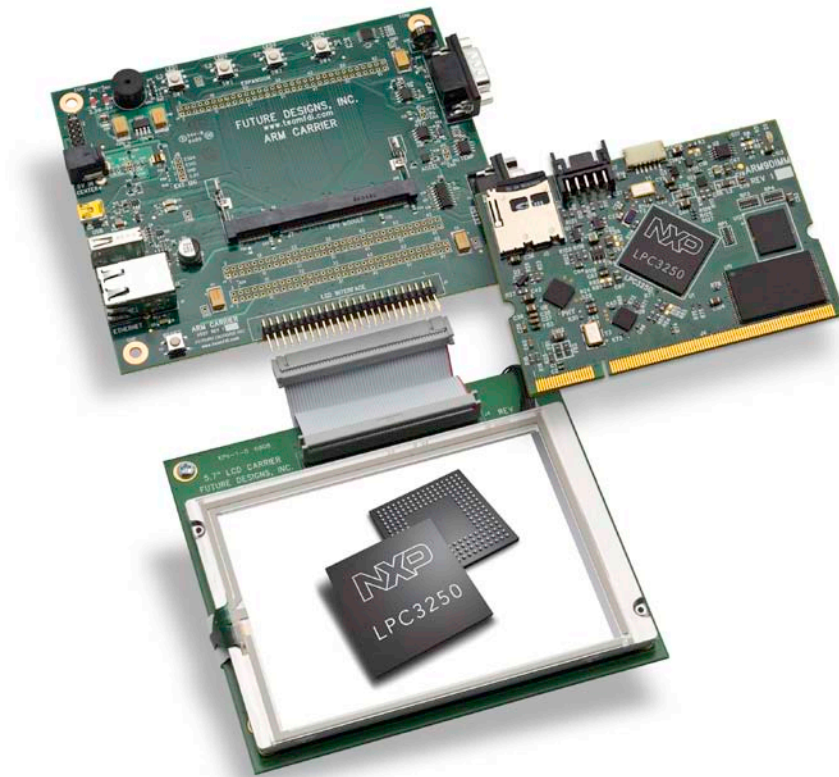


Quick Start Guide for LPC3250 Touch Screen LCD Kit



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1. Introduction

The DK-TS-KIT is optimized to save development time in typical embedded control applications. Its modular format uses a base carrier board, a core CPU DIMM board and an LCD carrier board. The base carrier board includes expansion connectors for added flexibility and a range of configurations.

This Quick Start Guide supports the following DK-TS-KIT part numbers:

- **DK-57TS-LPC3250** 5.7" QVGA Touch Screen LCD Kit for the LPC2478, Toshiba PN: LTA057A344F or equivalent
- **DK-57VTS-LPC3250** 5.7" VGA Touch Screen LCD Kit for the LPC2478, Okaya PN: RV640480T-5X7WP or equivalent

2. Kit Contents

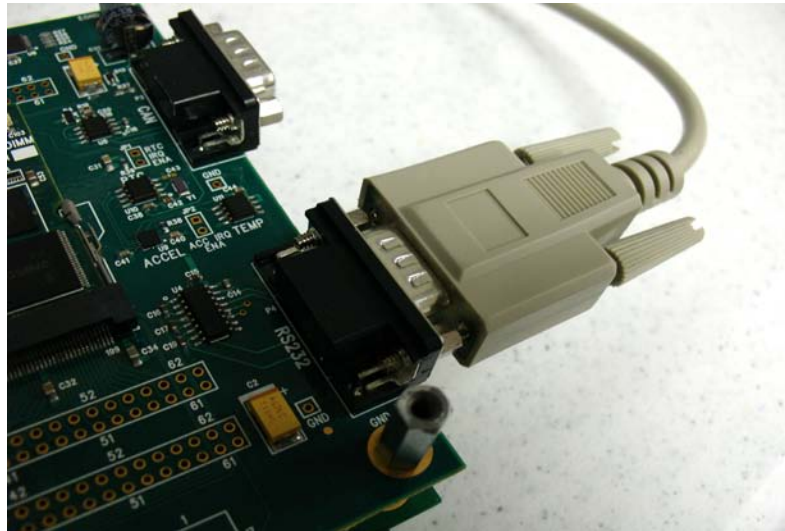
- DK-TS-LPC3250 Touch Screen Kit with LCD
- 5V Power Supply
- Quick Start Guide
- Segger Mini-JTAG Debugger and JTAG cable
- USB Flash Drive
- Ethernet Cable
- DB9 Serial Cable
- USB Cables

3. Startup Procedure

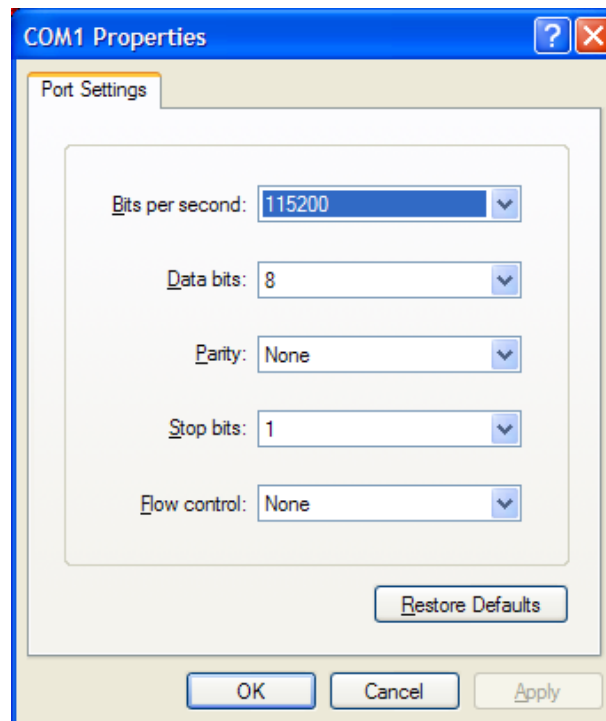
- A. Connect the USB Flash Drive (USB Host P1) provided with the kit. The flash drive contains the files required for the slide show to run. This will allow the slideshow to operate once the unit is powered up.



- B. Connect the serial cable – this is the console port FOR Linux and should be connected from the DK-TS-KIT Serial Port (P4) to an available serial port on your PC



- C. Open and configure a PC serial communications like HyperTerminal to 115200 bits per second, 8 Data bits, no parity, 1 Stop bit, no flow control .



- D. Connect the included 5V power supply to the DK-TS-KIT power connector (P5). The power supply MUST be a regulated 5VDC, 2.1mm, center positive power supply. The use of ANY other power supply may result in damage to the kit and subsequently, void warranty.



the

- A. Boot up process should be displayed on the PC Serial Communications Window (i.e. HyperTerminal)

```
Direct_1 - HyperTerminal
File Edit View Call Transfer Help

SIBL 1.02 (07/29/2009) - 266000000 Hz
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-----
DDR:  SDRAMCLK_CTRL = 0003CAA6
DDR:  DDR_LAP_NOM    = 0000002B (43)
DDR:  DDR_LAP_COUNT  = 0000002B (43)
DDR:  DDR_CAL_DELAY  = 00000009 (9)

LCD:  Turning on ... Done
NAND:  Initializing MLC ... OK
LCD:  Drawing splash screen ... OK
NAND:  Initializing MLC ... OK
UBOOT: Loading to address 0x81FC0000 ... OK
UBOOT: Running at 0x81FC0000...

U-Boot 1.3.3 (May 27 2009 - 03:47:53)

DRAM:  32 MB
NAND:  512 MiB
In:    serial
Out:   serial
Err:   serial
Hit any key to stop autoboot:  1

Connected 0:00:21  ANSIW  115200 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
```

- B. At the login prompt enter root, and for password enter root.

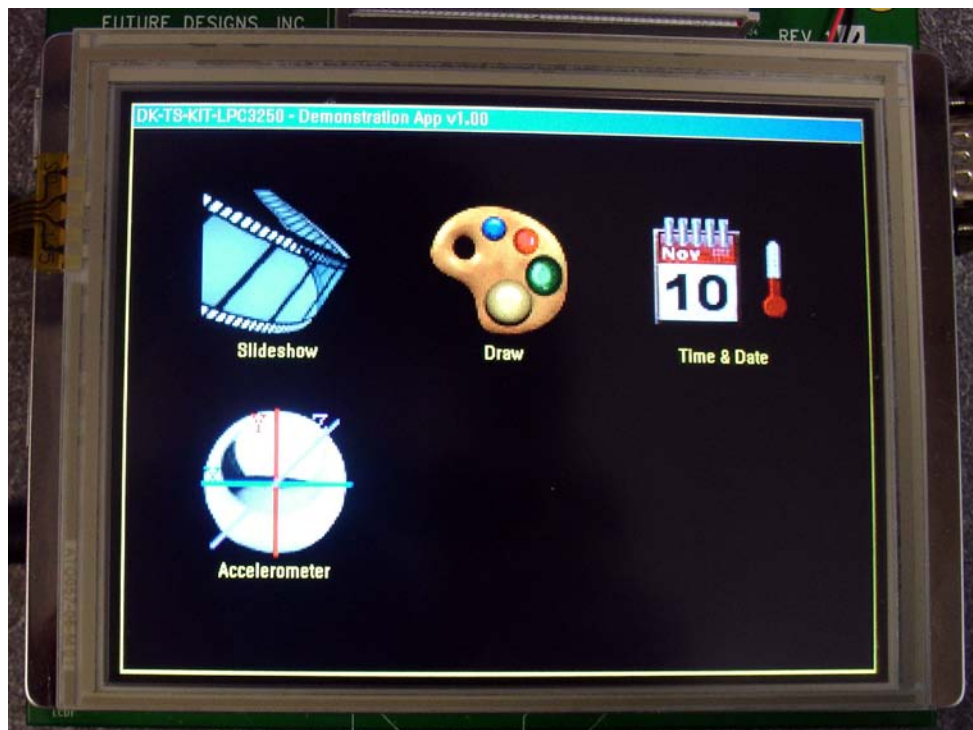
MainMenu:

Welcome to Future Designs, Inc. LPC3250 Linux

The default password for the root account is: root
please change this password using the 'passwd' command
and then edit this message (/etc/issue) to remove this message

nxp login: root
Password:
[root@nxp /root]#

- C. The following screens should appear after the boot up process is complete:



- D. At this point the unit is ready for software demonstrations.

4. Demonstration Software Main Menu

The Demonstration Software has the following options:

- **Slideshow**

Selecting the slideshow icon will cause the Flash Drive to be read. This will take several seconds and the LCD should show “loading slideshow” This demonstration allows the user to manually scroll up and down through the slide show by “dragging” a stylus or finger at least half way across the screen. To return to the main menu scroll back past the first slide, this will return you to the main menu. After approximately 30 seconds of no activity the slideshow will begin to auto scroll. The user can regain manual control at any time by “dragging” forward or backwards to the next slide.

The slideshow files can also be copied to a microSD card and executed from there. If no USB Flash Drive is loaded the software will then look for slideshow files on the microSD card.

Slideshow customization:

For best results, always use caps in the filename. Images must be in 24 bit uncompressed Targa (.TGA) format. Adobe Photoshop and many other graphics programs can save images in this format.

When using DK-TS KIT's with a QVGA LCD (e.g. DK-TS-57TS-LPCxxx or DK-TS-35TS-LPC2478), the images must be 320x240 in size and use the file names QSLIDE01.tga, QSLIDE02.tga, QSLIDE03.tga, etc. QVGA LCD units can also use the older style file names such as PICTURE1.tga, PICTURE2.tga, PICTURE3.tga, etc. There is a limit of 38 slides in a QVGA slideshow.

When using DK-TS KIT's with a VGA LCD (e.g. DK-TS-57VTS-LPCxxxx), the images must be 640x480 in size and use the file names VSLIDE01.tga, VSLIDE02.tga, VSLIDE03.tga, etc. There is a limit of 8 slides in a VGA slideshow.

- **Draw**

A very simple art program is provided. Use the touch screen to draw lines in the box to the right. Clicking on **Color** allows the color to be changed between various options. Hint – use black to erase. **Save** stores the graphic image as the file IMAGE.RAW on the USB Flash Drive. **Load** recalls the saved graphic image from the USB Flash Drive. If the USB Flash Drive is not present then the unit will look for the file on the microSD card and respond with an error message if neither file medium is present.

- **Time & Date**

selecting this icon will launch a new screen that shows the time and date from the external Real Time Clock (RTC). To return to the main menu touch the exit icon. Touch “Time” to advance to the “Set Time” screen and set or update the time as necessary. Touch “Date” to advance to the “Set Date” screen and set or update the date as necessary. Once set an on-board super cap will back-up the time and date for several days (typically) if the unit is powered off.

- **Accelerometer**

selecting this icon demonstrates the accelerometer feature by moving a simulated ball across the screen as the CARRIER board is tilted along the X and Y axis. To return to the main menu touch the exit icon.

5. Additional Documentation and Software Updates

Complete Users Manuals, Schematics, and documentation are available on the Flash Drive provided in the DK-TS-KIT and are also available from the following websites (please refer to the websites for the latest updates):

- www.teamfdi.com/dk-ts-kit
- Segger Mini-JTAG Debugger
 - <http://www.segger.com/cms/jlink-software.html>