ZC706 Restoring Flash Contents

October 2014

XTP247

Revision History

Date	Version	Description
10/08/14	9.0	Recompiled for 2014.3.
06/09/14	8.0	Recompiled for 2014.2.
04/16/14	7.0	Recompiled for 2014.1.
12/18/13	6.0	Recompiled for 2013.4.
10/23/13	5.0	Recompiled for 2013.3.
06/19/13	4.0	Recompiled for Vivado 2013.2.
04/18/13	3.2	BIST contents updated.
04/16/13	3.1	Added AR54225.
04/03/13	3.0	Recompiled for 14.5.
01/18/13	2.1	Minor Updates.
12/18/12	2.0	Recompiled for 14.4.
10/23/12	1.0	Initial version.

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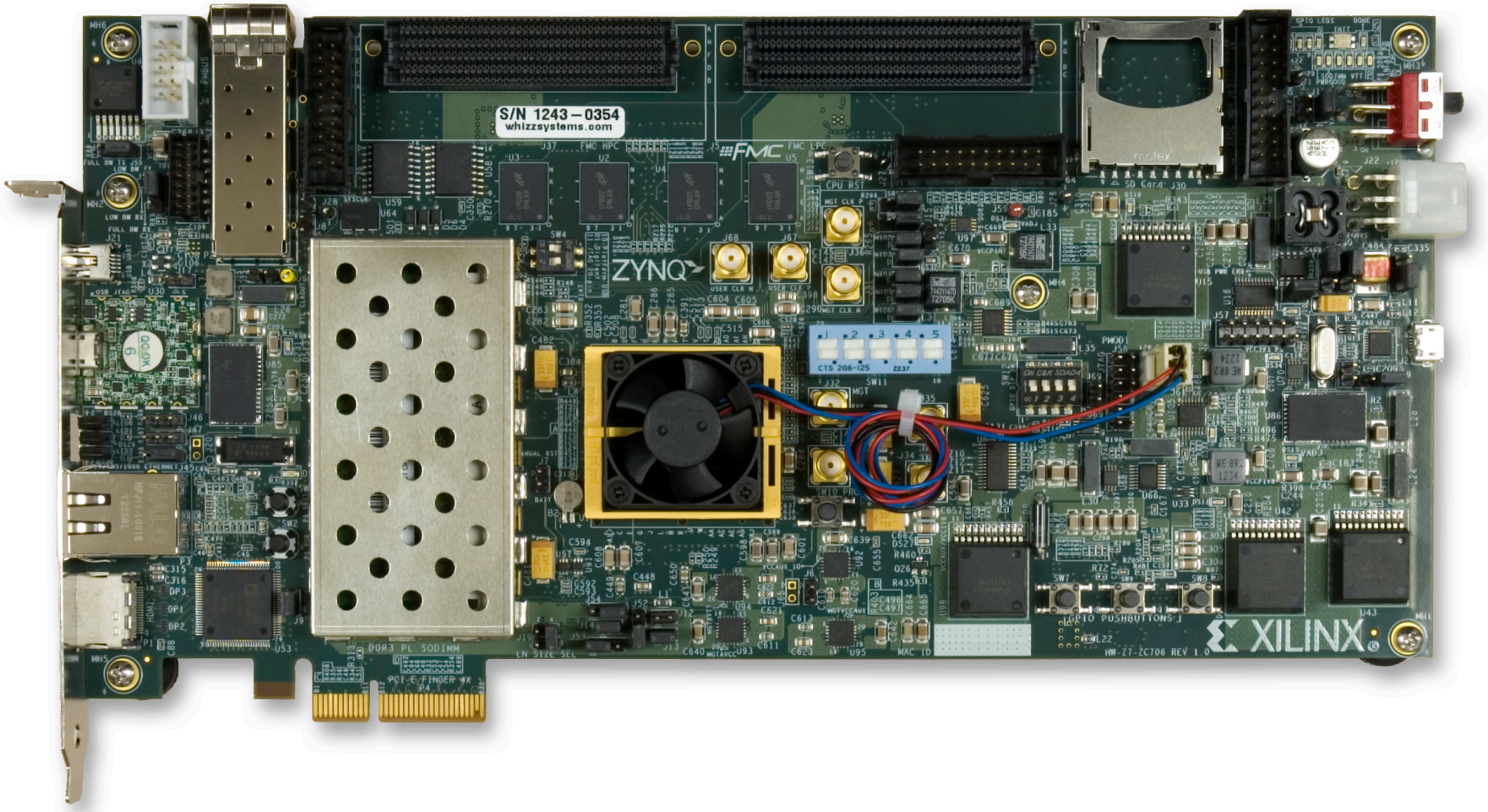
Overview

- Xilinx ZC706 Board
- Software Requirements
- ZC706 Setup
- Restoring ZC706 QSPI Flash
- References

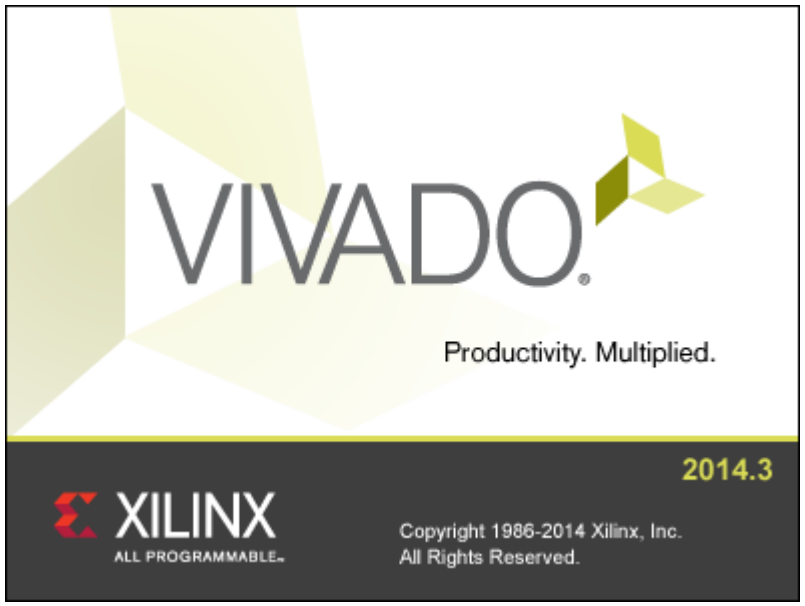
Note: This presentation applies to the ZC706

ZC706 Board



Vivado Software Requirements

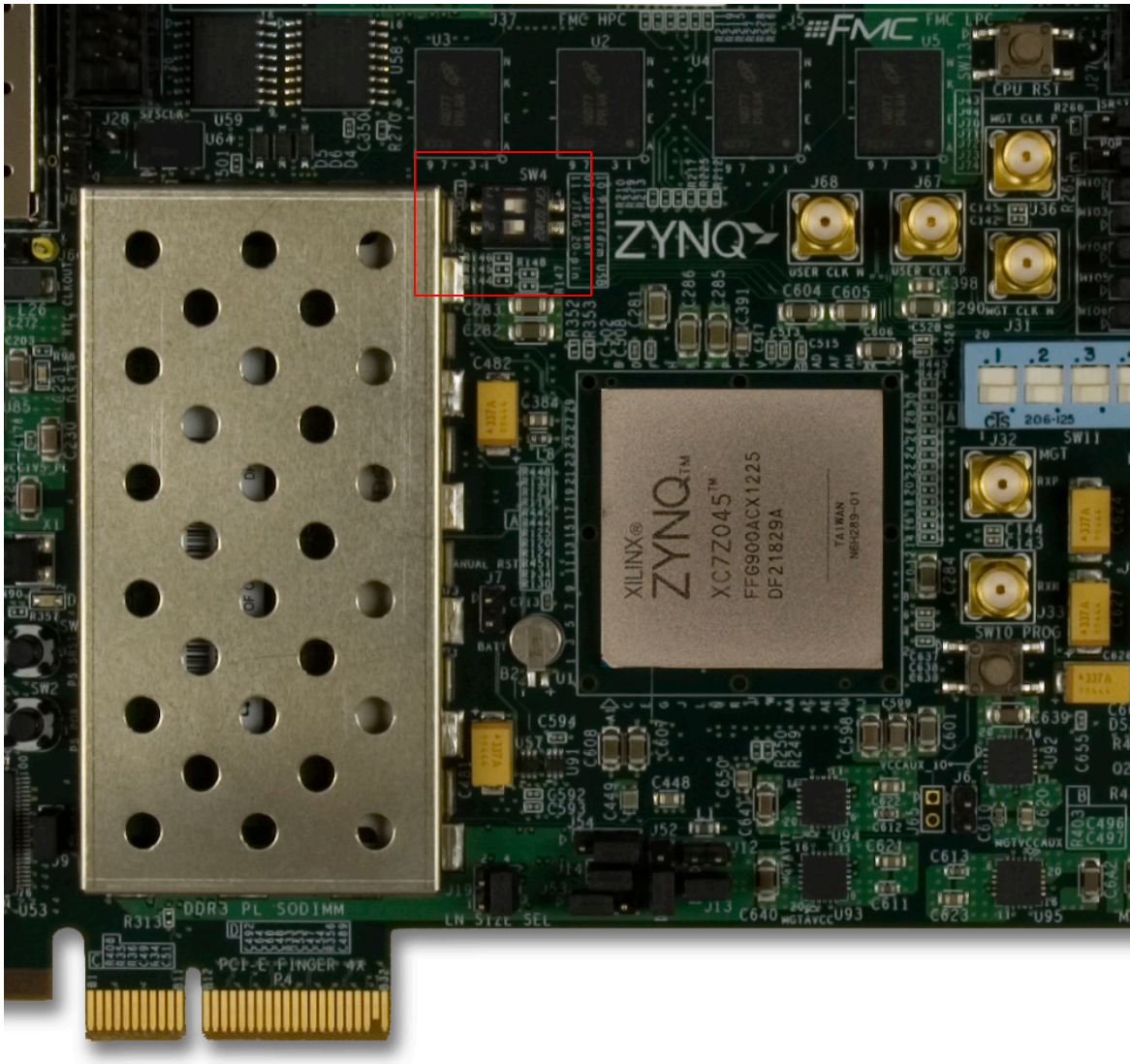
- **Xilinx Vivado Design Suite 2014.3, Design Edition + SDK**
  - Combined installer



Note: Presentation applies to the ZC706

ZC706 Setup

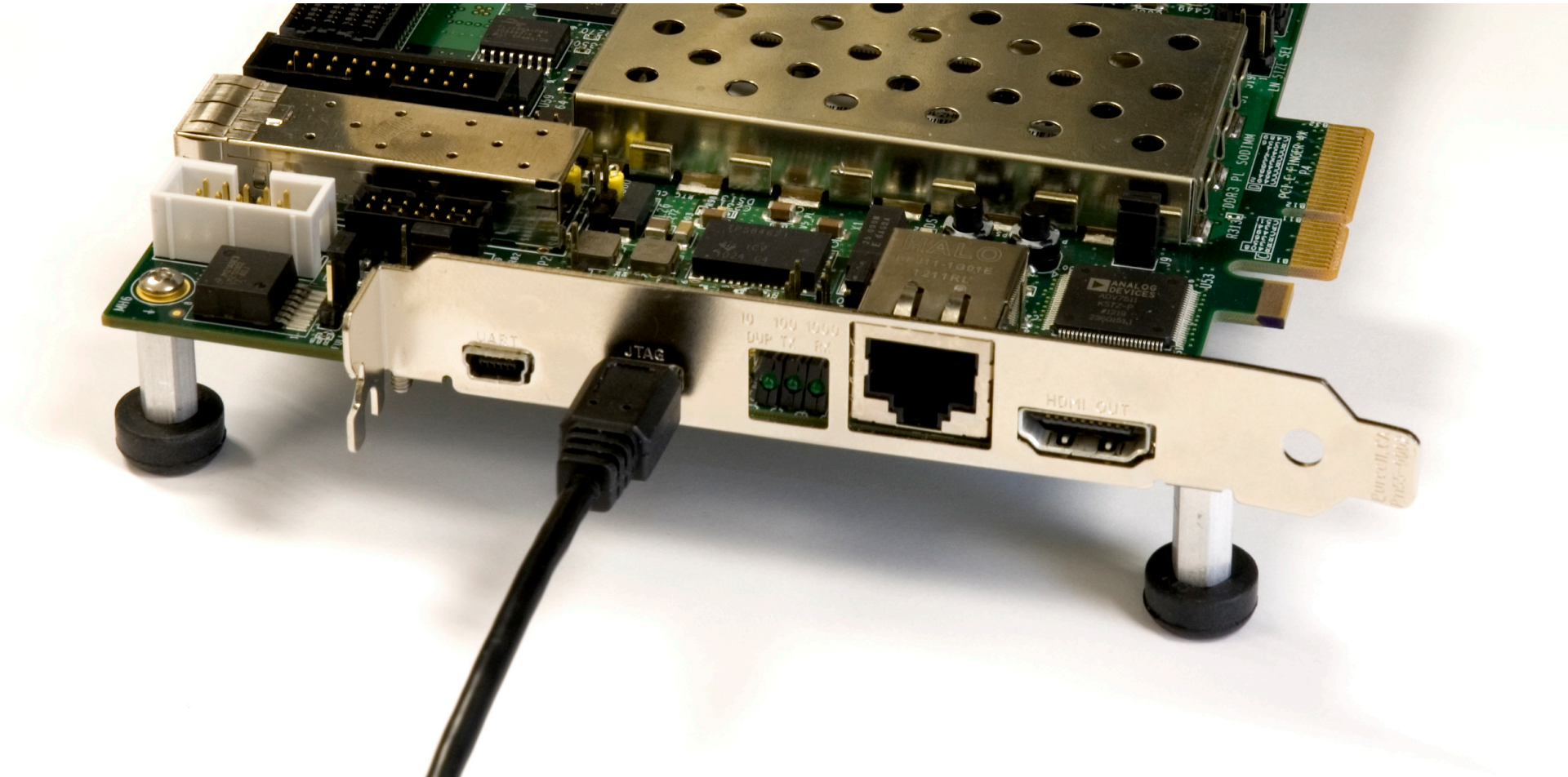
- **Set the JTAG Select Switch, SW4, to 01**
  - If using a Platform Cable USB (II) JTAG Cable, set SW4 to 10



Note: Presentation applies to the ZC706

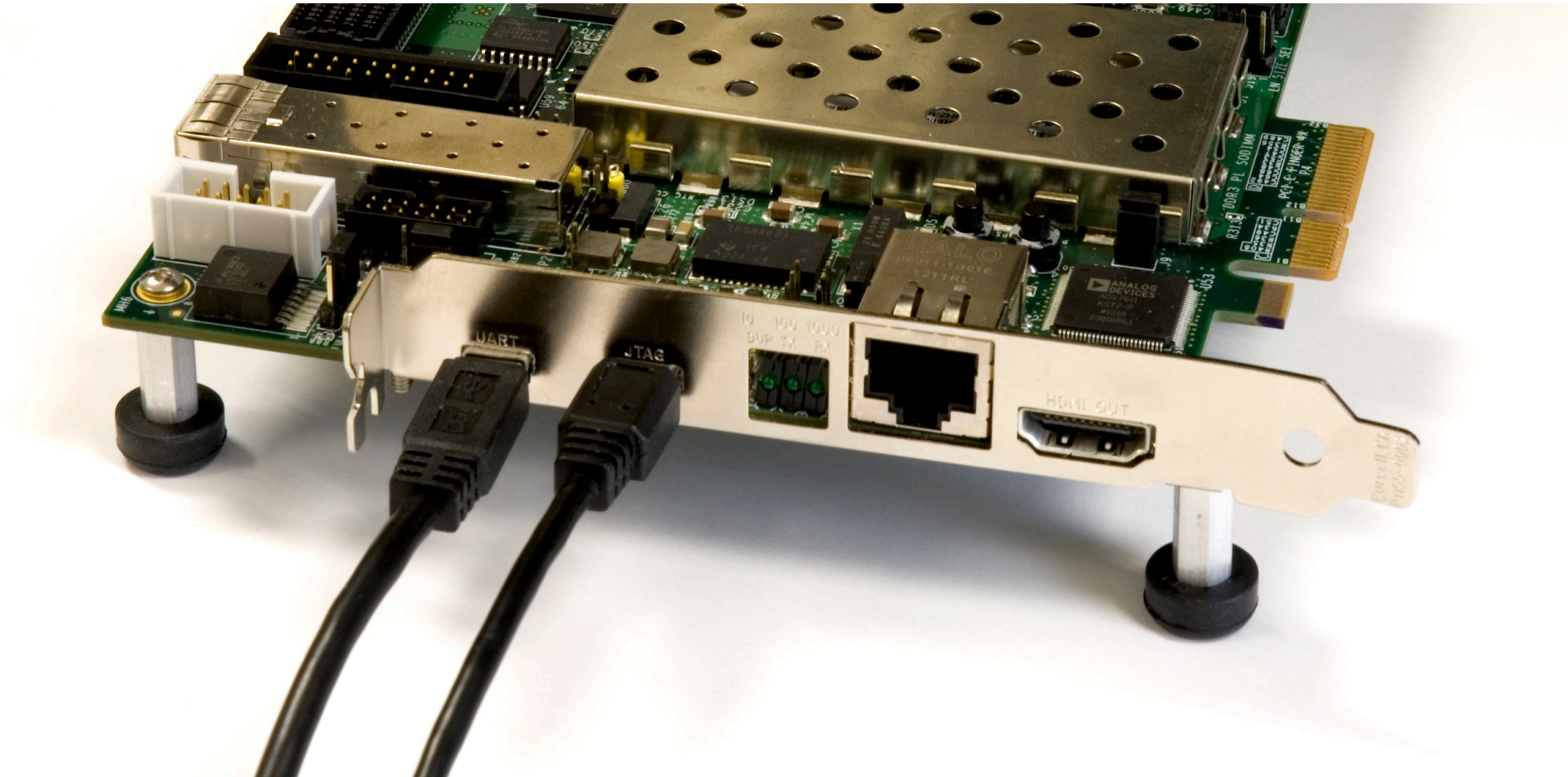
ZC706 Setup

- **Connect a USB Type-A to Micro-B cable to the USB JTAG (Digilent) connector on the ZC706 board**
  - Connect this cable to your PC
  - Power on the ZC706 board



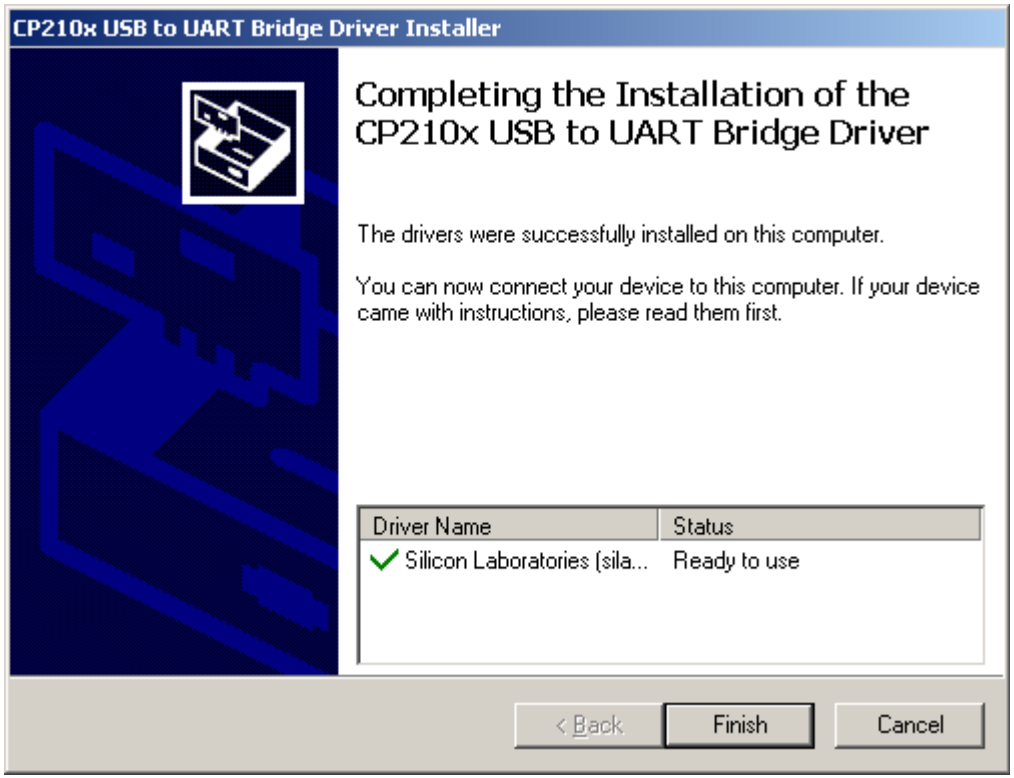
ZC706 Setup

- **Connect a USB Type-A to Mini-B cable to the USB UART connector on the ZC706 board**
  - Connect this cable to your PC
  - Power on the ZC706 board for UART Drivers Installation



ZC706 Setup

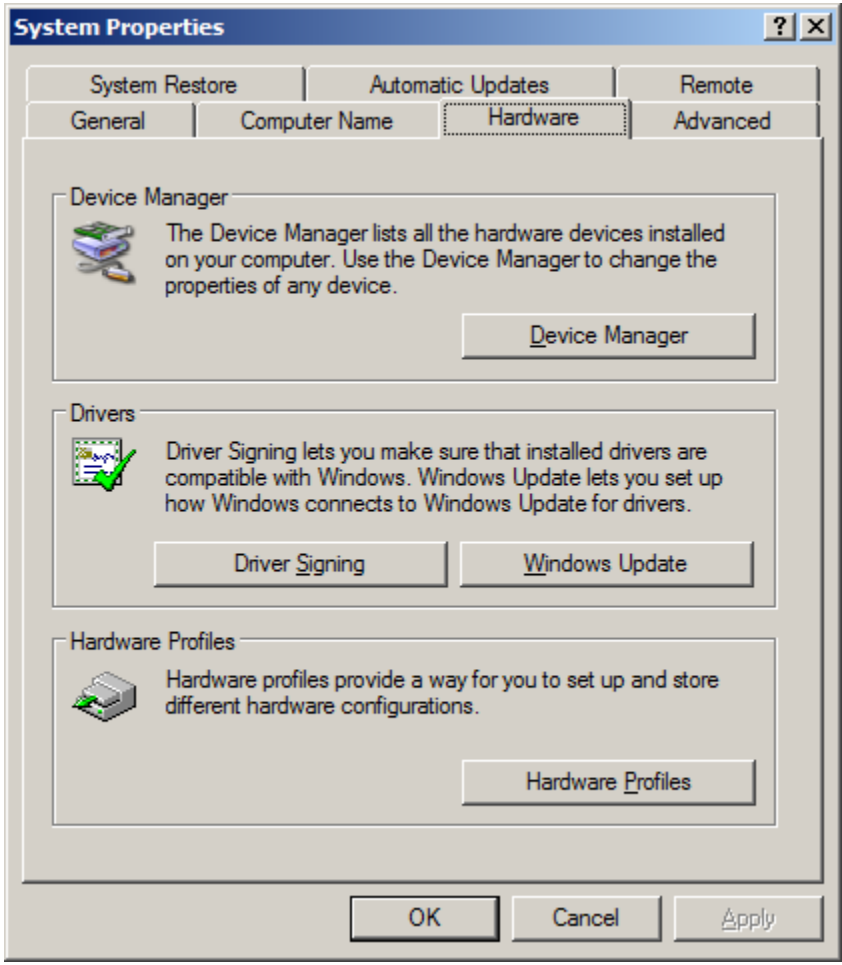
- **Install USB UART Drivers**
  - Refer to UG1033 for details on installing the USB to UART Drivers



Note: Presentation applies to the ZC706

ZC706 Setup

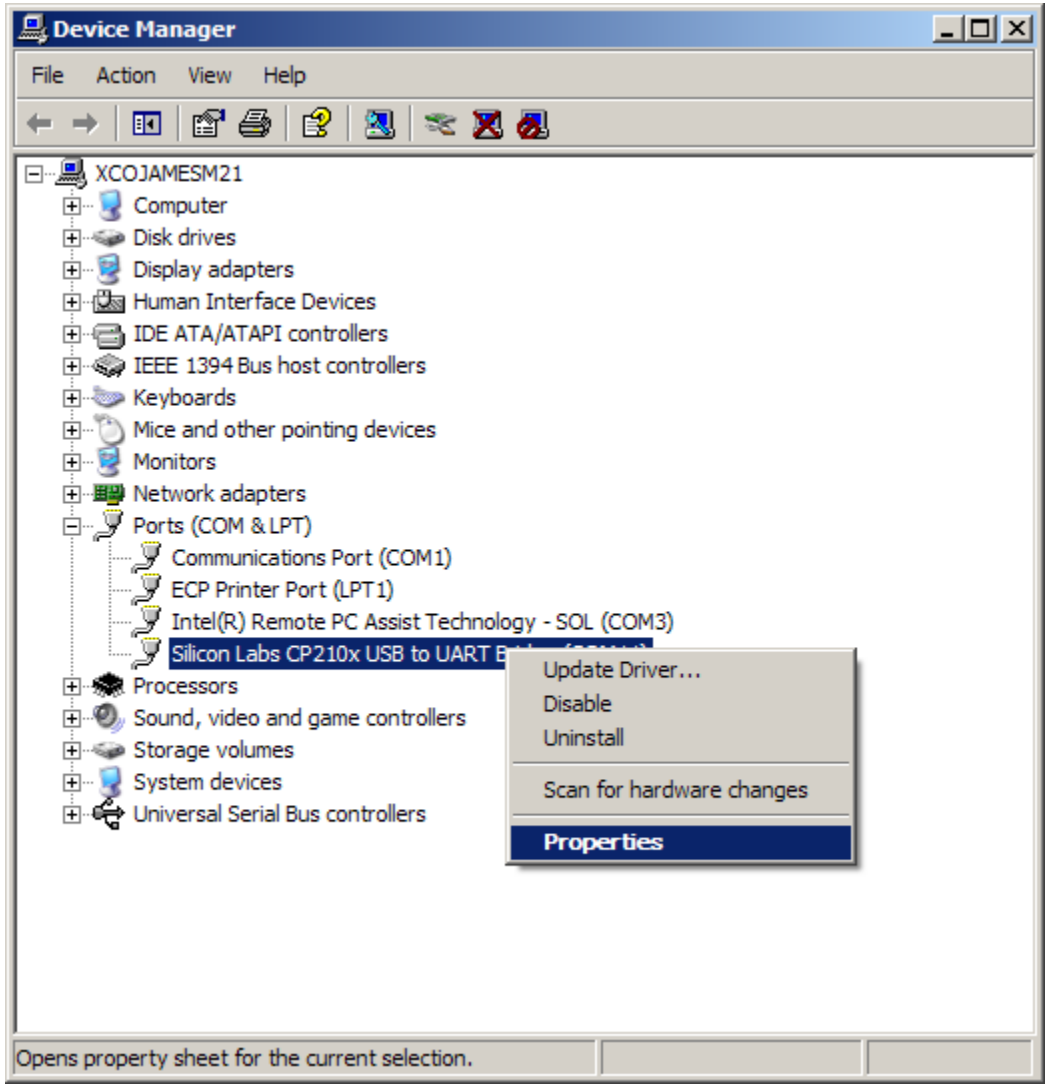
- Reboot your PC if necessary
- Right-click on My Computer and select Properties
  - Select the Hardware tab
  - Click on Device Manager



Note: Presentation applies to the ZC706

ZC706 Setup

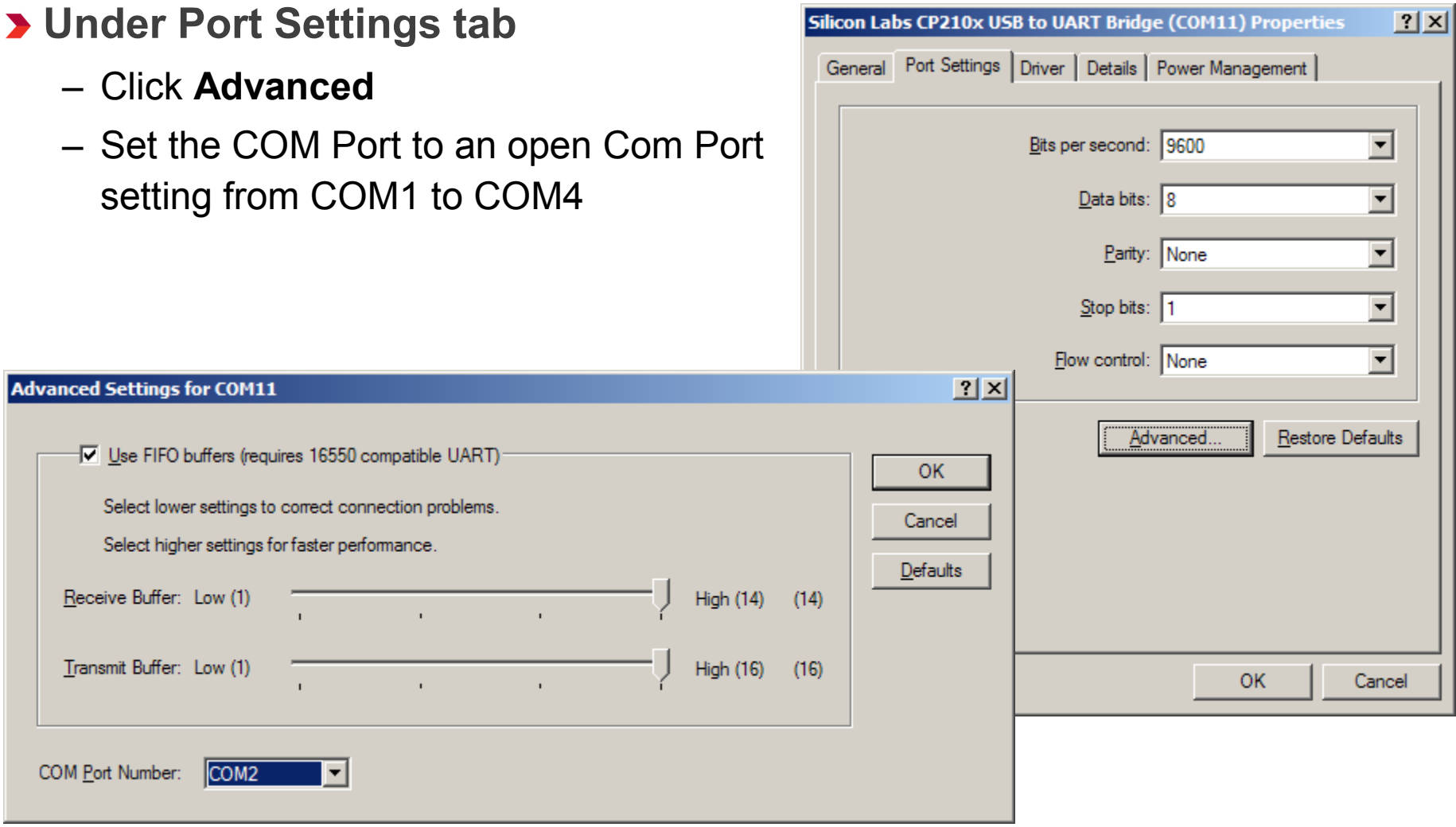
- **Expand the Ports Hardware**
  - Right-click on **Silicon Labs CP210x USB to UART Bridge** and select Properties



Note: Presentation applies to the ZC706

ZC706 Setup

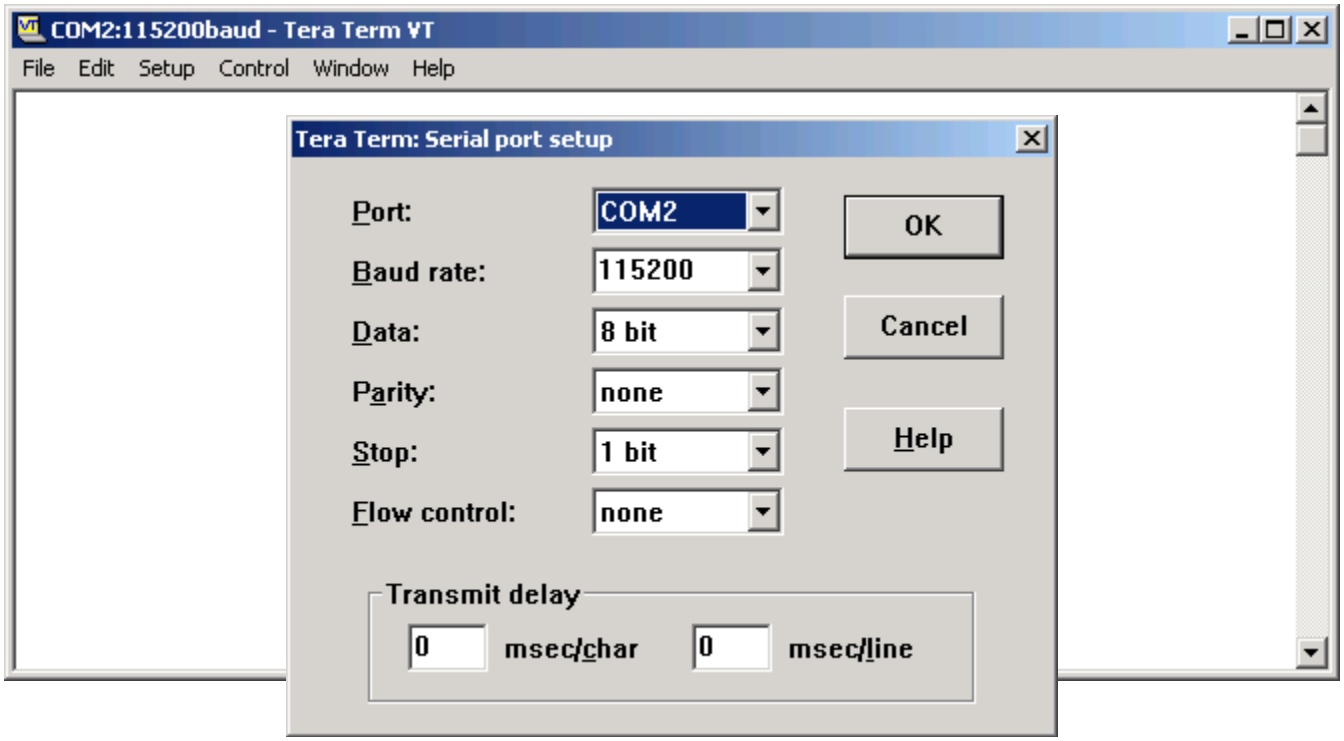
- **Under Port Settings tab**
  - Click **Advanced**
  - Set the COM Port to an open Com Port setting from COM1 to COM4



Note: Presentation applies to the ZC706

ZC706 Setup

- Refer to UG1036 regarding Tera Term installation
- Board Power must be on before starting Tera Term
- Start the Terminal Program
  - Select your USB Com Port
  - Set the baud to **115200**

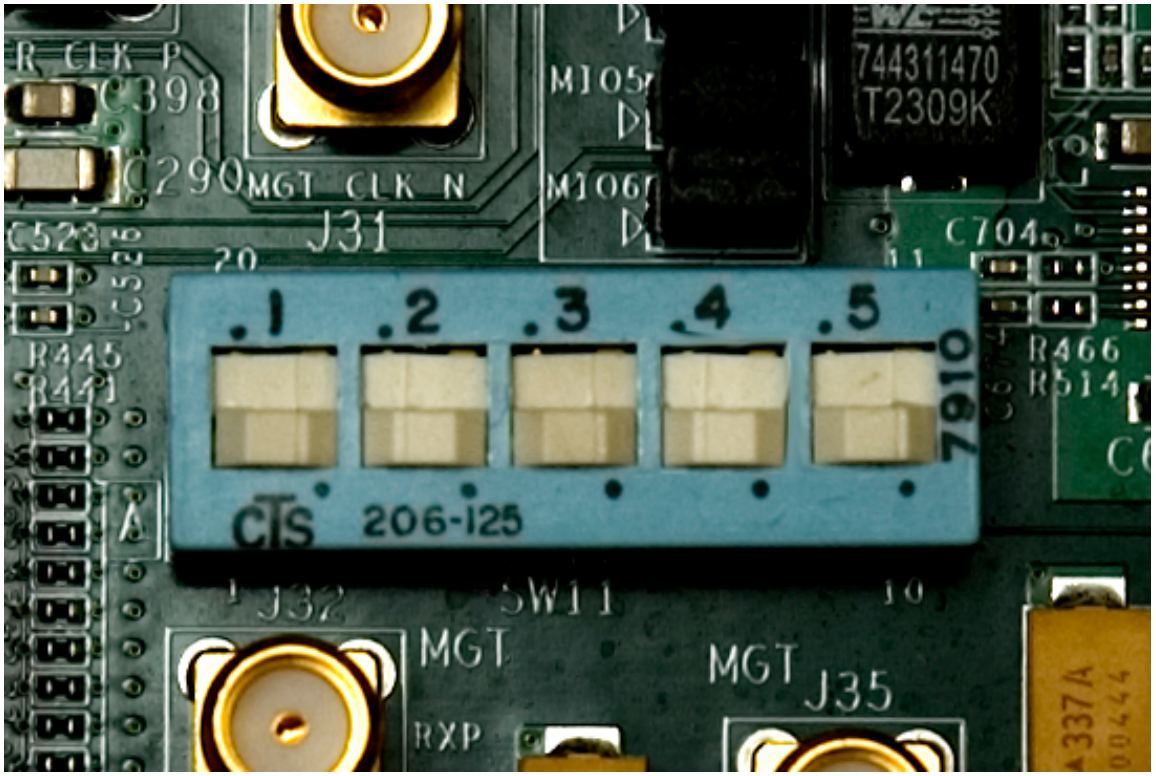


Note: Presentation applies to the ZC706

Restoring ZC706 QSPI Flash

Restoring ZC706 QSPI Flash

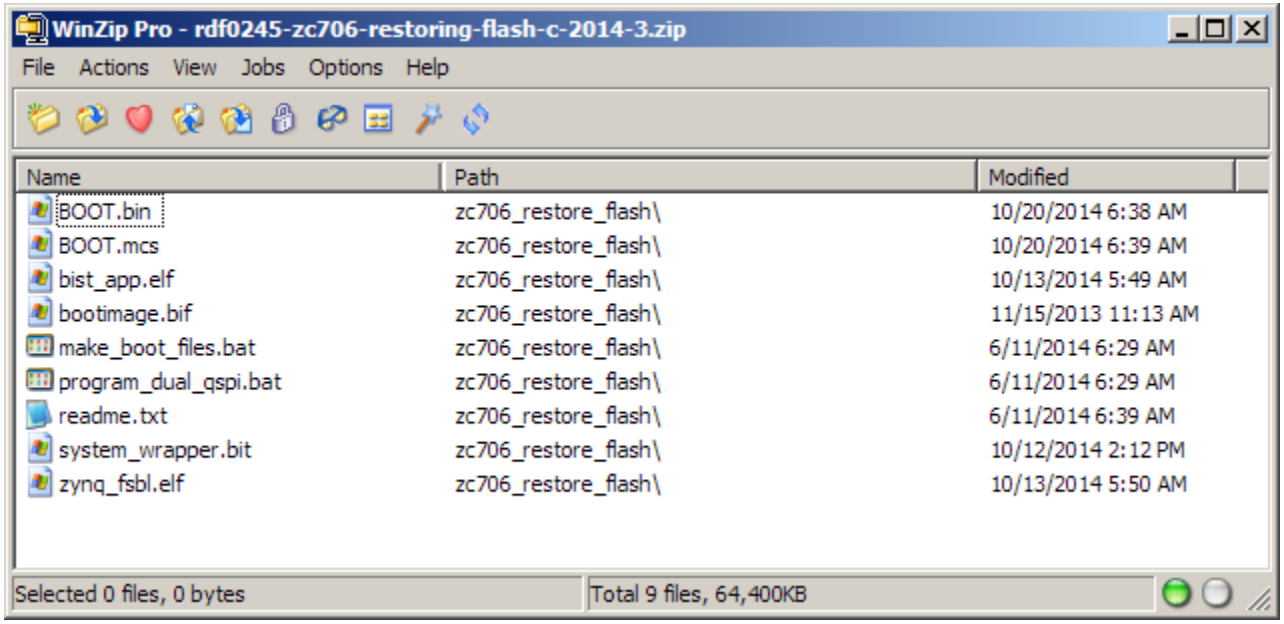
- Set the SW11 DIP switches to: 00000



Note: Presentation applies to the ZC706

Restoring ZC706 QSPI Flash

- **Unzip the ZC706 Restoring Flash Design Files (2014.3 C) ZIP file to your C:\ drive**
  - Available through http://www.xilinx.com/zc706



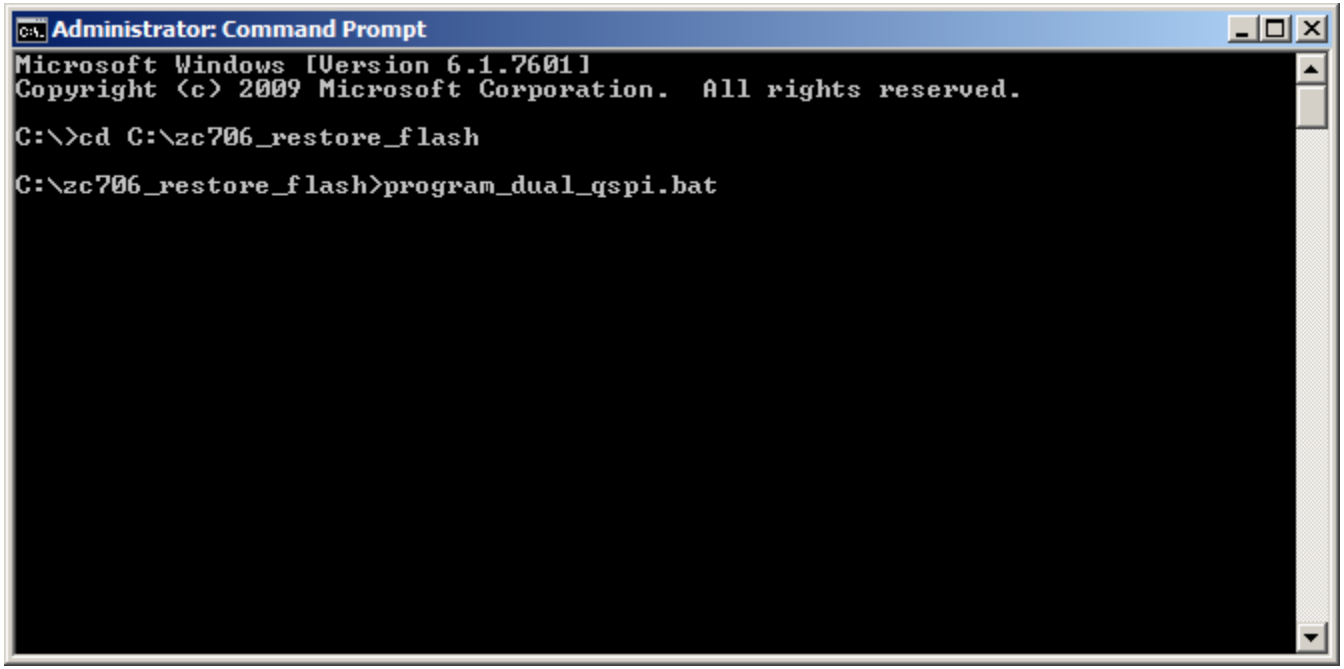
Note: Presentation applies to the ZC706

Restoring ZC706 QSPI Flash

- Open a Windows prompt
- Cycle ZC706 Power if any programs have been run
- Program the QSPI Flash

  cd C:\zc706_restore_flash

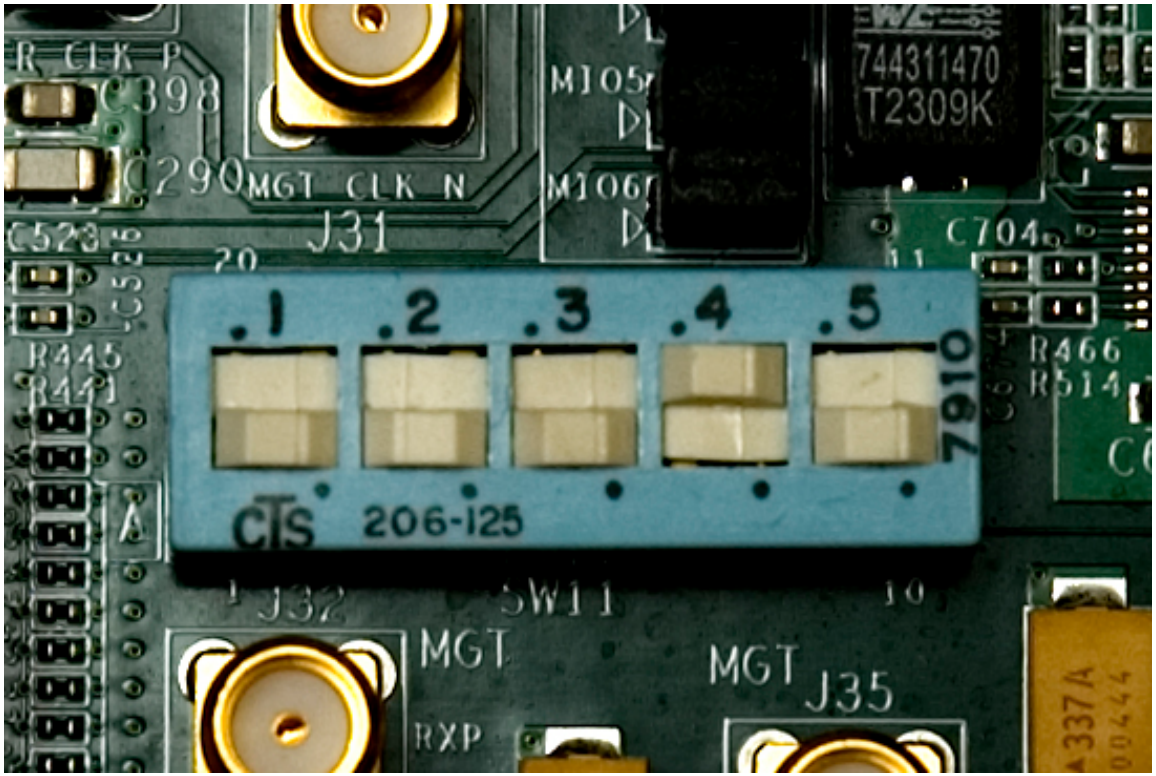
  program_dual_qspi.bat



Note: Takes about 3 minutes

Restoring ZC706 QSPI Flash

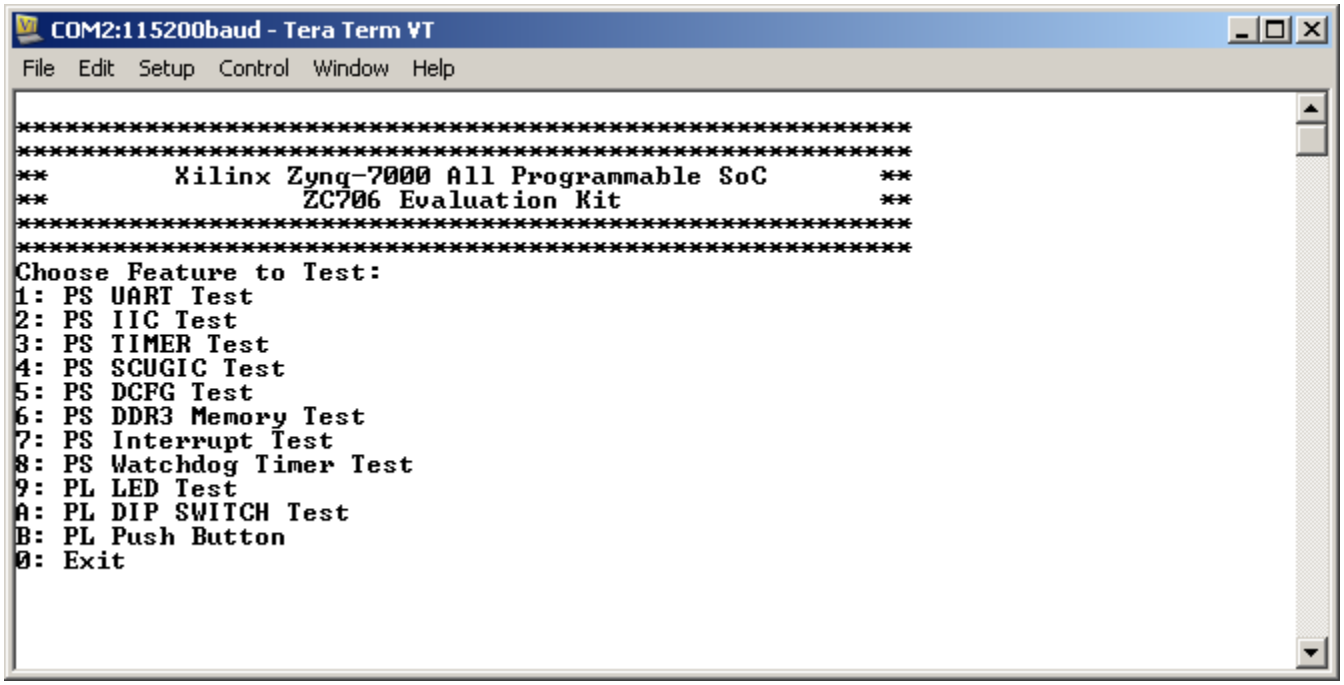
- Set the SW11 DIP switches to boot from QSPI: 00010



Note: Presentation applies to the ZC706

Restoring ZC706 QSPI Flash

- View initial BIST screen



Note: Presentation applies to the ZC706

References

References

- **7 Series Configuration**
  - 7 Series FPGAs Configuration User Guide – UG470
    - http://www.xilinx.com/support/documentation/user_guides/ug470_7Series_Config.pdf

Documentation

Documentation

- **Zynq-7000**
  - Zynq-7000 All Programmable SoC
    - http://www.xilinx.com/products/silicon-devices/soc/zynq-7000/index.htm
- **ZC706 Documentation**
  - Zynq-7000 AP SoC ZC706 Evaluation Kit
    - http://www.xilinx.com/products/boards-and-kits/EK-Z7-ZC706-G.htm
  - ZC706 Getting Started Guide – UG961
    - http://www.xilinx.com/support/documentation/boards_and_kits/zc706/14_7/ug961-zc706-GSG.pdf
  - ZC706 User Guide – UG954
    - http://www.xilinx.com/support/documentation/boards_and_kits/zc706/ug954-zc706-eval-board-xc7z045-ap-soc.pdf