



ADS512101

Revision 4.x Errata

*Errata on the ADS512101 Revision 4.x as of 9/16/2009.
The revision designation is on the PCB and the SN label.*

STx is implementing these Corrective Actions on revision 4.1 ADS512101. If you receive an ADS512101 without these changes or an ADS512101 exhibiting these problems, STx will repair at no charge. Contact our sales department, ADS512101@silicontkx.com, 800.827.2650, for an RMA.

Power

When ADS512101 Rev 4.1 performs memory intensive operations, such as running a graphics demo, U2 the 3.3v regulator, Linear Tech LTM4602's, may have a 200 to 300mv droop. This "droop" may result in erratic behavior such as resets or the CPU freezing.

Corrective Actions:

- 1) **Attach a wire from C27 +3.3v pad (pad facing towards the SATA connector J5) and to R16 +3.3_AUX pad (pad facing towards the CPLD U17)**
- 2) **Program the CPLD with ADS5121e_04_cpld_06_002e60f1.pof (CPLD code can be download from www.silicontkx.com/support/index.php)**

0.9 V MFREF MVTT

When outputting all white pixels on high resolution displays (greater than 640x480) the ADS512101 may freeze or reboot. This is because the DDR MVTT and MVREF pins are connected to the same 0.9V rail, normally they should be powered separately.

Corrective Actions:

- 1) **Remove R39 and connect a jumper wire from R39 pin 1, MVREF (pad closest to RSDD40 marking). Connect the other end of the jumper to a different 0.9V supply, at C30 Vout2 from U4 (pad closest to U4).**

CPU Fuse

There is a possibility fuses in the CPU could be affected if RO-6 remains in the circuit.

Corrective Action:

- 1) **Remove RO-6, if it is installed on the board.**

VGA Gain

A problem with high gain on the VGA was detected.

Corrective Action:

- 1) **Remove RO-16, RO-17, and RO-18, if it is installed on the board.**

LCD Bright- ness

The LCD backlight intensity circuitry for connector P19 uses a digital potentiometer, U31, to control the LCD brightness. The footprint used in the design is incorrect.

Corrective Action:

- 1) **Remove U31 if it is installed on the board.**
- 2) **To provide constant intensity, a 10K resistor should be installed between pins 6 and 7 of P19.**

*Errata on the ADS512101 Revision 4.x, continued.
Below are changes from the original ADS512101 description.*

SATA

SATA does not function due to a problem with the MPC5121e silicon. Freescale expects to correct SATA in the future.

Touch Screen

The original ADS512101 design includes a touch screen controller, U38. This controller communicates with the CPU using I2C. At the time of the final release of the ADS512101 software drivers were not available to support this function. It was decided to not assemble the controller device on the ADS512101.

STx will under special request assembly U38.

There have since been several providers, including Freescale, that introduced software drivers for an 'off-board' serial touch screen controller. Additional information available upon request.

UART

The pin assignments in user manual revision 1.2 dated September 4, 2008 or earlier for UART1 and 0 ten pin headers, P6 and P8, are for revision 3.2 and earlier ADS512101. In revision 4.0 and newer the pin assignment changed. The schematic, ADS5121E_04_SCH_03, included on the STx CD does correctly provide the pin connection for these headers.

Below is the correct pin assignment for these headers.

P06, UART 0, 10 pin header	
Pin	Description
1	+3.3V
2	GND
3	CPU RTS
4	MEDIA GPIO 6
5	CPU TXD
6	TOUCH 0 IRQ#6
7	CPU RXD
8	CPU CTS
9	GND
10	+5.0V

P08, UART1, 10 pin header	
Pin	Description
1	NC
2	NC
3	UART1 RXD
4	UART1 RTX
5	UART1 TXD
6	UART1 CTS
7	NC
8	NC
9	GND
10	NC

Contact

Silicon Turnkey Express
749 Miner Rd.
Highland Hts., OH 44143

ADS512101@silicontkx.com

www.silicontkx.com
PH: 440 461 4700 182
FX: 440 461 4329