output voltages for Source and Gate Driver power supplies
- $V_{POS} + V_{NEG} = \pm 50mV$ tracking accuracy
- Controlled inrush current during soft start
- Six General Purpose IO Pins available
- Package: 76-pin 23mm x 23mm x 2.4mm Castellated-via, 1mm pitch

■ System Diagram



■ Description

Display Support

- Compatible with E Ink Monochrome Active Matrix Panels
- Up to 4-bit grayscale waveforms (16 grey-shades)
- Auto Waveform Management Version 2
- Panel Border Support
- Waveform format: E Ink proprietary

Stacked Memory

- Host write rotation: 90°, 180°, or 270°
- Host writes can use packed mode for high-speed transfers
- Host writes with transparency for non-rectangular images
- New image data can be loaded to the image buffer while display updates are in progress

Host Support

- Indirect Intel 80 8/16-bit or Serial Host
- Simplified command style access

Display Features

- Picture-in-Picture (PIP) window with separate image buffer and transparency function
- Hardware Cursor support

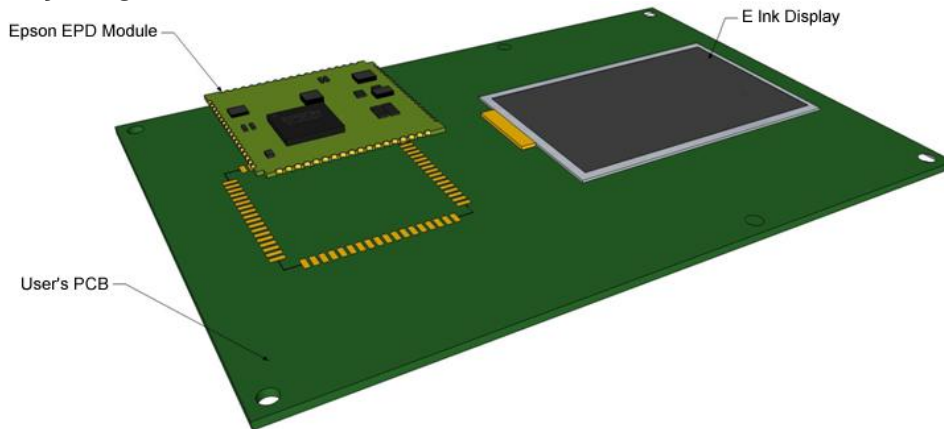
Power Management Support

- Power Management with built-in temperature sensor
- Software Power Save Modes
- Low and ultra-low power modes

Miscellaneous

- Six General Purpose Input/Output pins
- Each GPIO pin can be configured for edge detect interrupt
- Module Supply Voltage: 3.3V
- PMIC Inverting Regulator Supply Voltage: 2.7V ~ 5.5V

■ PCB Assembly Diagram



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