# Texas Instruments

**Analog EVM Test Procedure**

# INT062 Test Procedure

# Rev. 1

1. **GENERAL**
   1. **PURPOSE**
      1. To provide detailed instructions for testing SN65DSI85Q1EVM Module.
   2. **SCOPE**
      1. This document describes the required instructions for testing the SN65DSI85Q1EVM.
   3. **REFERENCE DOCUMENTATION**
      1. Schematic “SN65DSI85Q1EVM\_SCHEMATICS.DSN”
      2. Assembly ” SN65DSI85Q1EVM\_LAYOUT.BRD”
      3. Users Guide “SN65DSI85-Q1 User’s Guide.docx”
   4. **MATERIALS**
      1. AC/DC Power Adapter. Any Power adapter with a dc level of 5V.
      2. TFT Display 1024x600.
      3. LVDS Cable 40 pin.
   5. **DEFINITIONS**
      1. ESD: Electrostatic discharge.
      2. USB: Universal Serial Bus
      3. SGC: Small Gauge Coaxial.
      4. LVDS: Low-voltage differential signaling.
      5. LCD: Liquid Crystal Display.
      6. PC: Personal Computer.
      7. GUI: Graphical User Interface
      8. LED Load is reference to boards with mounted LEDs
      9. UUT is reference to Unit under Test
      10. EVM is reference to Evaluation Module assembly, in this case the UUT

1. **SAFETY**
   1. This test must be performed by qualified personnel trained in electronics theory and understand the risks and hazards of the assembly to be tested.
   2. ESD precautions must be followed while handling electronic assemblies while performing this test.
   3. Precautions should be observed to avoid touching areas of the assembly that may hot or present a shock hazard during testing.
2. **QUALITY**
   1. Test data or reports shall be made available upon request by Texas Instruments.
3. **APPAREL**
   1. Electrostatic smock
   2. Electrostatic Gloves or finger cots
   3. Safety Glasses
   4. Ground ESD wrist strap.
4. **EQUIPMENT**
   1. Equipment needed to perform tests:
      1. SN65DSI85Q1EVM.
      2. System with USB host controller.
      3. Total Phase [Aardvark I2C/SPI controller](http://www.totalphase.com/products/aardvark-i2cspi/).
      4. SGC type cable with one-to-one pin mapping to a pane
      5. LCD video panel with LVDS receivers.
      6. 5v Power Supply.
   2. Software needed for testing:
      1. Control Center Serial Software. (<http://www.totalphase.com/products/control-center-serial/> )
5. **EQUIPMENT SETUP**
   1. Plug Total Phase Aardvark I2C/SPI controller into PC using a USB2 cable. If first time, you will have to install application and the driver. Application SW and driver can be downloaded from Total Phase website.
   2. Plug Total Phase Aardvark I2C/SPI controller into J10 on SN65DSI85Q1EVM board. Make sure pin #1 on Aardvark aligns with pin#1 on J10.
   3. SHUNT on SDA ON (J18) and SCL ON (J19) pin1 and 2.
   4. Plug 5V adapter into J13 on SN65DSI85Q1EVM board.
   5. Connect the Display cable into the I-PEX connector J2.
   6. Connect the USB micro cable to USB Host PC.
   7. Make sure all the switches of SW2 are in OFF position.

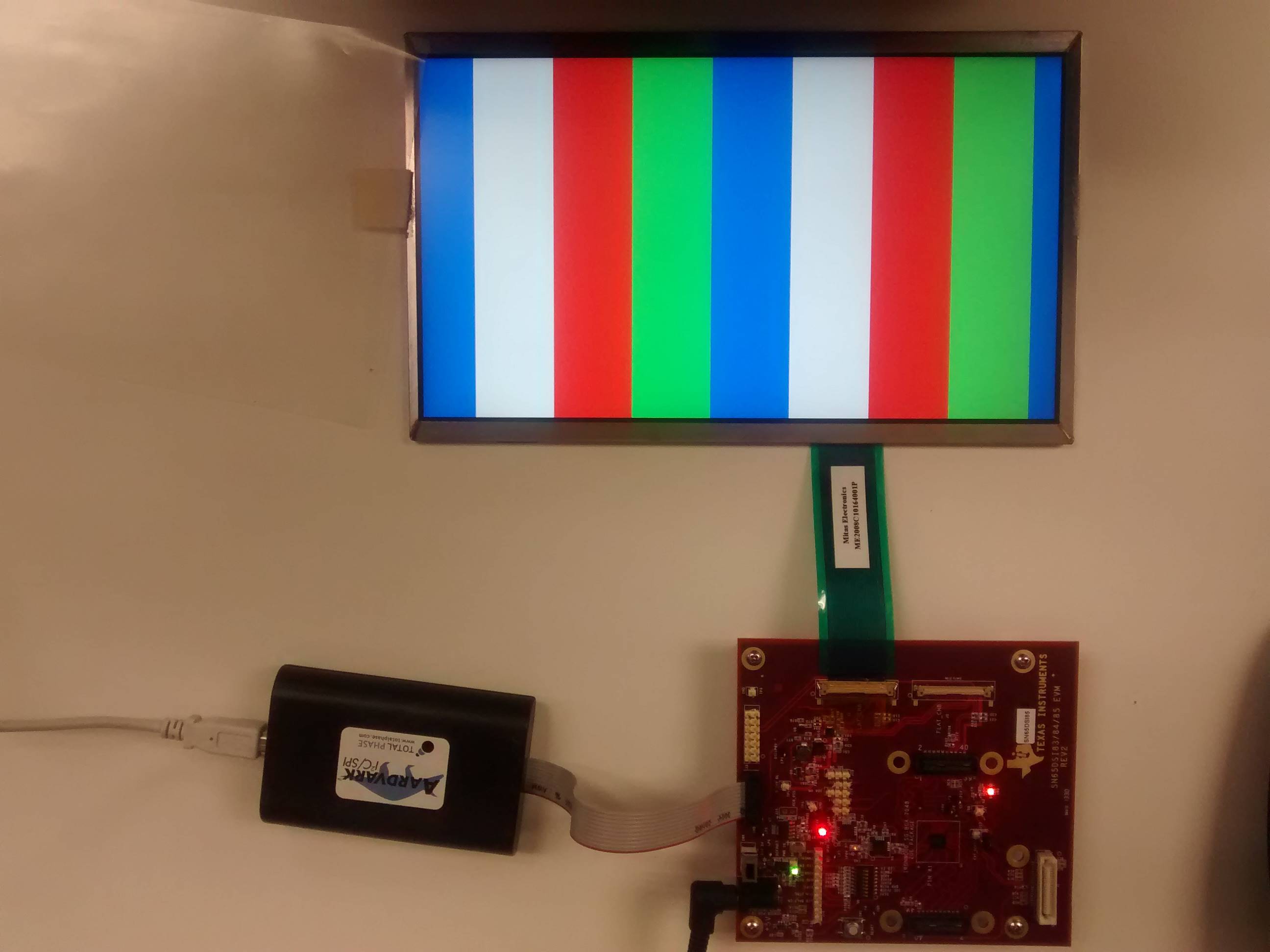


Figure 1. “Equipment Setup”

1. **PROCEDURE**
   1. Generate test video pattern for LVDS output using script 1024x600\_singleA\_18bit\_x1.xml.
      1. Run Aardvark GUI.

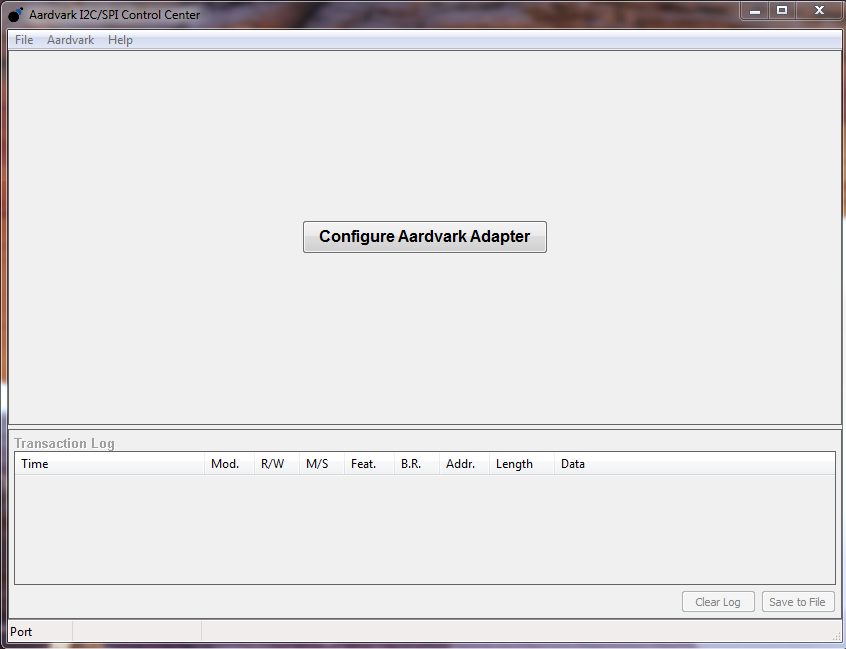


Figure 2. “Aardvark Setup”

* + 1. Click Configure Aardvark Adapter button.
    2. Select Mode as Batch mode and select Aardvark Port. The click OK.

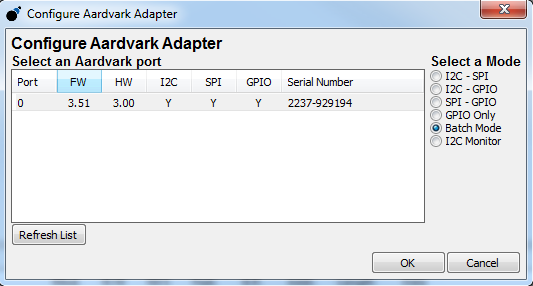


Figure 3 “Configure Adapter”

* + 1. Click Load button and load the Aardvark script called “1024x600\_singleA\_18bit\_x1.xml”.

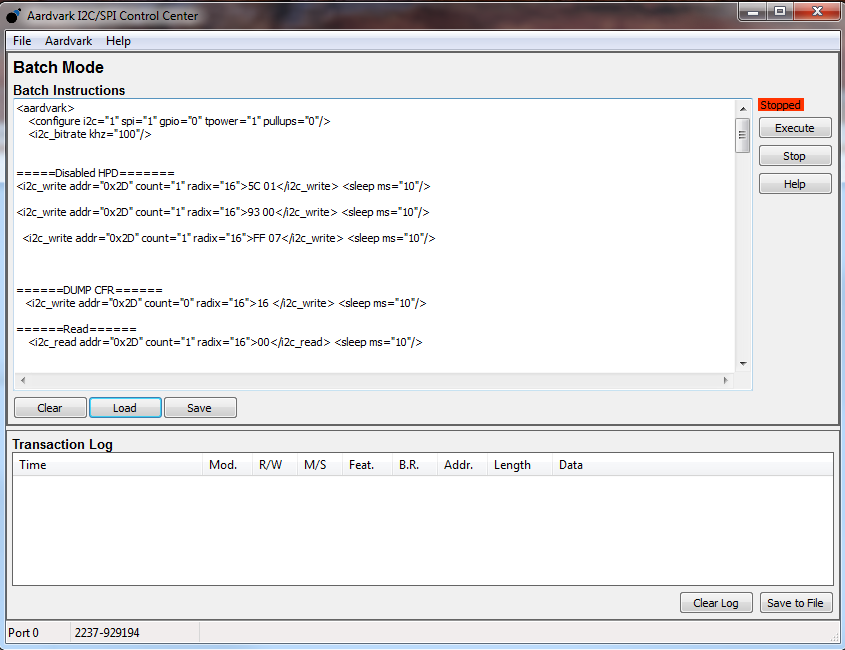


Figure 4. “Execute Script ”

* + 1. Move switch, SW3, from OFF to ON (position 1) on SN65DSI85Q1EVM board.
    2. Measure voltage on LP1 of SN65DSI85Q1EVM board. Should measure 1.8V(+/- .15V).
    3. Measure voltage on LP2 of SN65DSI85Q1EVM board. Should measure 1.8V(+/- .15V).
    4. Measure voltage on LP3 of SN65DSI85Q1EVM board. Should measure 1.1V(+/-.15V)
    5. Measure voltage on LP7 of SN65DSI85Q1EVM board. Should measure 3.3V(+/-.165V).
    6. Run Aardvark script. If Color bar is displayed on monitor, then Pass.

1. **EQUIPMENT SHUTDOWN**
   1. Move switch, SW3, from ON to OFF (position 3) on SN65DSI85Q1EVM board.
2. **MATERIAL DISPOSITION & TRANSFER**
   1. **CONFORMING MATERIAL**

Units that have passed this test procedure shall be packaged into anti-static ESD approved bags, labeled with two labels according to the table below, and shipped per the P.O.

|  |  |
| --- | --- |
| **Label 1**  **Assembly Number+Dash Number if Applicable** | **Label 2**  **IC Number** |
| INT062-001 | SN65DSI85PAP |
| INT062-002 | SN65DSI83PAP |
|  |  |
|  |  |

* 1. **NON-CONFORMING MATERIAL**

If yield loss is 2% or less, scrap non-conforming units and adjust P.O. to reflect total amount shipped. If yield loss approaches or exceeds 5%, contact EVM coordinator for assistance.