



64/256-Position I²C Compatible Nonvolatile Memory Digital Potentiometer

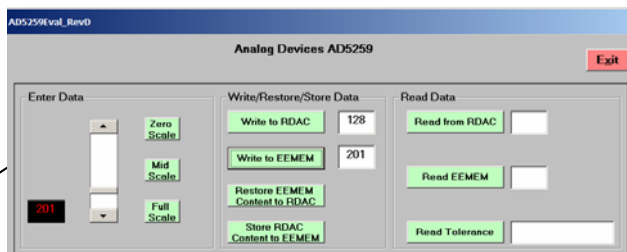
Evaluation Board User Manual

AD5258/AD5259

5 Steps to Setup The Evaluation Board...



1. Install AD5258 / AD5259

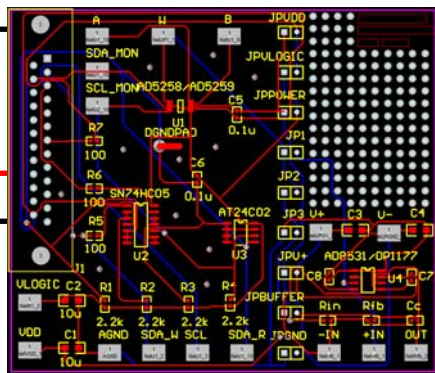
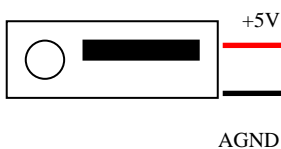


3. Open AD5258/59Eval_RevX.exe

2. Configure Board and
connect to Parallel Port
with Provided
Connector and Cable



4. Use Computer's Supply
or Provide Power Supply



5. Measure Result

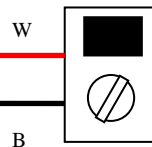


Figure 1. Evaluation Kit Setup

**No Programming
Skills Required!**



General Overview

This evaluation board provides the user with a simple and quick solution to evaluate digital potentiometers from Analog Devices.

How to Get Started

1. Load the CD and click on setup.exe.
2. **Use power from the parallel port or apply an external power supply**(refer to “Powering Options” to avoid damaging the part and computer port).
3. Connect board to parallel port with the provided connector and cable.
4. Open the AD5258/59Eval_RevX program from the Windows Start menu.

Powering Options

A. Using the power from the parallel port.

1. Connect JPVDD jumper. This will power V_{DD} .
2. Connect JPVLOGIC jumper. This will power V_{LOGIC} .

B. Using an external power supply(supply must be at least +2.7V)*

1. **DO NOT connect JPVDD and JPLOGIC jumpers.**
2. Connect JPPOWER jumper.
3. Connect voltage supply power and ground to the V_{DD} and GND pads on the board.

*If two independent supplies are being for V_{DD} and V_{LOGIC} , do not connect JPPOWER. Simply apply the two power supplies to V_{DD} , V_{LOGIC} , and GND pads on the board.

How to Use Software Interface

1. In the ‘Enter Data’ box, either type in the value, use the scroll bar, or click a preset button. Note that this is simply a data entry box and does not perform any function on the digital potentiometer device. Communication with the device occurs in Steps 2 and 3.
2. In the ‘Write/Restore/Store’ box...
 - i. Click on ‘Write to RDAC’ to write value chosen in Step 1 to the RDAC.
 - ii. Click on ‘Write to EEMEM’ to write value chosen in Step 1 to the EEMEM.
 - iii. Click on ‘Restore EEMEM Content to RDAC’ to restore current EEMEM content to RDAC.
 - iv. Click on ‘Store RDAC Content to EEMEM’ to store current RDAC setting to EEMEM.
3. In the ‘Read Data’ box...
 - i. Click on ‘Read from RDAC’ to read back current setting of RDAC.
 - ii. Click on ‘Read EEMEM’ to read back current content of EEMEM.
 - iii. Click on ‘Read Tolerance’ to read back the tolerance of the resistance R_{AB} . For example, if the device is the device is a 10k Ω option and the tolerance readback is 3.5%, that would mean the actual value of R_{AB} = 10,350 Ω .



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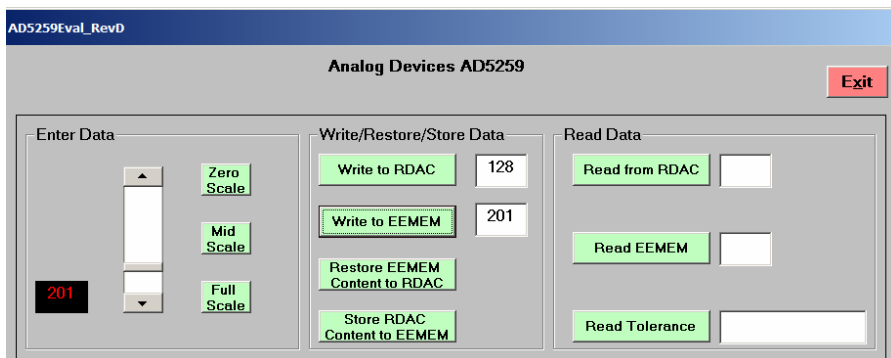


Figure 2. AD5259 Software Graphical Interface

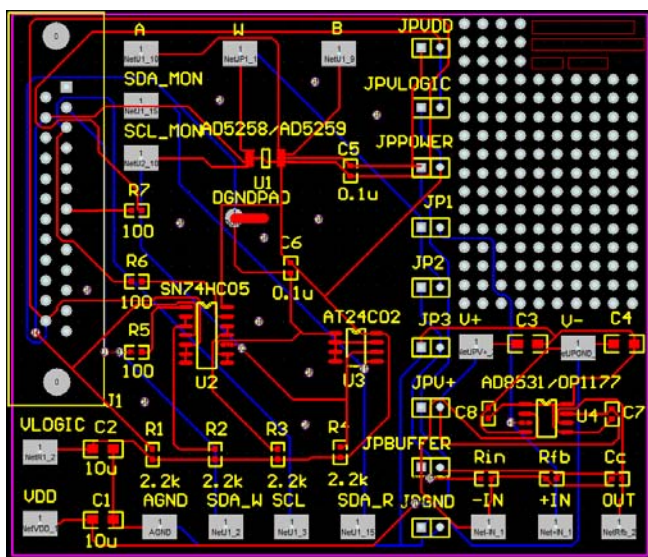


Figure 3. Evaluation Board Top Overlay.



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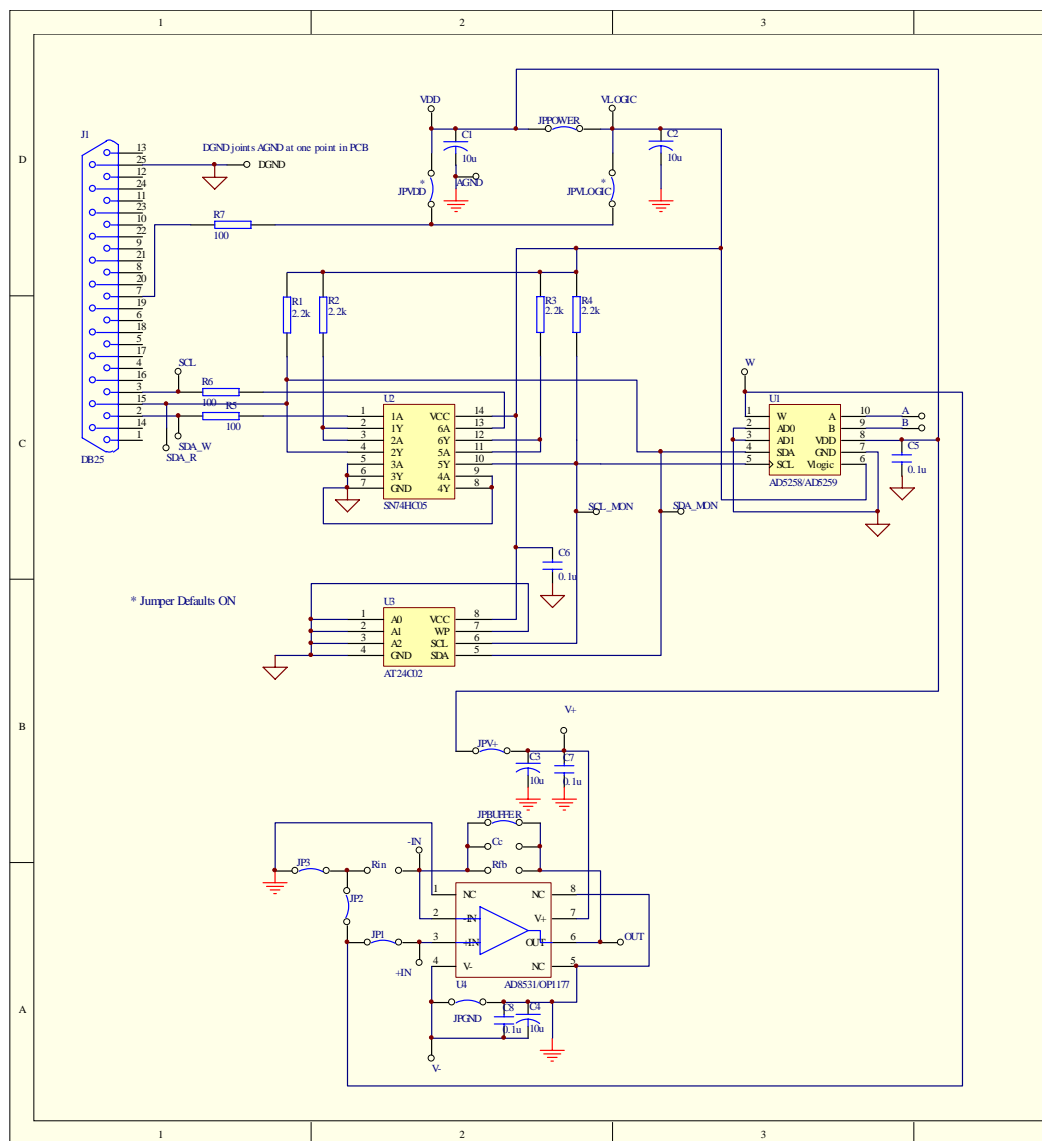


Figure 4. Evaluation Board Schematic

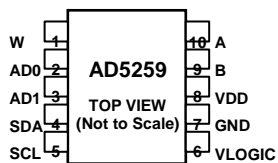
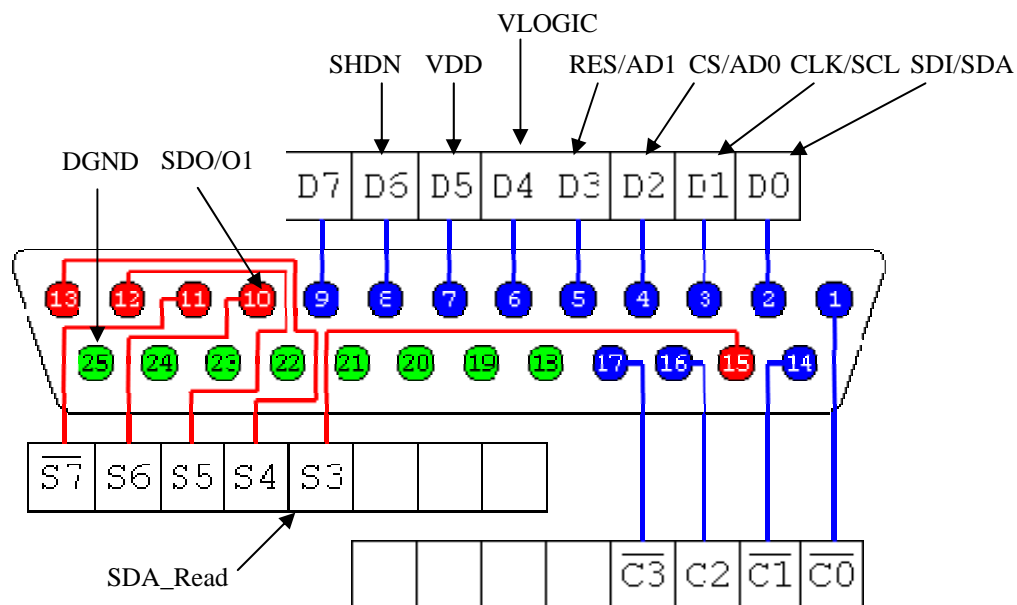


Figure 5. Pinout

Parallel Port Connection (Information for Visual Basic Program Developers Only)



<http://www.doc.ic.ac.uk/~ih/doc/par/>

8 output pins accessed via the **DATA Port**
5 input pins (one inverted) accessed via the **STATUS Port**
4 output pins (three inverted) accessed via the **CONTROL Port**
The remaining 8 pins are grounded

portID = Val("&H" + "378") [378h = 888]
portID = Val("&H" + "379") [379h = 889]
portID = Val("&H" + "37A") [37Ah = 890]

