KCU105 Board Interface Test

March 2015

XTP345

Revision History

Date	Version	Description
03/06/15	1.0	Initial version.

© Copyright 2015 Xilinx, Inc. All Rights Reserved.
XILINX, the Xilinx logo, the Brand Window and other designated brands included herein are trademarks of Xilinx, Inc. All other trademarks are the property of their respective owners.

NOTICE OF DISCLAIMER: The information disclosed to you hereunder (the “Information”) is provided “AS-IS” with no warranty of any kind, express or implied. Xilinx does not assume any liability arising from your use of the Information. You are responsible for obtaining any rights you may require for your use of this Information. Xilinx reserves the right to make changes, at any time, to the Information without notice and at its sole discretion. Xilinx assumes no obligation to correct any errors contained in the Information or to advise you of any corrections or updates. Xilinx expressly disclaims any liability in connection with technical support or assistance that may be provided to you in connection with the Information. XILINX MAKES NO OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, REGARDING THE INFORMATION, INCLUDING ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT OF THIRD-PARTY RIGHTS.

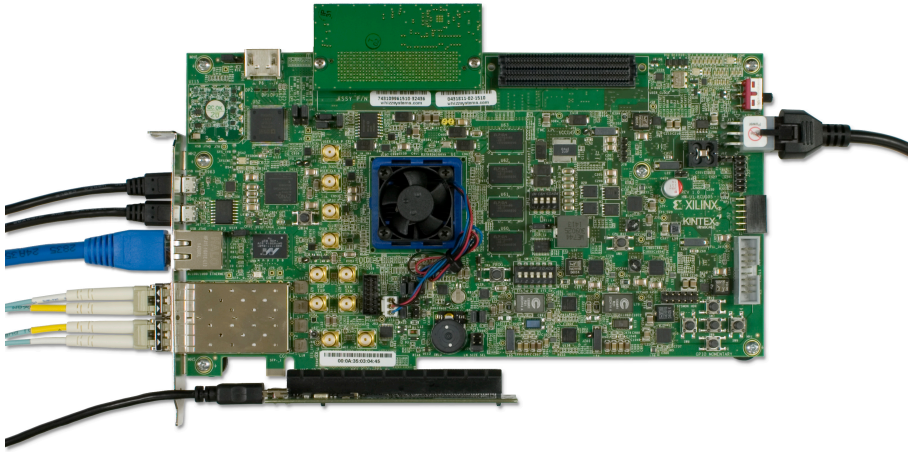
KCU105 Board Interface Test Overview

- KCU105 Software Install and Board Setup
- KCU105 Board Interface Test Setup
- Running the Board Interface Test
- Appendix
- References

Note: This presentation applies to the KCU105

KCU105 Software Install and Board Setup

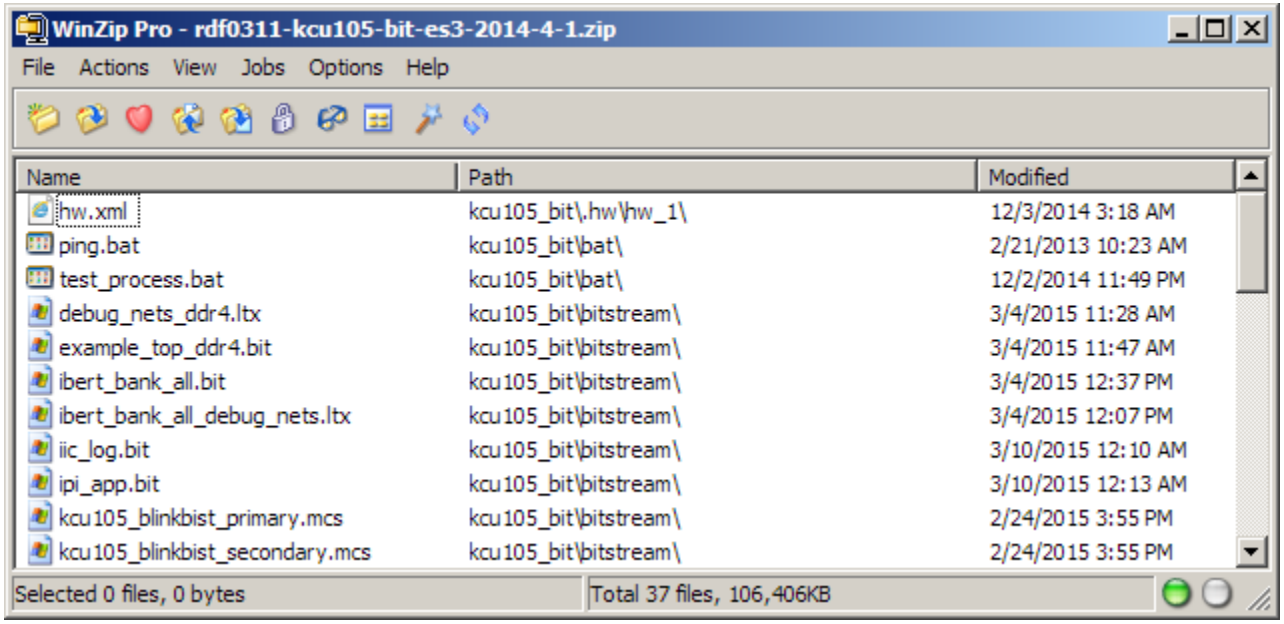
- **Refer to XTP352 – KCU105 Software Install and Board Setup for details on:**
  - Software Requirements
  - KCU105 Board Setup
  - UART Driver Install
  - Ethernet Setup
  - Optional Hardware Setup



Note: Presentation applies to the KCU105

KCU105 Board Interface Test Setup

- **Open the KCU105 Board Interface Test Design Files – RDF0311:**
  - Extract these files to your C:\ drive



Note: Presentation applies to the KCU105

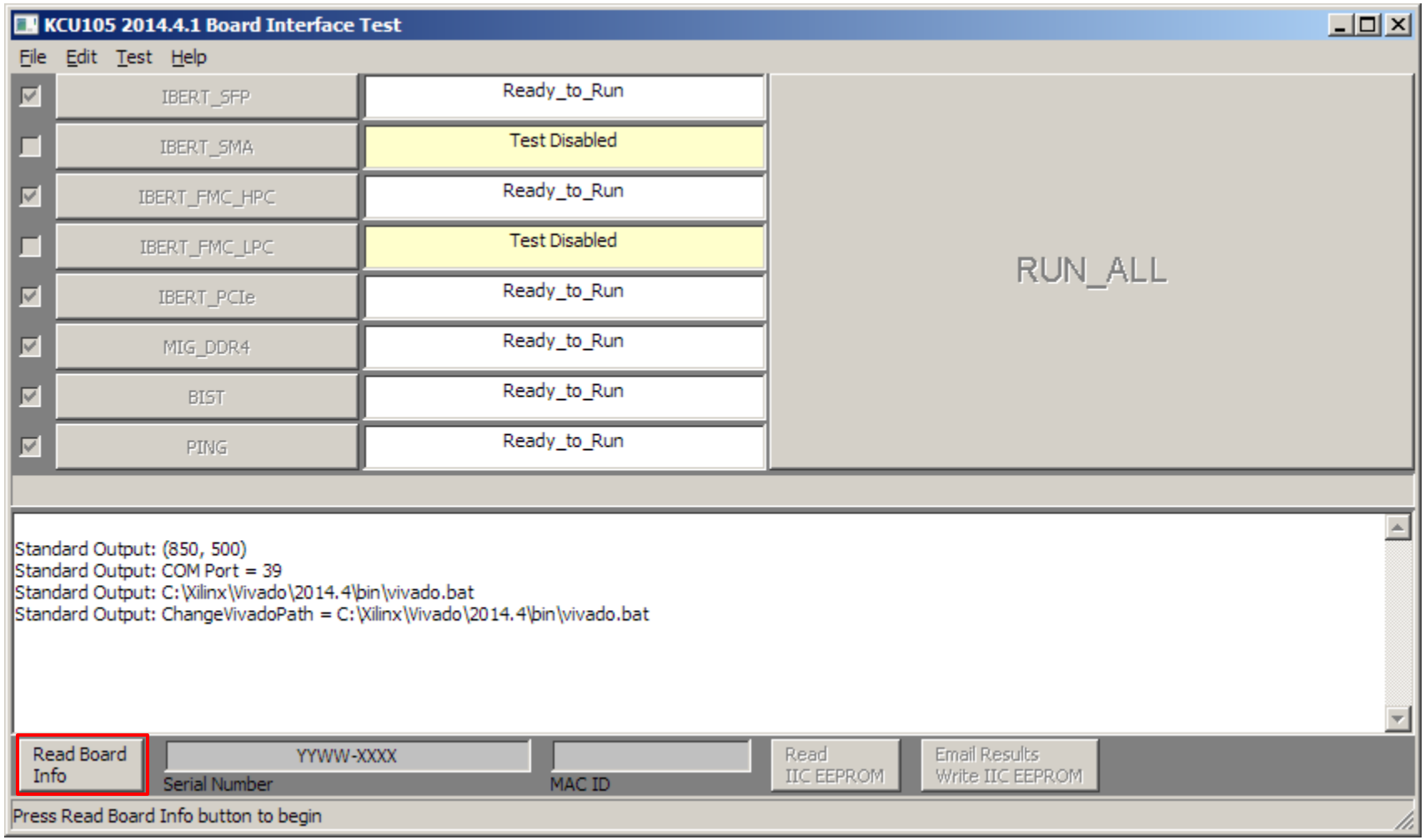
Running the Board Interface Test

- From C:\kcu105_bit, double click on kcu105_bit.exe

Note: Executable requires 64-bit Windows

Running the Board Interface Test

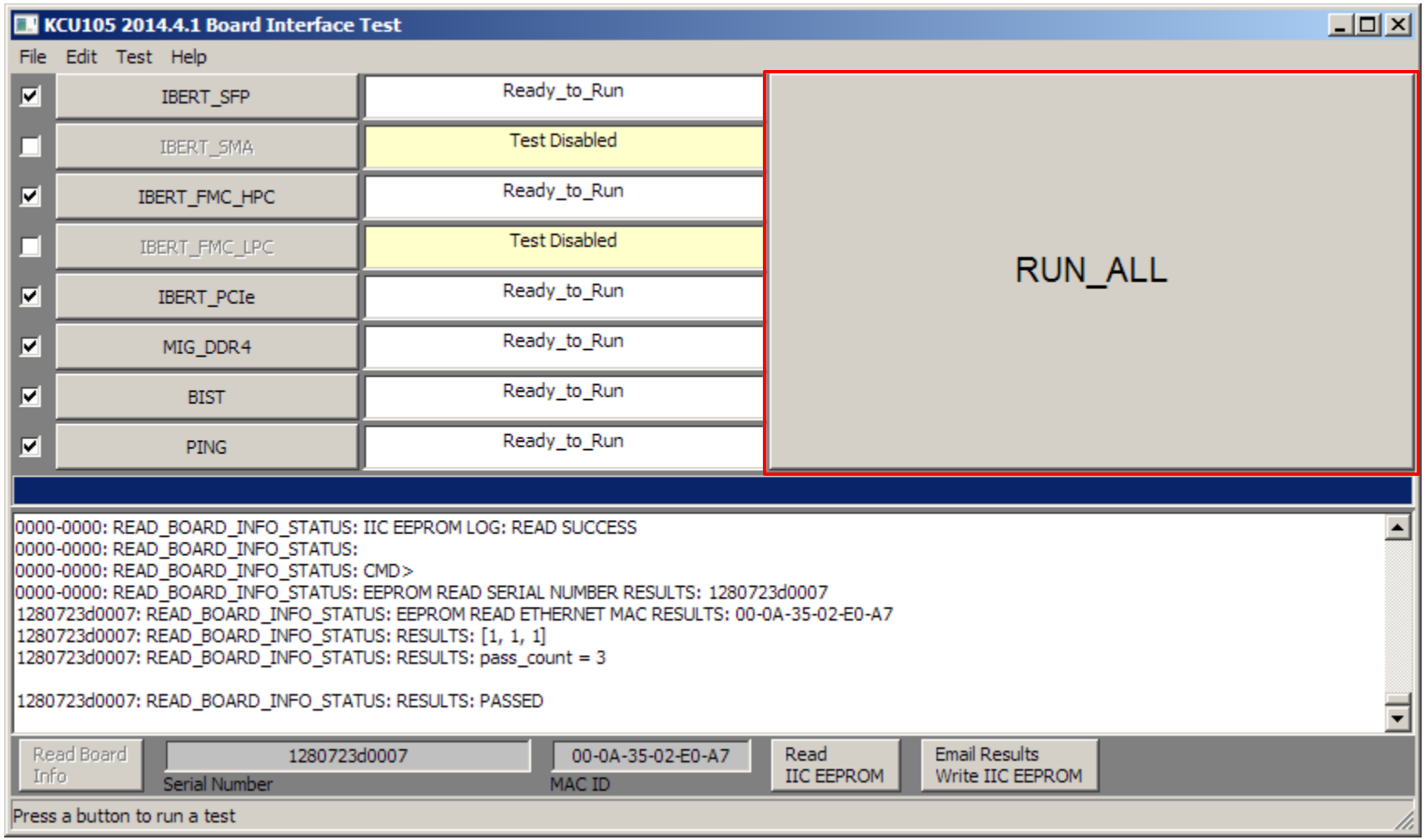
- The tests for the included hardware are preselected
- Press the Read Board Info button



Note: The Vivado path indicates 2014.4

Running the Board Interface Test

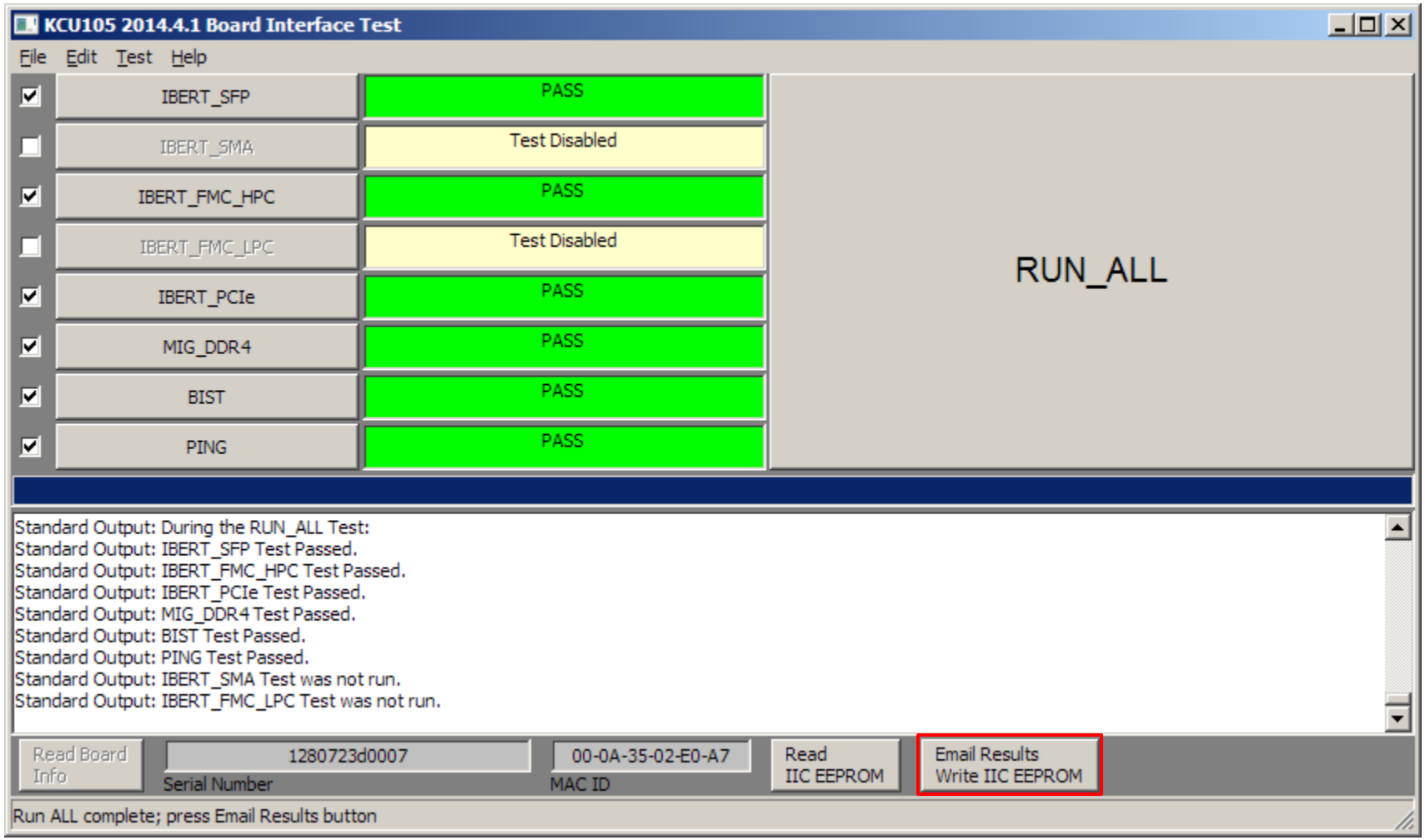
- The Serial number and MAC ID are read back from the IIC EEPROM
- Click the RUN_ALL button



Note: Presentation applies to the KCU105

Running the Board Interface Test

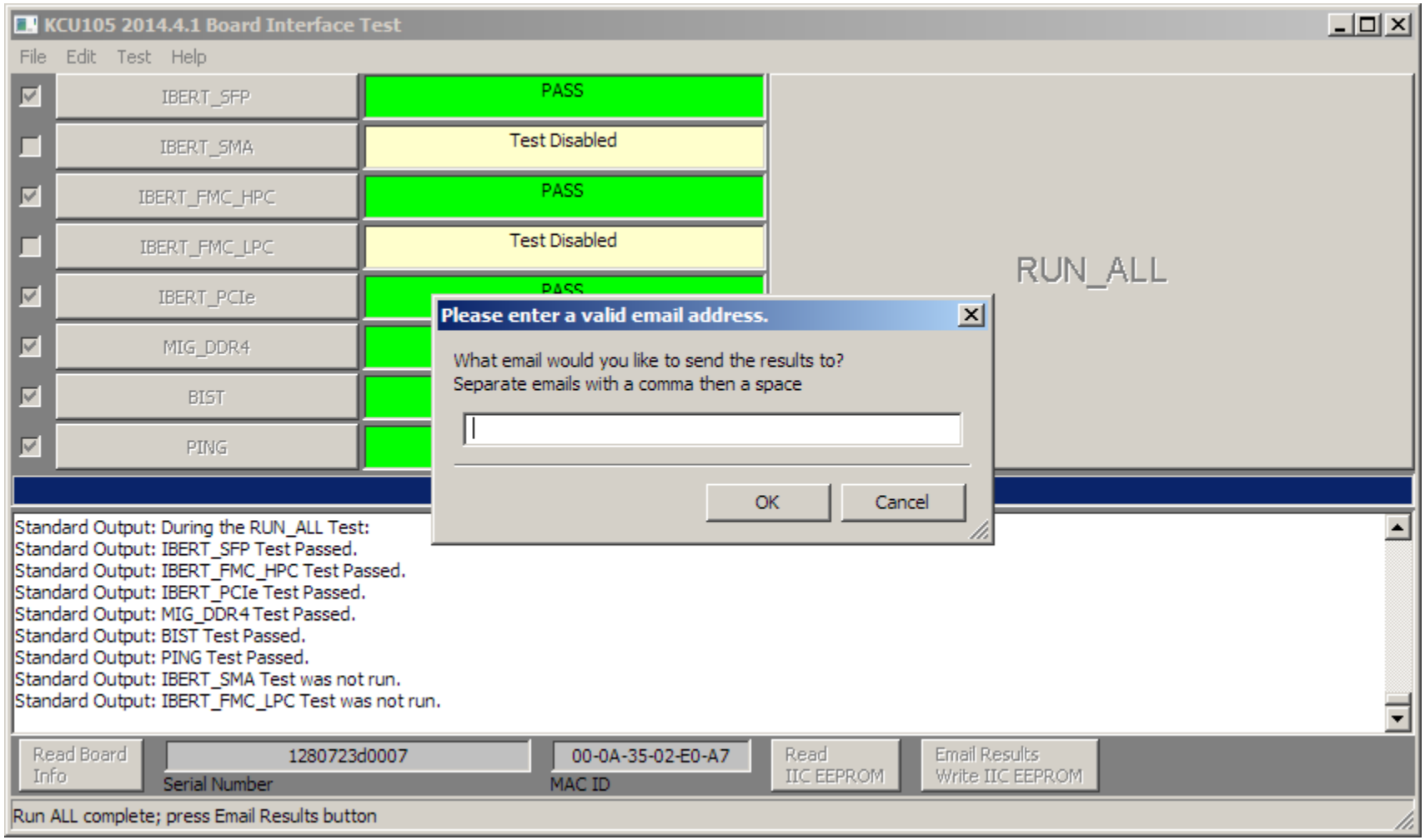
- All selected tests passed
- To send the test log, click the Email Results button



Note: Presentation applies to the KCU105

Running the Board Interface Test

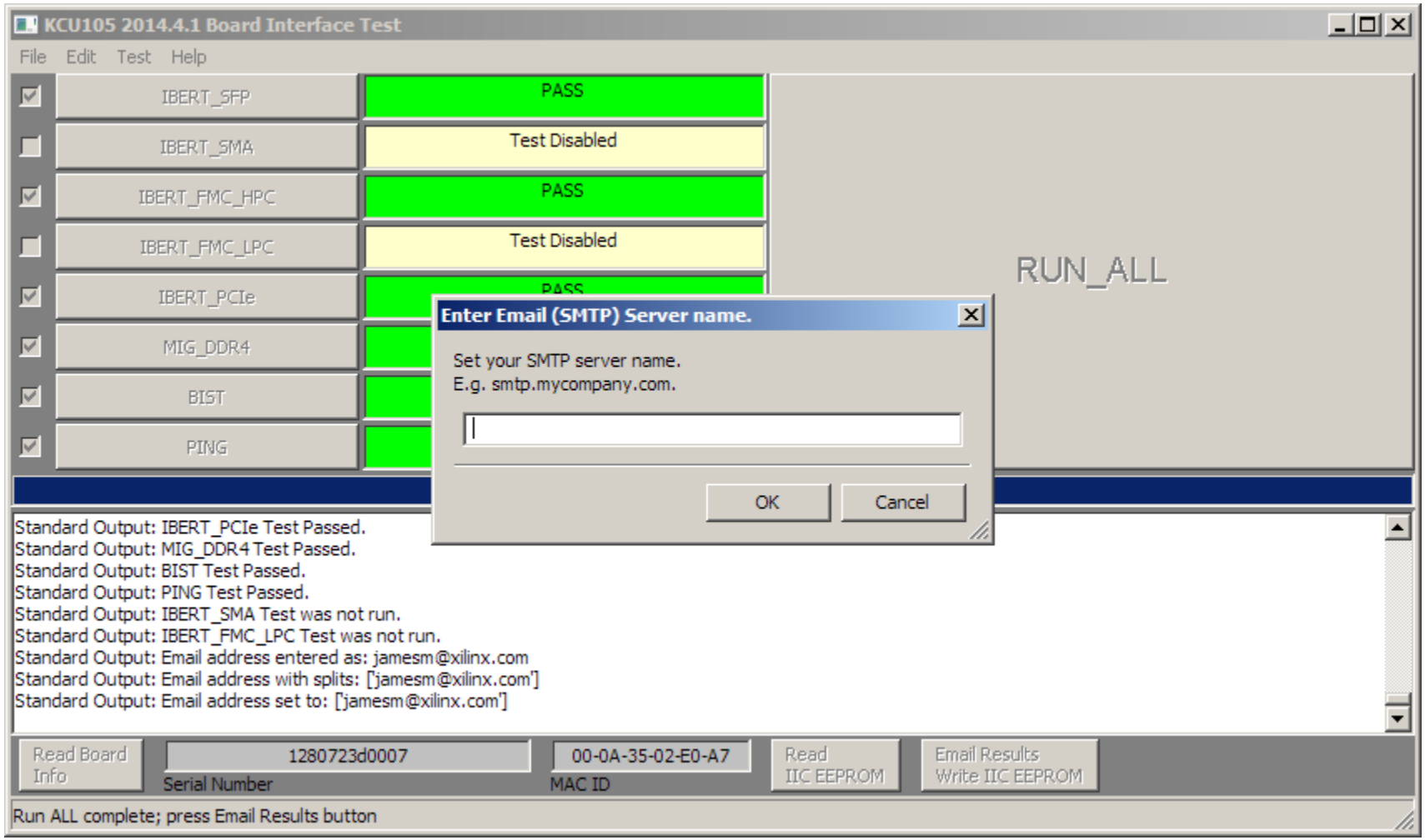
- **Enter the Email Address(es) of test log recipients**
  - E.g. <my email>@mycompany.com, <someone>@anycompany.com



Note: Presentation applies to the KCU105

Running the Board Interface Test

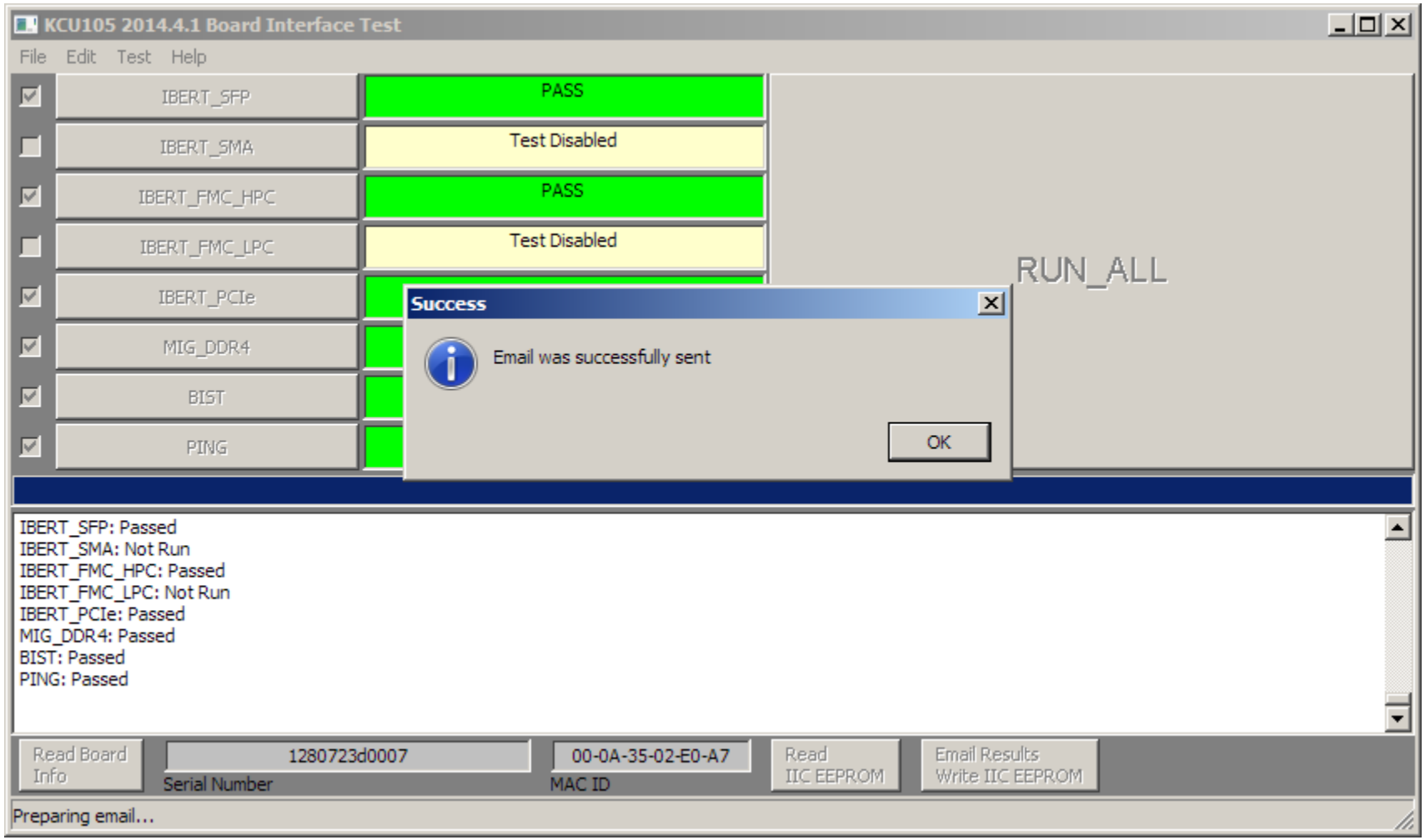
- **Enter the Email (SMTP) Server name**
  - E.g. smtp.mycompany.com



Note: Presentation applies to the KCU105

Running the Board Interface Test

- Message confirms email success with delivery of test results



Note: Presentation applies to the KCU105

Appendix

- **Ensure that you have followed all instructions in XTP391 - KCU105 Evaluation Kit Quick Start Guide and XTP352, KCU105 Software Install and Board Setup**
- **Ensure that no other Terminal program is connected to the KCU105's Standard COM UART port while the Board Interface Test is running**
  - See XTP352, page 17 for details on COM Ports
- **Only one board can be connected to your PC during the test**
  - Both USB UART (J4) and USB JTAG (J87) are required for this test
  - Disconnect any other board UARTs or Programming Cables
- **If you missed any set-up instructions and experience problems, then please follow these steps:**
  1. Recheck your setup
  2. End any hw_server or vcse_cableserver processes and cycle board power
  3. Open Vivado Hardware Manager and test PC-board JTAG connectivity

Note: Presentation applies to the KCU105

References

References

- **Vivado Release Notes**
  - Vivado Design Suite User Guide - Release Notes – UG973
    - http://www.xilinx.com/support/documentation/sw_manuals/xilinx2014_4/ug973-vivado-release-notes-install-license.pdf
  - Vivado Design Suite 2014.x - Vivado Known Issues
    - http://www.xilinx.com/support/answers/59464.html
  - Vivado 2014.4 Update (2014.4.1) Release Notes
    - http://www.xilinx.com/support/answers/63635.htm
- **Vivado Programming and Debugging**
  - Vivado Design Suite Programming and Debugging User Guide – UG908
    - http://www.xilinx.com/support/documentation/sw_manuals/xilinx2014_4/ug908-vivado-programming-debugging.pdf

Documentation

Documentation

- **Kintex UltraScale**
  - Kintex UltraScale FPGA Family
    - http://www.xilinx.com/products/silicon-devices/fpga/kintex-ultrascale.html
- **KCU105 Documentation**
  - Kintex UltraScale FPGA KCU105 Evaluation Kit
    - http://www.xilinx.com/products/boards-and-kits/kcu105.html
  - KCU105 Board User Guide – UG917
    - http://www.xilinx.com/support/documentation/boards_and_kits/kcu105/ug917-kcu105-eval-bd.pdf
  - KCU105 Evaluation Kit Quick Start Guide User Guide – XTP391
    - http://www.xilinx.com/support/documentation/boards_and_kits/kcu105/xtp391-kcu105-quickstart.pdf
  - KCU105 - Known Issues Master Answer Record
    - http://www.xilinx.com/support/answers/63175.html