ML507 QuickStart

May 2010

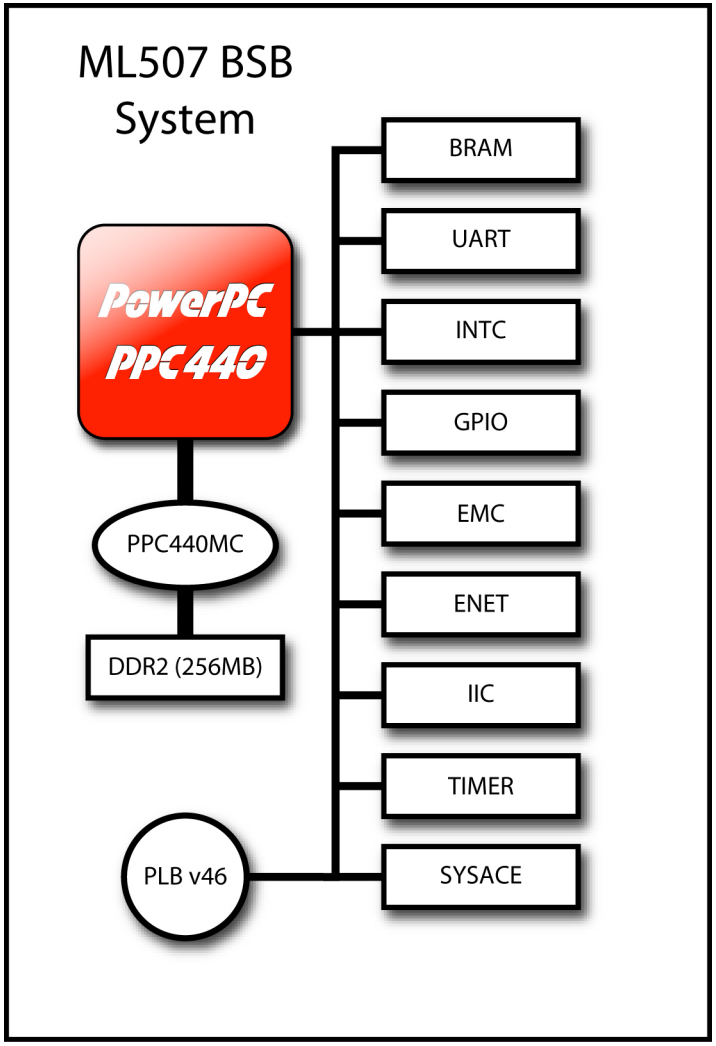
Overview

- **ML507 Setup**
- **Bootload**
- **Applications**
  - Slideshow
  - Web Server
  - Simon
  - Board Diagnostics
  - USB Keyboard
  - My ACE
  - Ringtone
- **References**

Note: This presentation applies to the ML507

ML507 BSB Hardware

- **The ML507 PPC440 design hardware includes:**
  - PPC440MC DDR2 Interface
  - External Memory Controller (EMC)
    - ZBT SRAM
  - BRAM
  - Networking
  - UART
  - Interrupt Controller
  - System ACE CF Interface
  - GPIO (IIC, LEDs and LCD)
  - PLB Arbiter

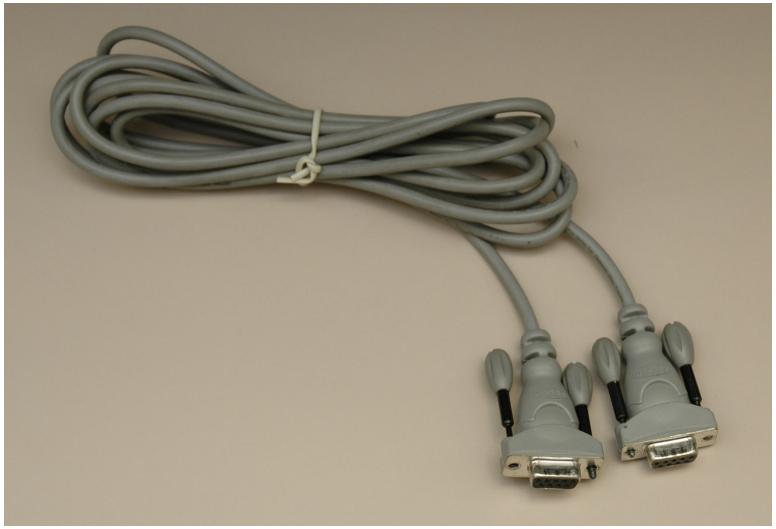


Note: Presentation applies to the ML507

ML507 Setup

- Connect the Xilinx Platform Cable USB to the ML507 board

- Connect the RS232 null modem cable to the ML507 board



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Hardware Setup

- The ML507 uses a DVI video interface
- Connect a DVI monitor

or

- Use a DVI/VGA adapter to connect a VGA monitor
  - http://www.belkin.com

Note: Presentation applies to the ML507

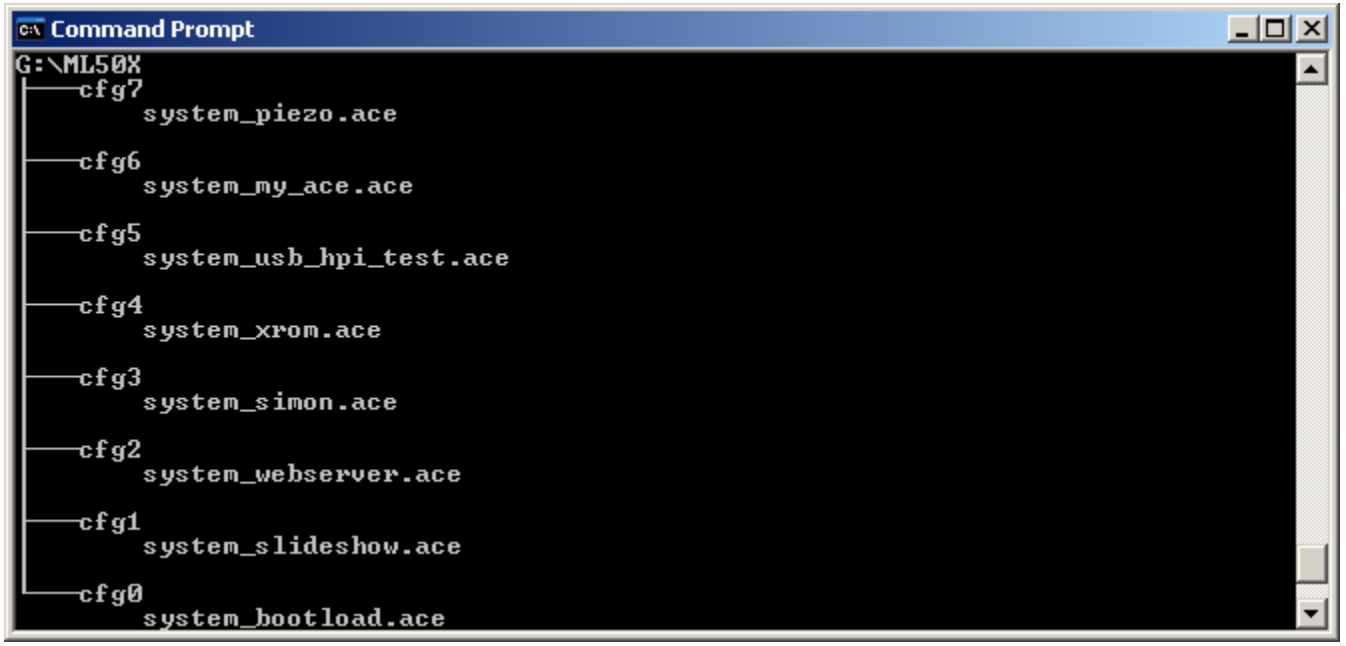
Hardware Setup

- **USB Keyboard**
  - www.dell.com

Note: Presentation applies to the ML507

Factory CompactFlash

- The CompactFlash shipped with the ML507 board has the following ace files preloaded:



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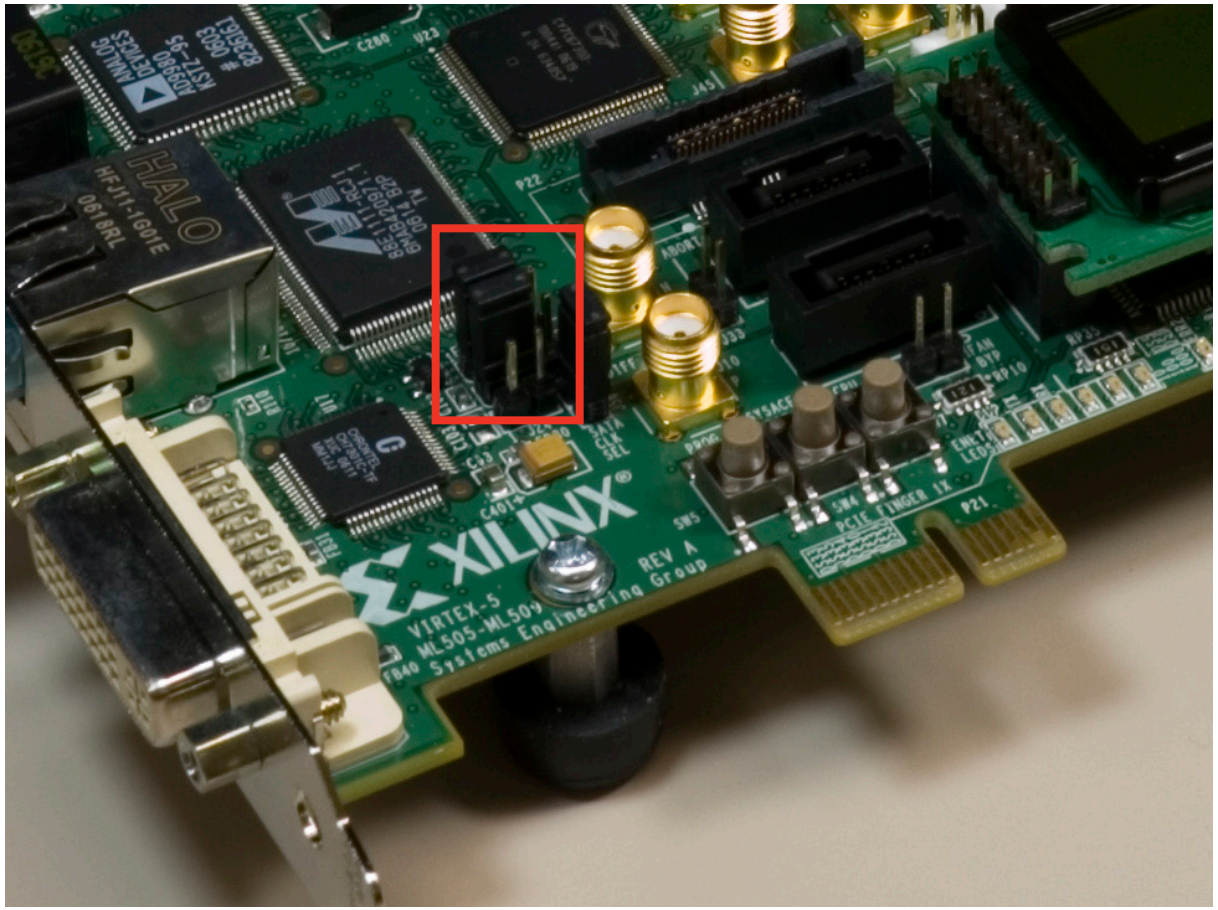
ML507 Setup

- **Set ML507 Jumpers for GMII**
  - Set both J22 and J23 to positions 1-2 (as shown)



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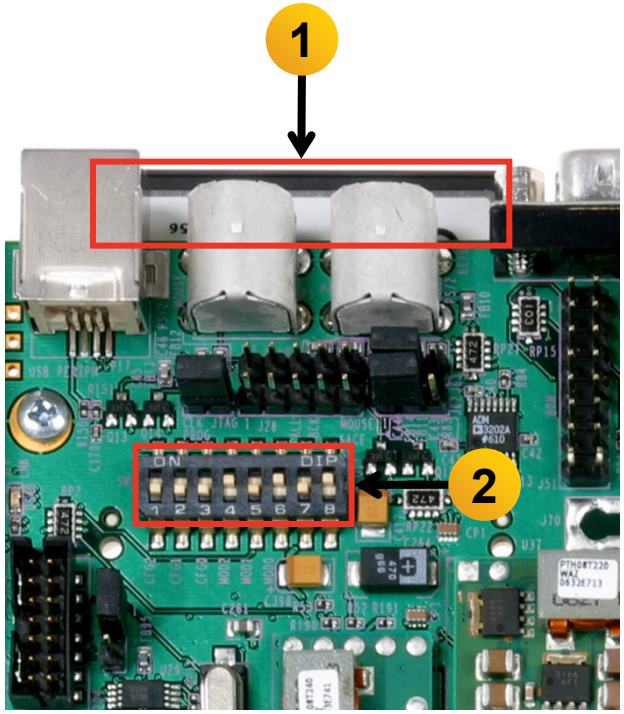
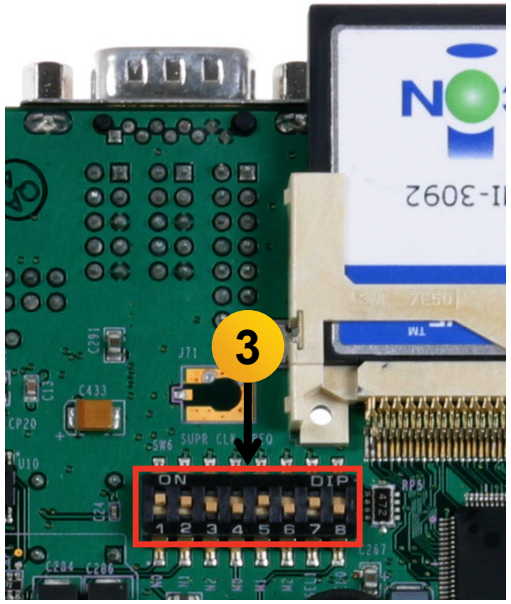
ML507 Setup

- Insert the Factory CompactFlash into the ML507 board (1)
- Set the Front DIP switches (SW3) to 00010101 (1 = ON) (2)
- Set the Rear DIP switches (SW6) to 11001010 (3)
- Power-up the ML507 board





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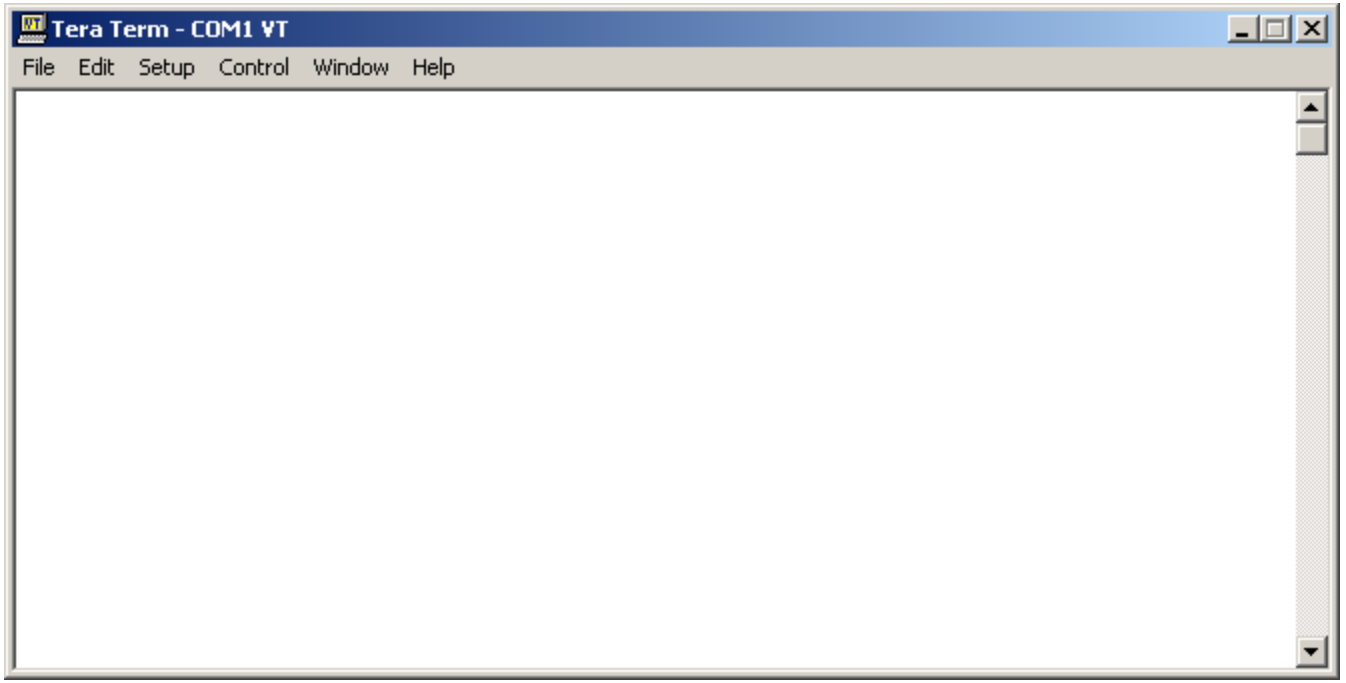
ML507 Setup

- **Start the Terminal Program:**



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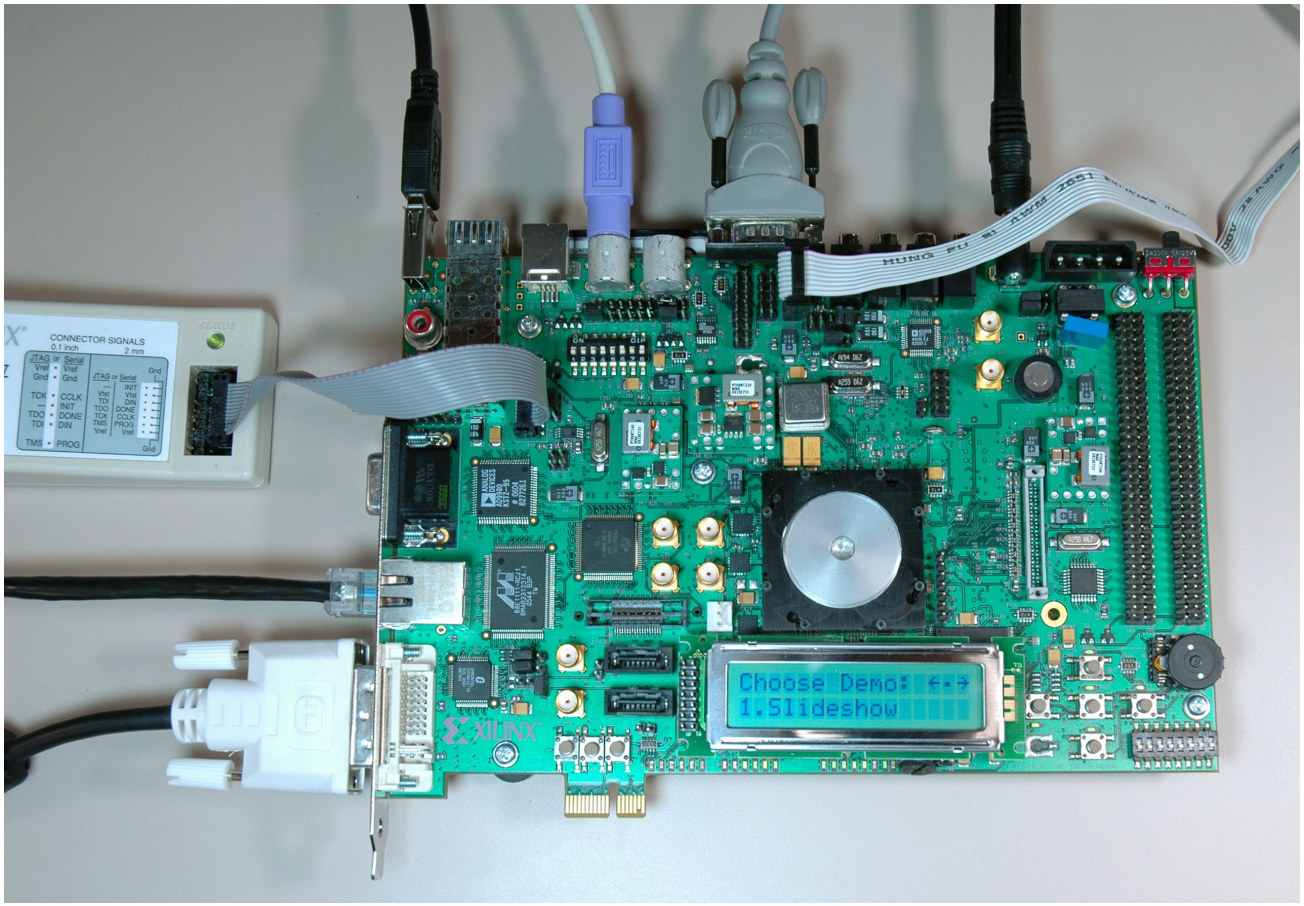
Additional Setup Details

- **Refer to ml505_overview_setup.ppt for details on:**
  - Software Requirements
  - ML505/506/507 Board Setup
  - Equipment and Cables
  - Software
  - Network
- **Terminal Programs**
  - This presentation requires the 9600-8-N-1 Baud terminal setup

Note: Presentation applies to the ML507

Bootload

- The system_bootload.ace loads:



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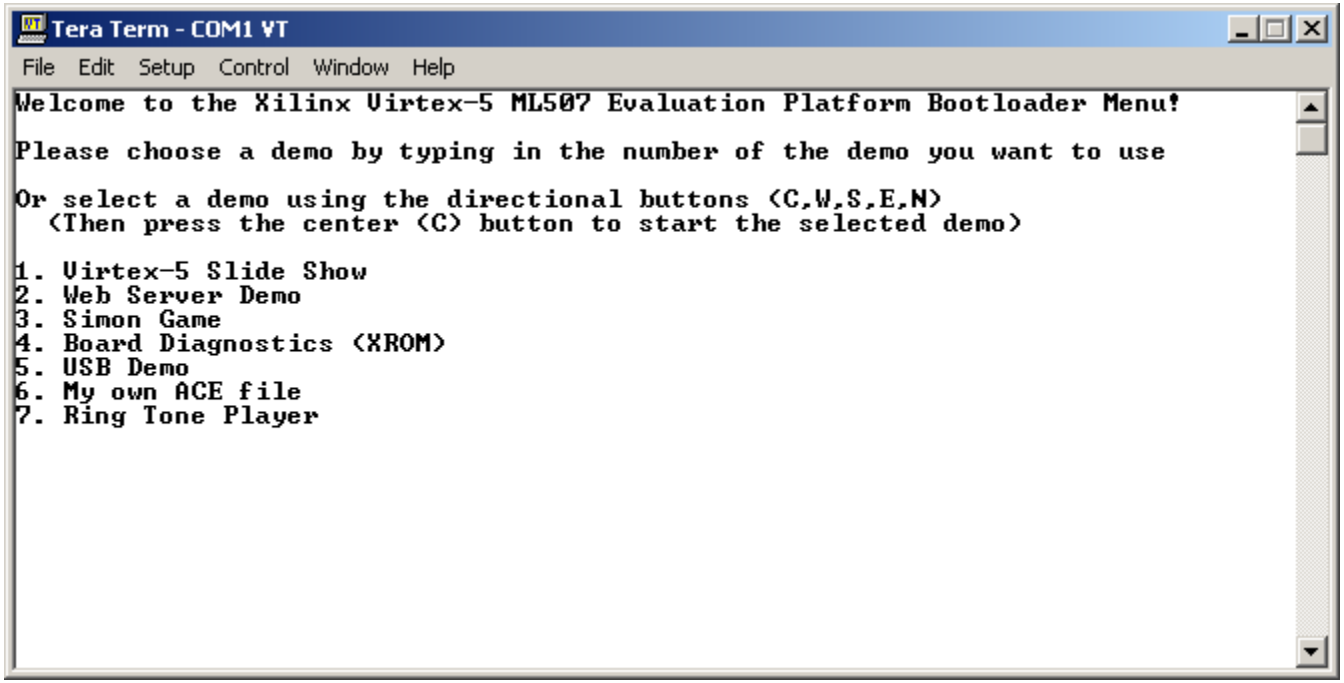
Bootload

- The terminal window also reflects the bootload application
- Use the left/center/right buttons to choose an application or type a number in the terminal window
- After each demo, push the SysACE reset to return to bootload



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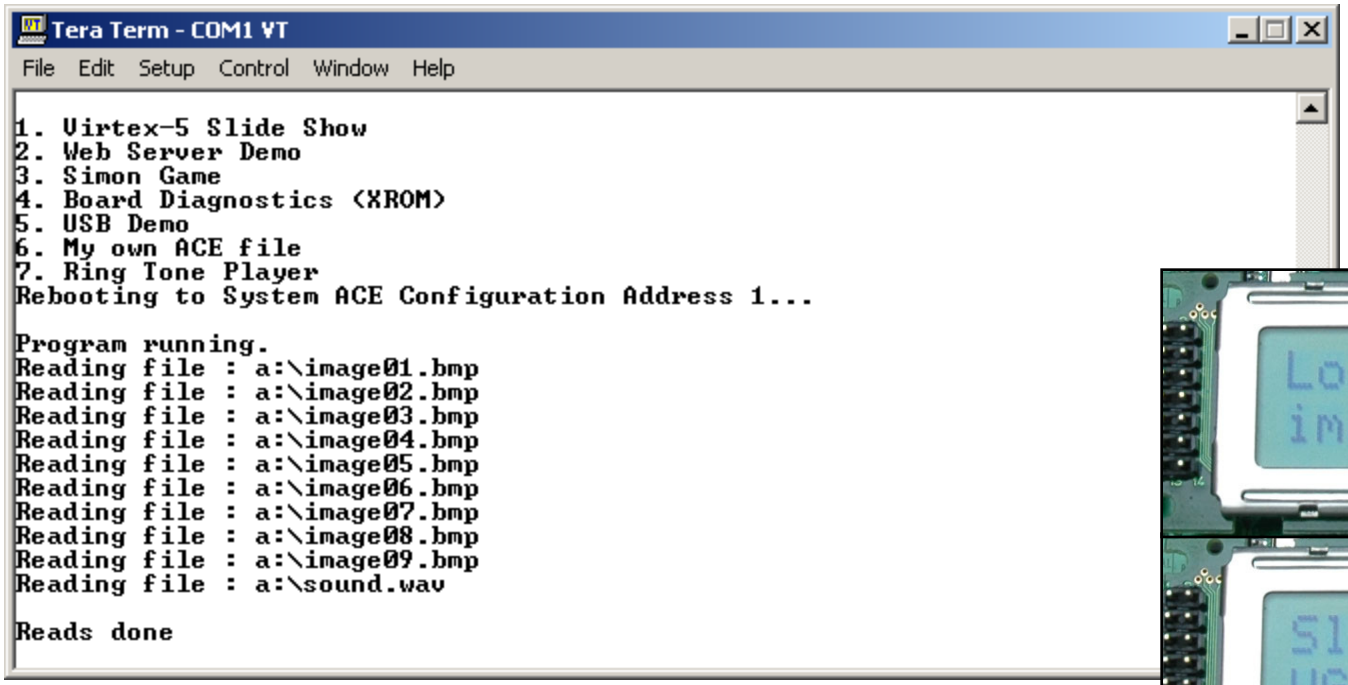
Slideshow

- Type 1, to launch the slideshow application in Configuration 1
- The slideshow loads the presentation into memory then presents it



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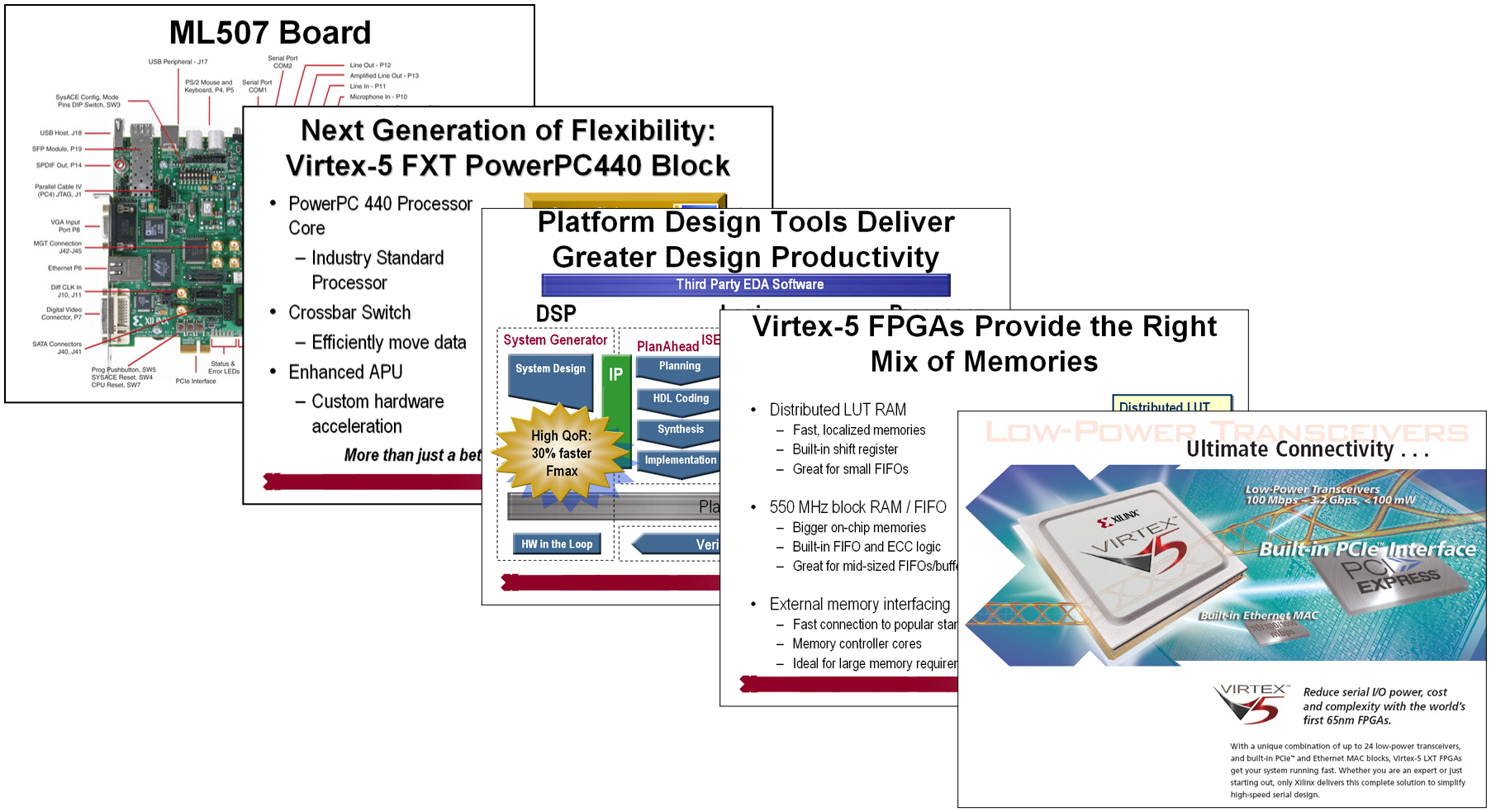
Slideshow

- **The slideshow app will present a series of slides on the Monitor:**



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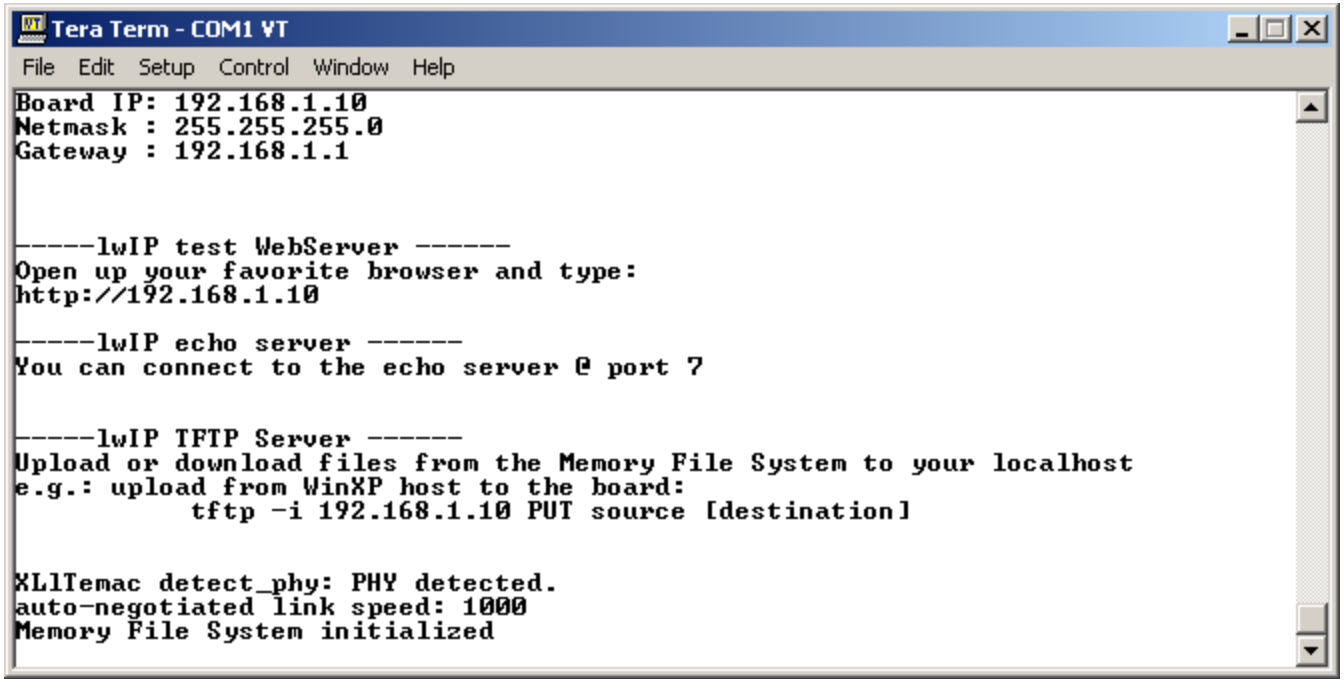
Web Server

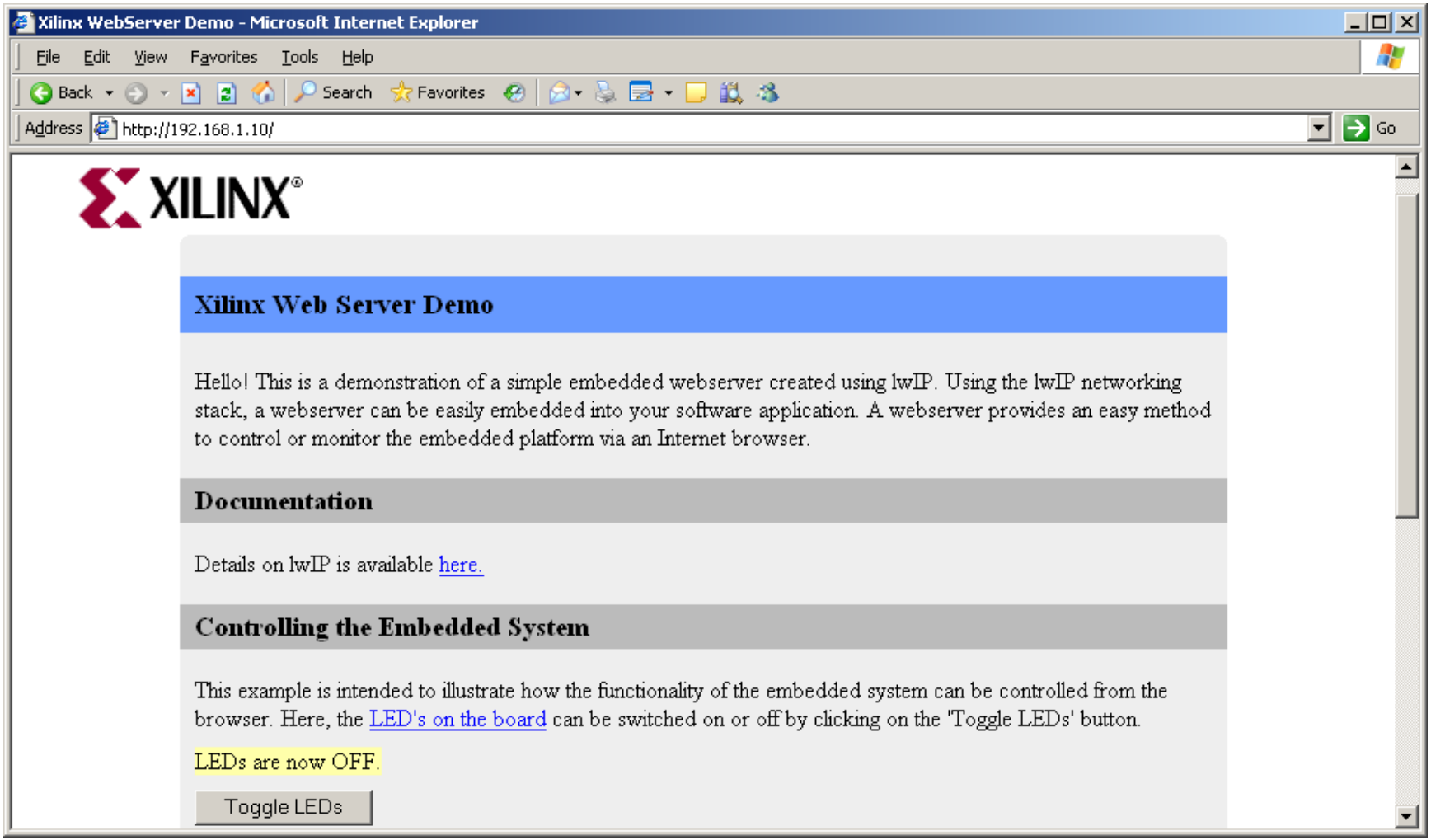
- **Type 2, to launch the web server application in Configuration 2**
  - Note: You may need to turn off your browser's proxy and specify a direct connection to the Internet in your browser options



Note: Host IP is 192.168.1.1, subnet mask is 255.255.255.0

Web Server

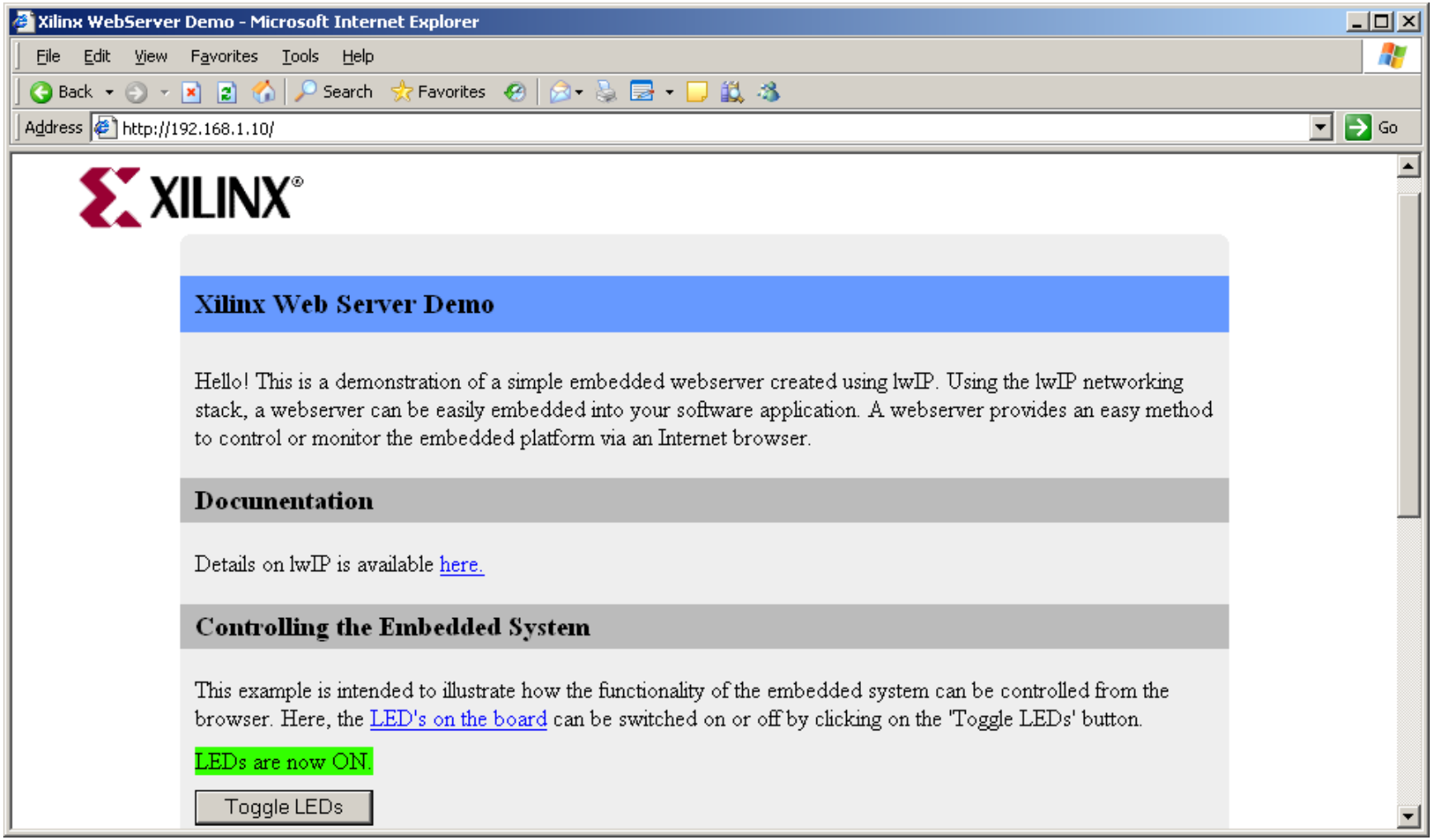
- Open a web browser to address 192.168.1.10



Note: Presentation applies to the ML507

Web Server

- Click the Toggle LEDs button; view change on ML507



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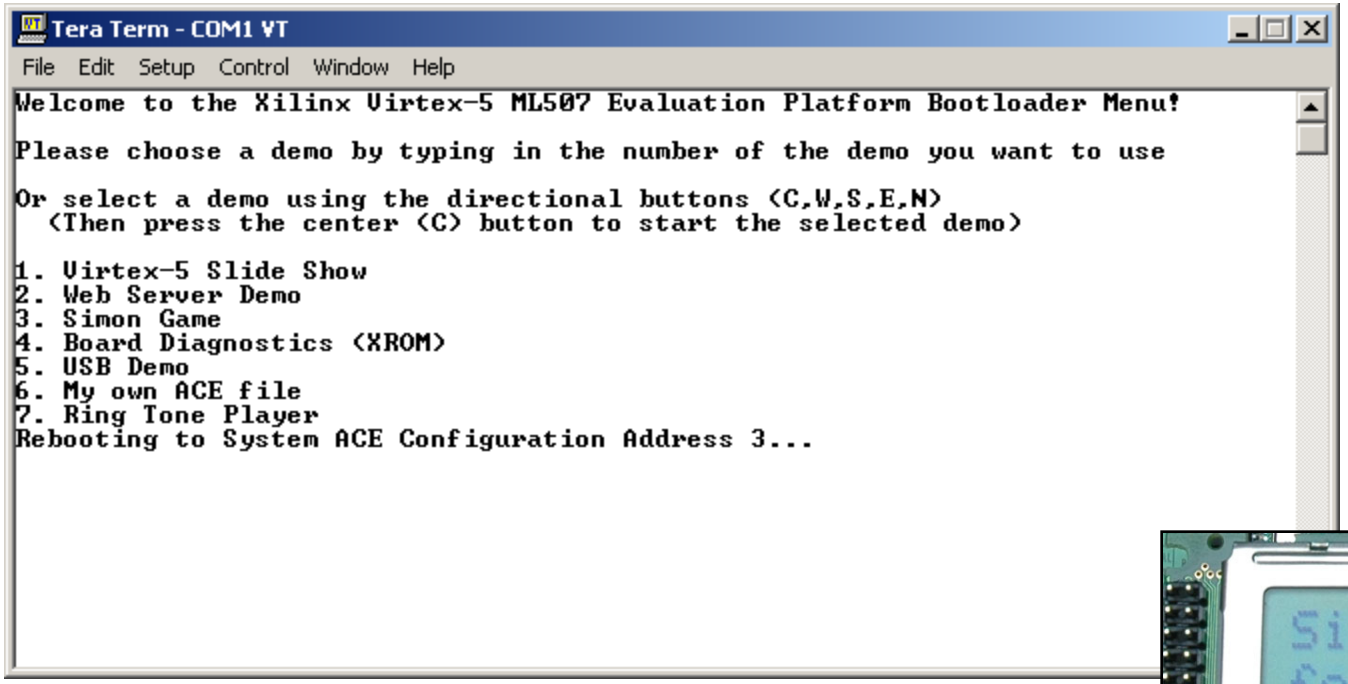
Simon

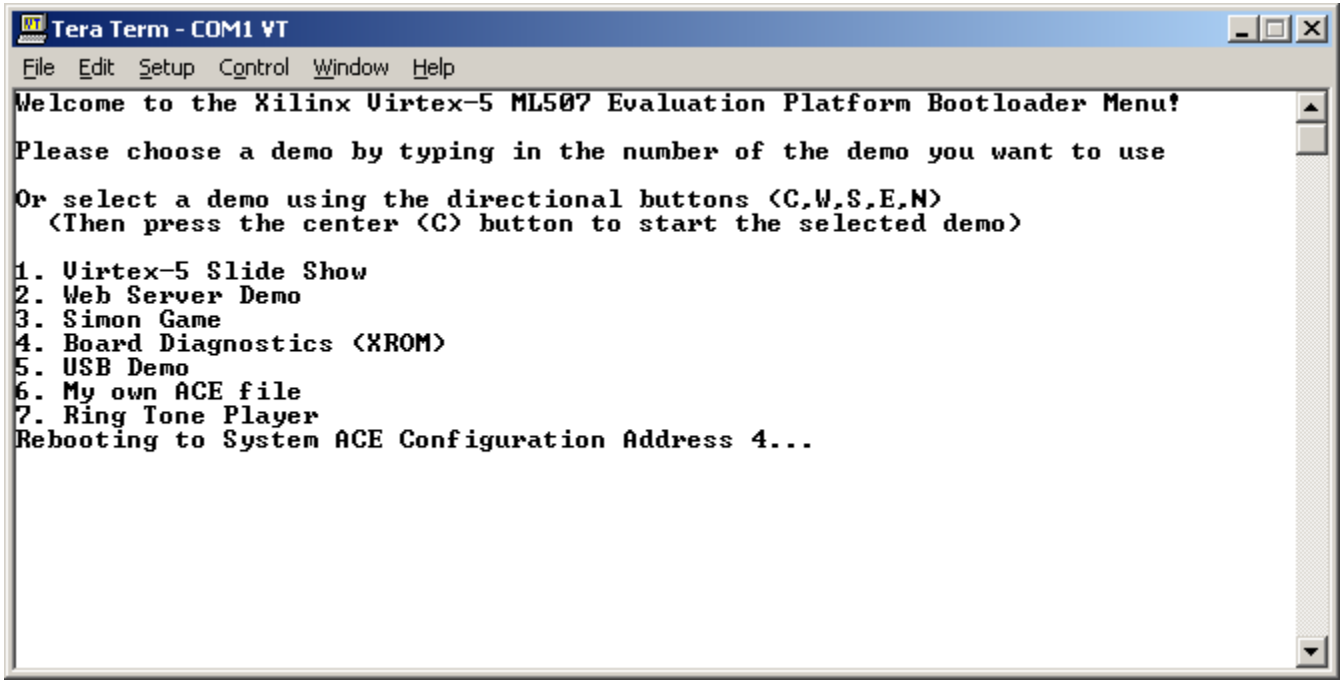
- Type 3, to launch the Simon application in Configuration 3



Note: Presentation applies to the ML507

Board Diagnostics

- Type 4, to launch the XROM application in Configuration 4



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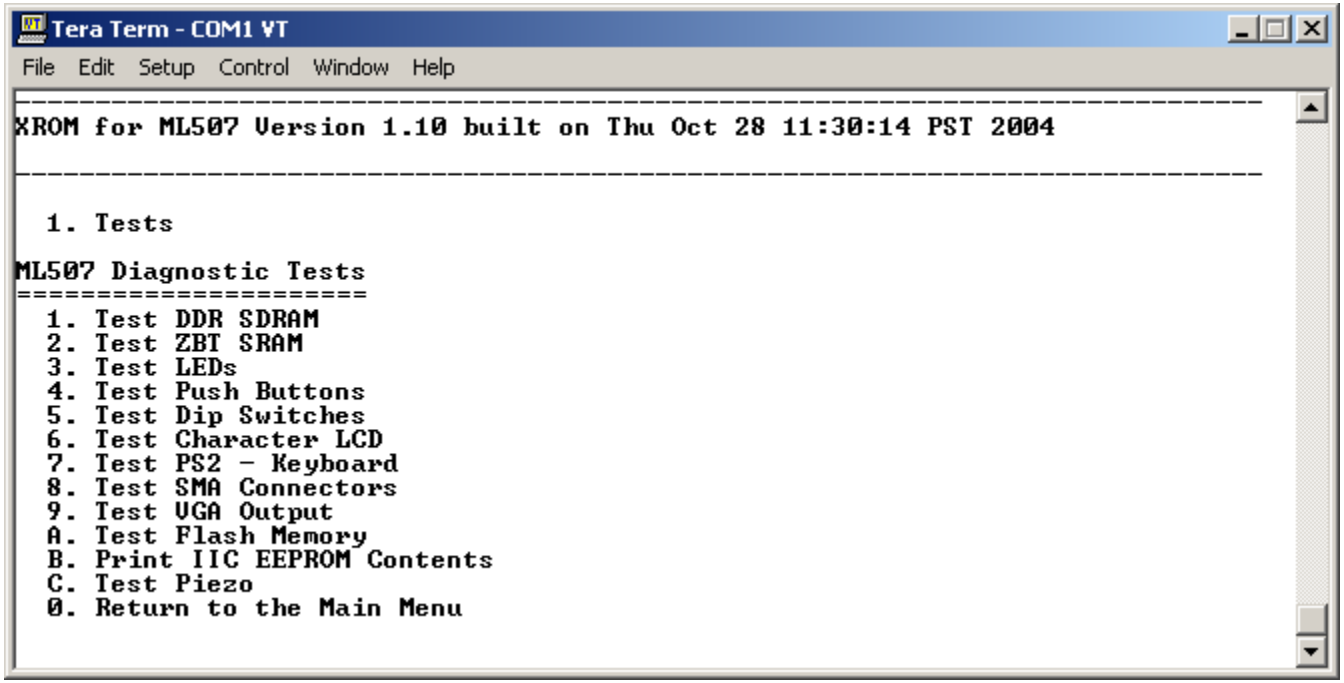
Board Diagnostics

- XROM includes a series of board test routines



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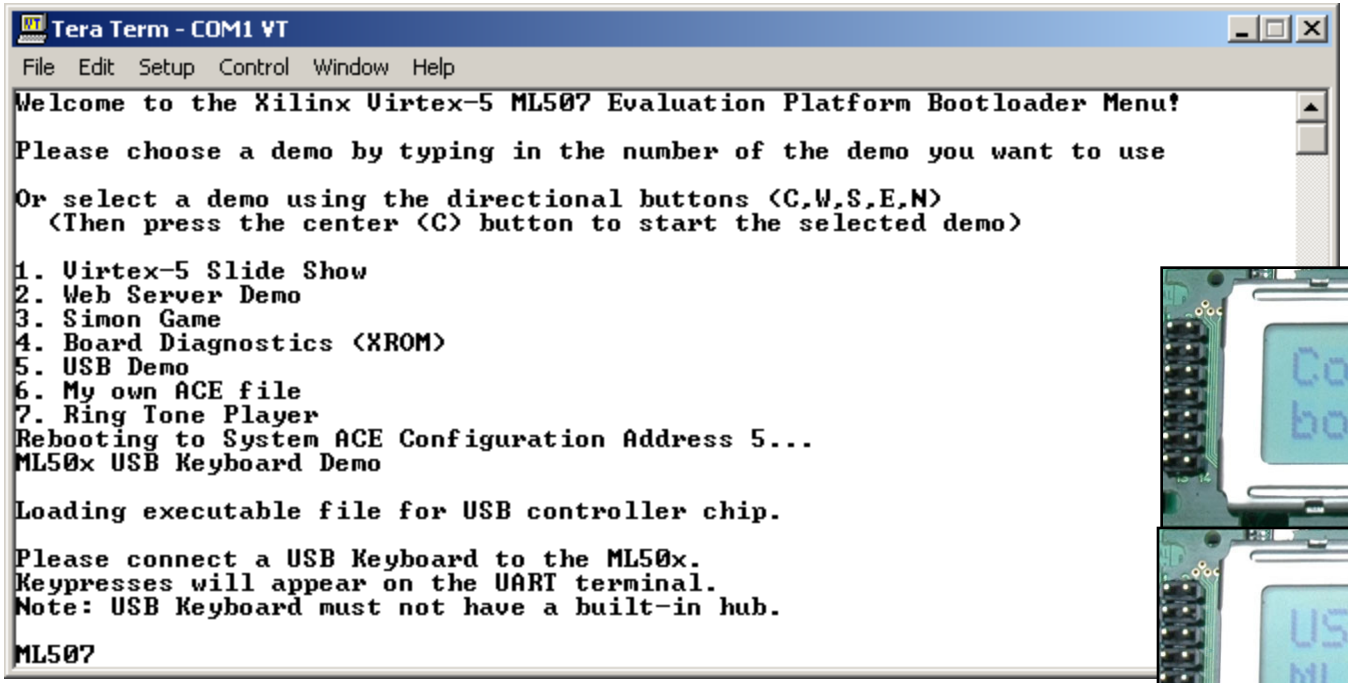
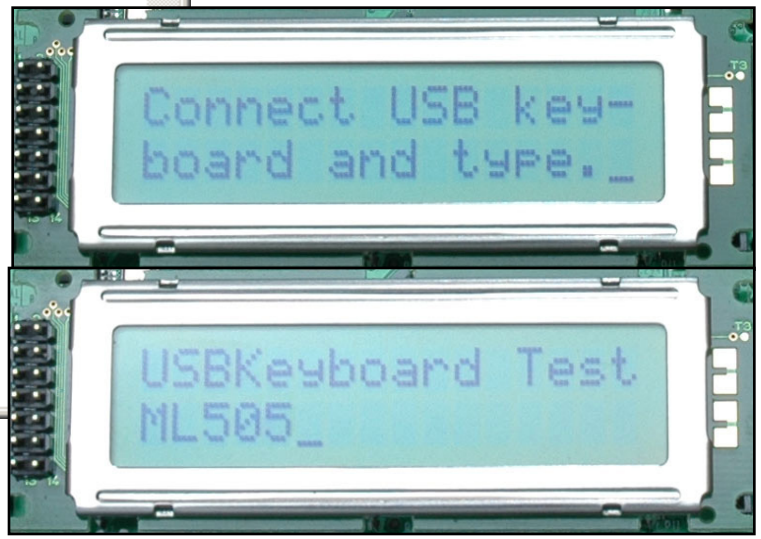
USB Keyboard

- **Type 5, to launch the USB Keyboard application in Configuration 5**
  - Type **ML507** and view results:





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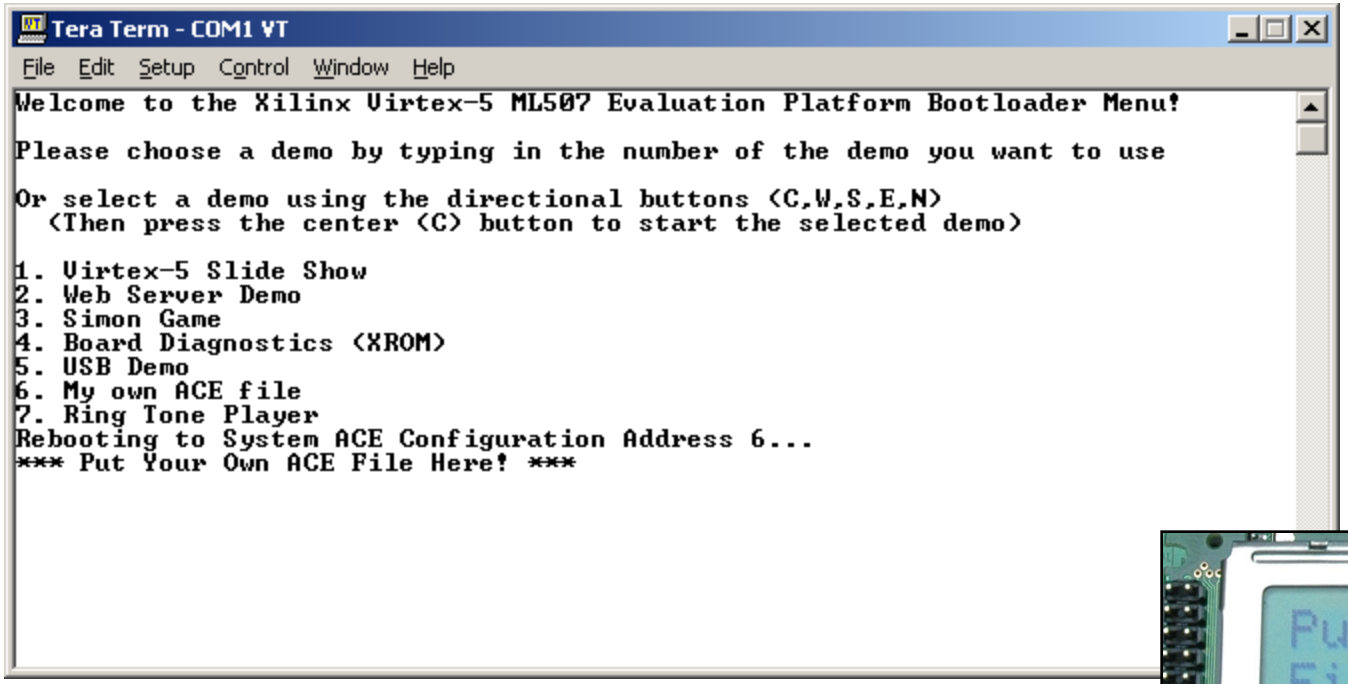
My ACE

- Type 6, to launch the My ACE application in Configuration 6



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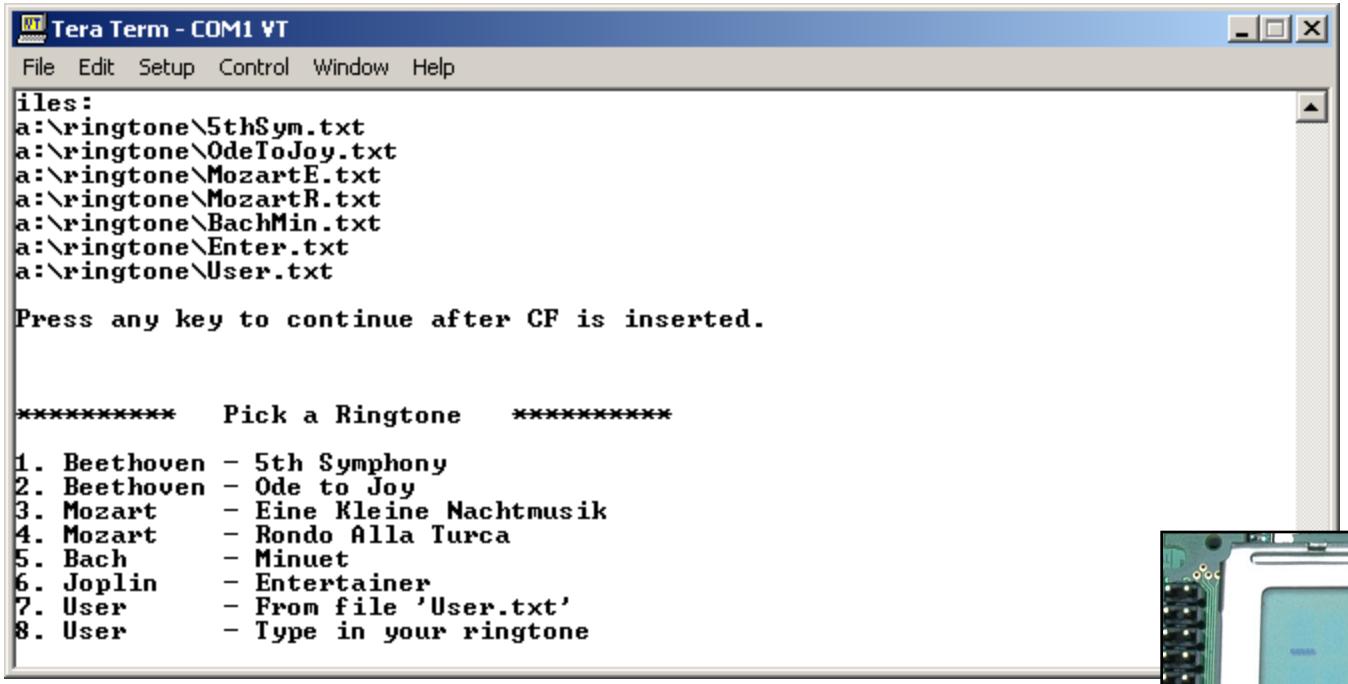
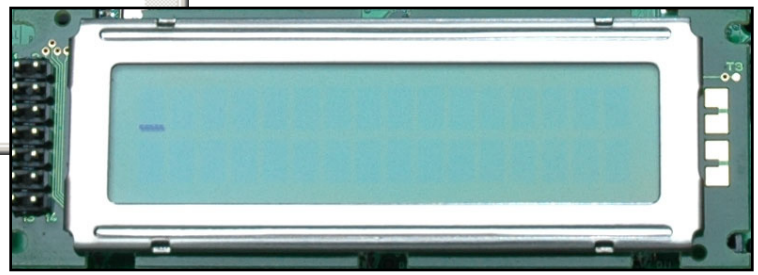
Ringtone

- Type 7, to launch the Ringtone application in Configuration 7
- Press any key then press 1-7 to play a simple melody





Note: Presentation applies to the ML507

References

References

- **Virtex-5**
  - Virtex-5 FPGA Family
    http://www.xilinx.com/products/virtex5/index.htm
- **Platform Studio**
  - Embedded Development Kit (EDK) Resources
    http://www.xilinx.com/tools/platform.htm
  - Embedded System Tools Reference Manual
    http://www.xilinx.com/support/documentation/sw_manuals/xilinx12_1/est_rm.pdf
  - EDK Concepts, Tools, and Techniques
    http://www.xilinx.com/support/documentation/sw_manuals/xilinx12_1/edk_ctt.pdf

Documentation

Documentation

- **ML505/506/507 Documentation**
  - ML505 Overview
    http://www.xilinx.com/ml505
  - ML506 Overview
    http://www.xilinx.com/ml506
  - ML507 Overview
    http://www.xilinx.com/ml507
  - ML505/506/507 Evaluation Platform User Guide – UG347
    http://www.xilinx.com/support/documentation/boards_and_kits/ug347.pdf
  - ML505/506/507 Getting Started Tutorial – UG348
    http://www.xilinx.com/support/documentation/boards_and_kits/ug348.pdf
  - ML505/506/507 Reference Design User Guide – UG349
    http://www.xilinx.com/support/documentation/boards_and_kits/ug349.pdf