

S1D13L01

S1D13L01 WQVGA Graphics Controller

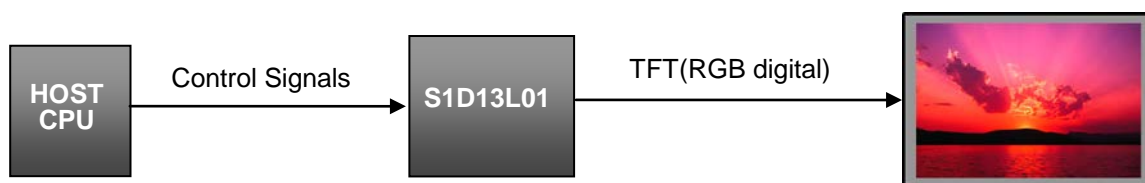
The S1D13L01 is a simple, multi-purpose Graphics LCD Controller with 384KByte embedded SRAM display buffer which supports both RGB interface TFT panels. The S1D13L01 supports most popular CPU interfaces in both 8/16-bit and Direct/Indirect variations. The embedded display buffer allows WQVGA up to 480x272 at 24bpp or 800x480 8bpp for single layer display, or 480x272 at 16bpp (Main Layer) and 480x272 at 8bpp (PIP Layer) for two layer display.

The S1D13L01's combination of multiple CPU interfaces and display interface types offers a versatile, yet easy to develop display system. Additionally, it offers Multiple Window support, Transparency and Alpha Blending functions. It is a flexible, low cost, low power, single chip solution designed to meet the demands of embedded markets such as low end IP phone devices where total system cost and battery life are major concerns. It's impartiality to CPU type or operating system also makes it an ideal display solution for a wide variety of other applications such as Office Automation, Medical instruments and Factory Automation applications.

■ FEATURES

- 384kByte Embedded Memory
- Direct and Indirect CPU Interfaces
- 8/16-bit data bus width
- SPI CPU interface
- Support for single panel implementation:
 - RGB Interface TFT panel
- Programmable resolutions (up to 800x480@8bpp) and color depth (up to 24 bpp)
- Multiple Window (Layer) support for Main and PIP
- Rotation (Swivel View) 90 /180 /270
- General Purpose IO Pins
- LUT 256wordx24bitx3pcs for both Main and PIP layer
- Alpha Blending, Transparency, Flashing
- Software initiated Power Save Mode
- H/PIOVDD: 3.3 or 1.8V, CORE/PLLVD: 1.5V
- Clocks can be selected from embedded PLL or digital clock inputs
- Temperature Range: -40° ~ 85°
- Package: QFP15 128-pin, 0.4mm pin pitch

■ SYSTEM BLOCK DIAGRAM



S1D13L01 Features

- Embedded display buffer
- 2 layer support
- Alpha Blending and Transparency
- PIP layer Flashing
- Programmable PLL



S1D13L01

■ DESCRIPTION

CPU Interface

- Support for most popular CPU interfaces
- Direct/Indirect Addressing
- 8/16-bit interface support
- SPI

Display Support

- Single panel implementation can be:
 - RGB Interface TFT panel
- Programmable resolutions up to 800x480@8bpp
- Programmable color depths up to 24 bpp

Display Features

- Multiple Window (Layer) support for Main and PIP
- Alpha Blending and Transparency
- PIP Flashing
- LUT 256wordx24bitx3pcs for both Main and PIP layer
- Rotation (Swivel View) 90 /180 /270

384KByte Embedded Memory

- Maximum Resolution for WQVGA:
 - 1 layer:
 - 480x272 at 24bpp or
 - 800x480 at 8bpp
 - 2 layer:
 - Main 480x272 at 16bpp and
 - PIP 480x272 at 8bpp

Miscellaneous

- Internal System Speed: 66MHz
- Software initiated power save mode
- Multiple General Purpose IO pins
- Flexible clock structure:
 - Embedded PLL
 - Digital clock inputs
- Operating Temperature Range: -40° ~ 85°
- Low Operating Voltage:
 - PLL/CORE_{VDD} 1.5 volts and
 - PIO/HIO_{VDD} 3.3 or 1.8 volts
- Package: QFP15 128-pin, 0.4mm pin pitch

NOTICE:

No part of this material may be reproduced or duplicated in any form or by any means without the written permission of Seiko Epson. Seiko Epson reserves the right to make changes to this material without notice. Seiko Epson does not assume any liability of any kind arising out of any inaccuracies contained in this material or due to its application or use in any product or circuit and, further, there is no representation that this material is applicable to products requiring high level reliability, such as, medical products. Moreover, no license to any intellectual property rights is granted by implication or otherwise, and there is no representation or warranty that anything made in accordance with this material will be free from any patent or copyright infringement of a third party. When exporting the products or technology described in this material, you should comply with the applicable export control laws and regulations and follow the procedures required by such laws and regulations. You are requested not to use, to resell, to export and/or to otherwise dispose of the products (and any technical information furnished, if any) for the development and/or manufacture of weapon of mass destruction or for other military purposes.

All brands or product names mentioned herein are trademarks and/or registered trademarks of their respective companies.

SEIKO EPSON CORPORATION

http://www.epson.com/devices/semicon_e/

MICRODEVICES OPERATIONS DIVISION

IC Sales & Marketing Department

421-8 Hino, Hino-shi, Tokyo 191-8501, JAPAN
Phone: +81-42-587-5814 FAX: +81-42-587-5117

Document code: 412705900
First issue February, 2014 in Japan

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Display Drivers & Controllers](#) category:

Click to view products by [Epson](#) manufacturer:

Other Similar products are found below :

[ICB2FL01G](#) [HV5812PJ-G-M904](#) [TW8813-LB2-GR](#) [TW8811-PC2-GR](#) [MAX1839EEP+](#) [TW9907-TA1-GR](#) [LX27901IDW](#) [SSD2828QN4](#)
[ICB2FL01GXUMA2](#) [DLP2000FQC](#) [PAD1000YFFR](#) [S1D13746F01A600](#) [FIN324CMLX](#) [AD8387JSVZ](#) [DLPC6421ZPC](#) [HV852K7-G](#)
[HV859K7-G](#) [HV857K7-G](#) [DIO2133CT14](#) [S1D13506F00A200](#) [S1D13L03F00A100-40](#) [TW2836-BA1-GR](#) [SSD2829QL9](#) [MAX749CSA+T](#)
[MAX4820EUP+T](#) [ICL7135CAI+](#) [ICL7135CMH+D](#) [ICL7137CMH+D](#) [MAX25221BATJ/V+](#) [S1D13748B00B100](#) [MAX3738ETG+T](#)
[MAX8722CEEG+](#) [MAX749CPA+](#) [MAX8785AETI+](#) [ICL7135CQI+](#) [HV518PJ-G-M903](#) [HV5812P-G](#) [HV5812PJ-G](#) [HV5812WG-G](#)
[HV7224PG-G](#) [HV853K7-G](#) [HV860K7-G](#) [HV6810WG-G](#) [HV857MG-G](#) [HV833MG-G](#) [HV857LMG-G](#) [HV850MG-G](#) [HV859MG-G](#)
[FMS6363ACSX](#) [FMS6364AMTC14X](#)