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S1D13705 Embedded Memory LCD Controller

13705SHOW Demonstration Program

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13705SHOW

13705SHOW is a program designed to demonstrate rudimentary display capabilities of the S1D13705. The display abilities are shown by drawing a pattern image to the video display at all supported color depths (1, 2, 4 and 8 bits-per-pixel)

The 13705SHOW display utility must be configured and/or compiled to work with your hardware platform. The program 13705CFG.EXE can be used to configure 13705SHOW. Consult the 13705CFG users guide, document number X27A-B-001-xx, for more information on configuring S1D13705 utilities.

This software is designed to work in both embedded and personal computer (PC) environments. For the embedded environment, it is assumed that the system has a means of downloading software from the PC to the target platform. Typically, this is done by serial communications. The PC uses a terminal program to send control commands and information to the target processor. Alternatively, the PC can program an EPROM, which is then placed in the target platform. Some target platforms can also communicate with the PC via a parallel port connection, or an Ethernet connection.

S1D13705 Supported Evaluation Platforms

13705SHOW has been tested with the following S1D13705 supported evaluation platforms:

- PC system with an x86 processor. Both 16-bit and 32-bit code is supported.
- M68EC000IDP (Integrated Development Platform) board, revision 3.0, with a Motorola M68EC000 processor.
- SH3-LCEVB board, revision B, with an Hitachi SH-3 HD6417780 processor.

If the platform you are using is different from the above, please see the S1D13705 Programming Notes and Examples manual, document number X26A-G-002-xx.

Installation

PC Intel Platform

For 16-Bit Program Version: copy the file 13705SHOW.EXE to a directory that is in the DOS path on your hard drive.

For 32-Bit Program Version: install the 32-bit Windows device driver S1D13X0X.VXD as described in the S1D13X0X 32-Bit Windows Device Driver Installation Guide, document number X00A-E-003-xx. Copy the file 13705SHOW.EXE to a directory that is in the DOS path on your hard drive.

Embedded Platform

Download the program 13705SHOW to the system.

Usage

PC platform: at the prompt, type:

`13705show [/a] [b=n] [/l] [/p [/alt]] [/vertical] [/noinit] [/?]`

Embedded platform: execute **`13705show`** and at the prompt, type the command line argument(s).

Where:	`/a`	automatically cycle through all video modes.
	`b=?`	starts 13705SHOW at a user specified bit-per-pixel (bpp) level, where ? can be: 1, 2, 4, or 8.
	`/l`	set landscape mode.
	`/p`	set portrait mode.
	`/alt`	use alternate portrait mode
	`/vertical`	displays vertical line pattern.
	`/update`	continuously update display memory.
	`/noinit`	bypass register initialization and use values which are currently in the registers.
	`/?`	displays the help screen.

Comments

- The /alt command line switch can only be used with the /p (portrait) mode switch. This switch will have no effect in landscape display modes.
- The Intel 32-bit version of 13705SHOW is designed to work under either Windows 9x or Windows NT. To install the 32-bit Windows device driver S1D13X0X.vxd see the S1D13X0X 32-Bit Windows Device Driver Installation Guide, document number X00A-E-003-xx.

  The 16-bit version of the program runs under DOS with no DOS extenders. The lack of a DOS extender means that the 16-bit program can only be used on a hardware platform where the S1D13705 is addressed below 1MB.

Program Messages

`ERROR: Did not find a 13705 device.`

The HAL was unable to read the revision code register on the S1D13705. Ensure that the S1D13705 hardware is installed and that the hardware platform has been configured correctly. Also check that the display memory address has been configured correctly.

`ERROR: Unable to locate/load S1D13XXX.VXD`

13705PLAY was unable to load a required driver. The file S1D13XXX.VXD should be located in x:\WINDOWS\SYSTEM or in x:\WINNT\SYSTEM. If the file is not there, install it as described in the S1D13XXX 32-Bit Windows Device Driver Installation Guide, document number X00A-E-003-xx.

`ERROR: An IOCTL error occurred`

This message indicates an error at the IO control layer occurred. The usual cause for this is an incorrect hardware configuration.

`ERROR: The HAL returned an unknown error`

This message should never be displayed, it indicates that 13705SHOW is unable to determine the cause of an error returned from the HAL.

ERROR: Could not initialize device

The call to initialize the S1D13705 registers failed.

Not enough memory for www x hhh x bpp!!

This message is printed if there is insufficient display memory to show a complete image with a width of www pixels, a height of hhh pixels and a color depth of bpp bit-per-pixel. In this case the mode is skipped and the next display mode is attempted.

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