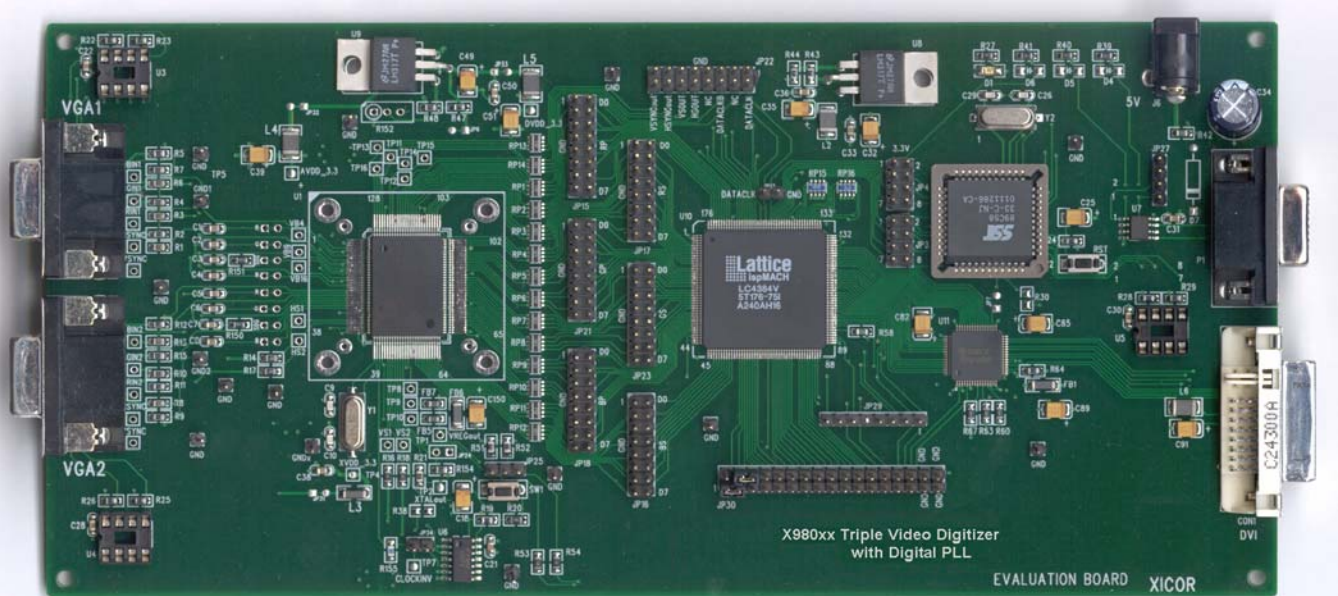




Xicor, Inc
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Installation and Operation of Xicor's X980xx Analog Front End Evaluation System



Revision 1.2



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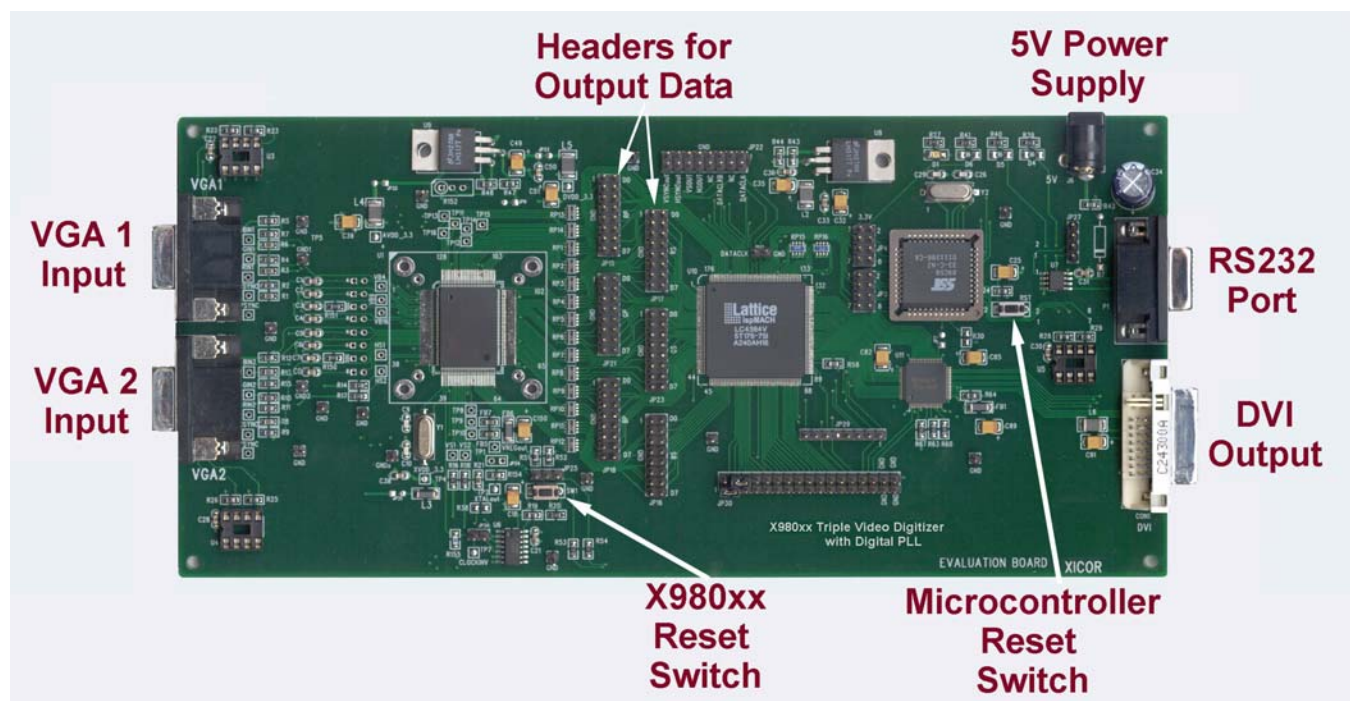
PC Requirements

Operating System: Designed to work with Windows NT, 2000, XP, 98, and Millennium. Verified working with Windows 2000, XP, and 98.

Hardware Requirements: DB9 serial port, CD-ROM drive for install files, 10MB free hard disk space.

Hardware Setup

- Connect the serial cable to the RS232 port
- Connect a monitor with a DVI input to the FVI connector
- Connect an RGN input to VGA 1 or VGA 2
- Connect the 5V power supply to the power connector



Software Installation

Launch the "setup.exe" file on the CD ROM and follow the instructions. A directory called "Xicor" should be added to your "Start Menu/Programs" tree. Inside that directory is the executable called "X980xx Evaluation Software".

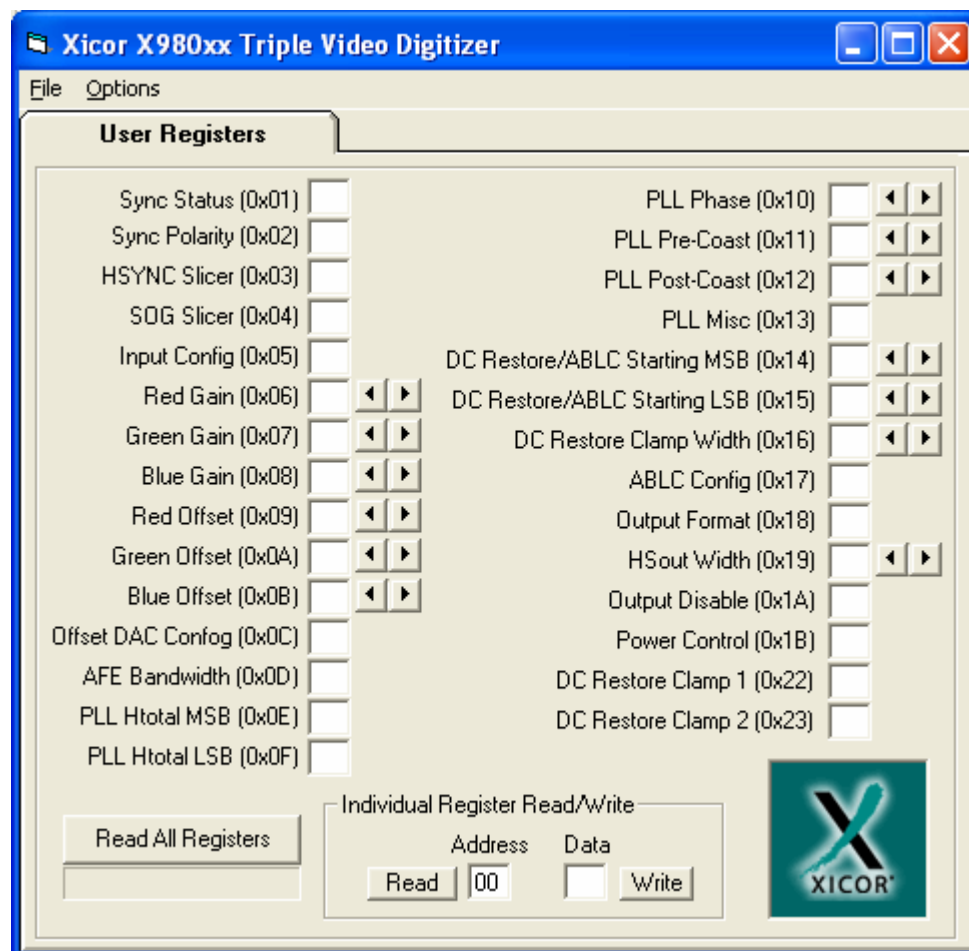


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Starting the Software

Select "Start" menu/ "Programs" / "Xicor" / "X980xx Evaluation Software" to launch the software.

After the program has launched, you should see the following screen:

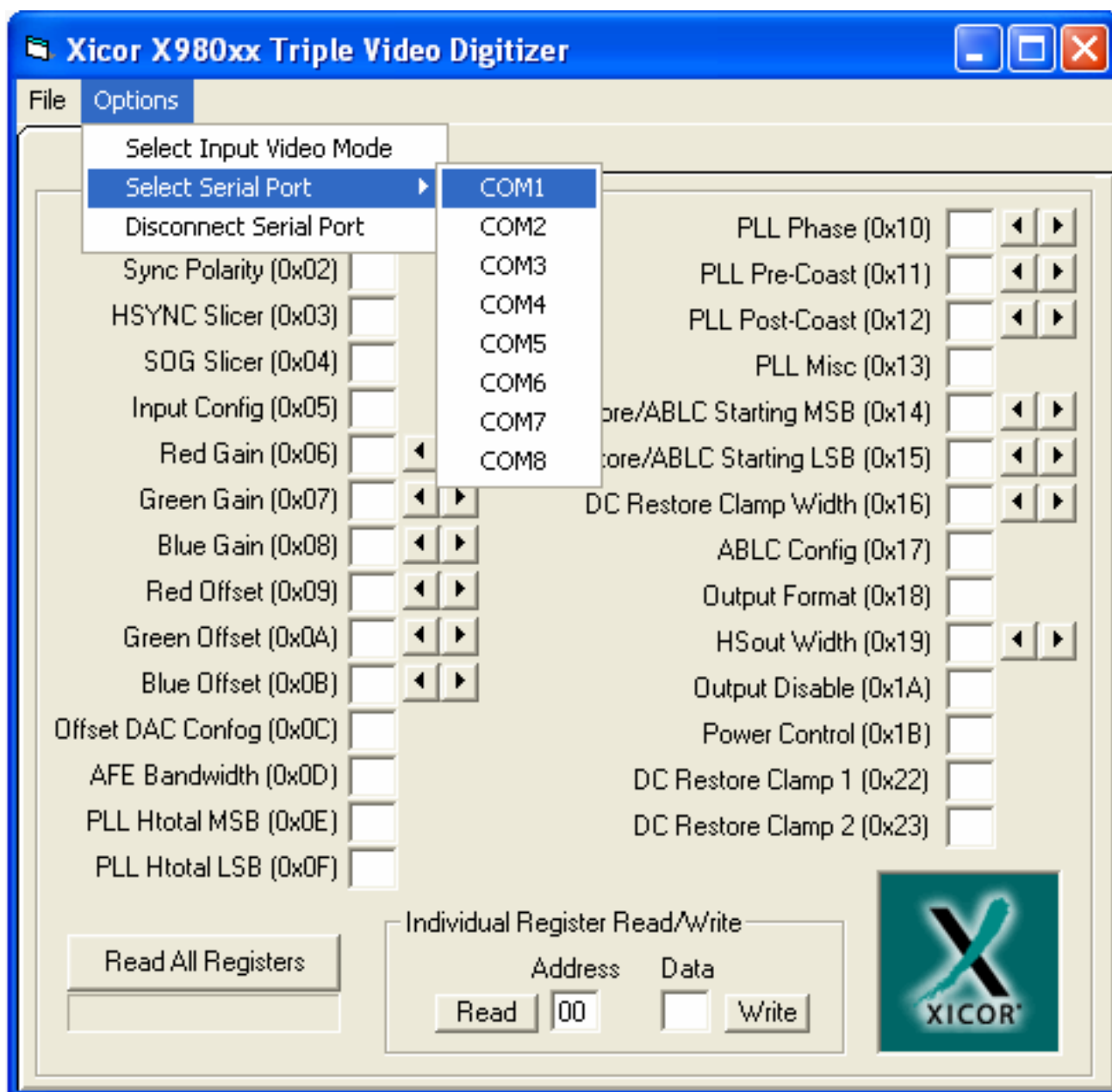




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Configuration

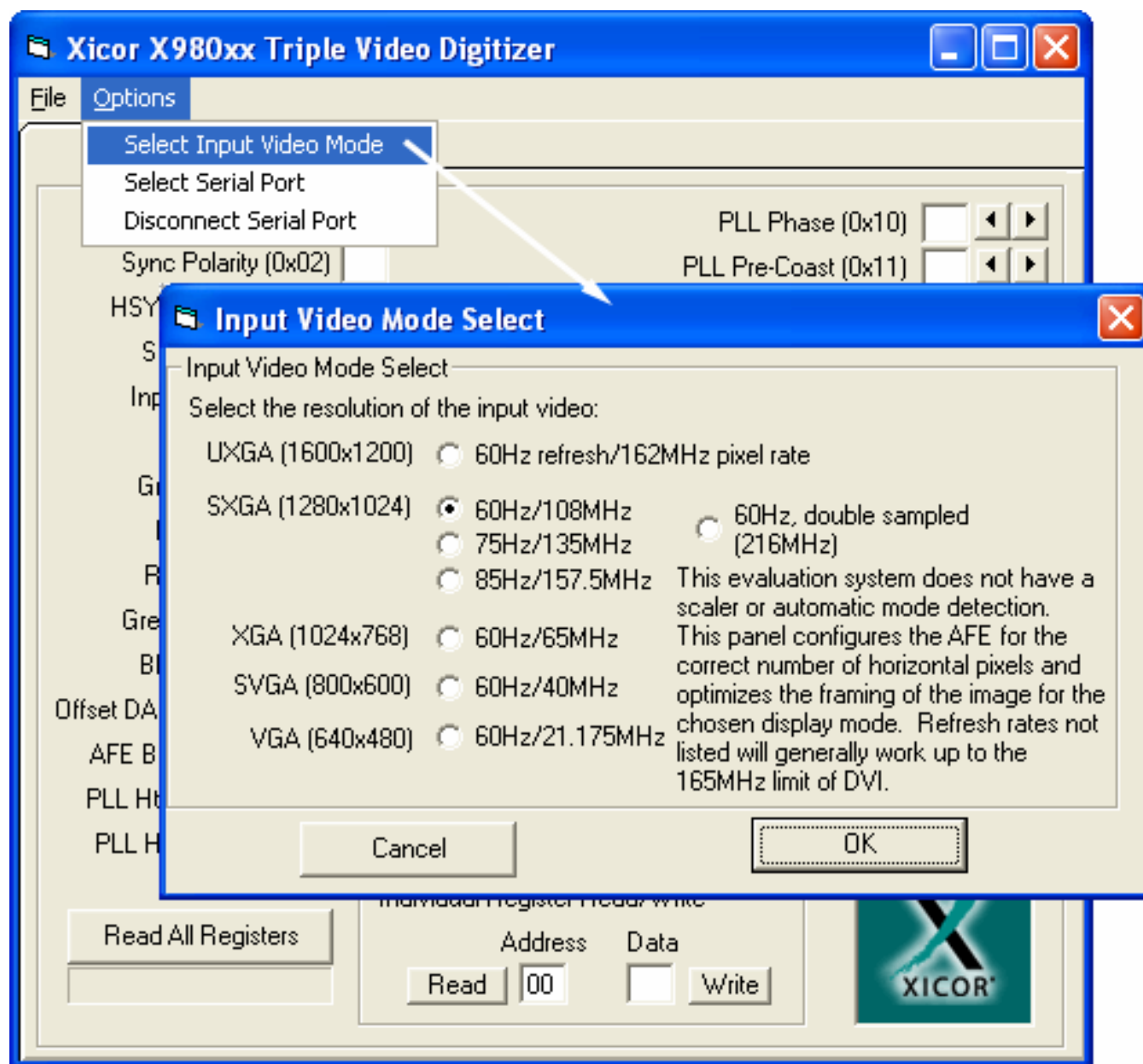
The software launches using the COM1: serial port as the default. If necessary, select another serial port under the Options/Select Serial Port menu item. Click on the “Read All Registers” button in the lower left screen. All of the register values from the X980xx on the evaluation board should become visible. If the register values are not read correctly, proceed to the Troubleshooting section of this document.





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The X980xx evaluation platform does not automatically detect the video mode of the incoming video signal. To obtain the correct image on the DVI monitor, first write the correct value to register 0x05 to select the VGA input with the signal to be displayed. Then use the “Options” menu to select the resolution and refresh rate that matches the resolution and refresh rate of the VGA signal to be digitized:





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Operation

The DVI monitor should now be displaying the image being transmitted on the VGA connector. At this point, all the registers of the X980xx can be adjusted. For example, the PLL Phase register (0x10) can be adjusted to find the optimum sampling phases for the signal. The gain control registers (0x06 – 0x08) and the offset control registers (0x09 – 0x0B) can be adjusted for contrast and brightness control. The Automatic Black Level Compensation (ABLC, register 0x17) function can be disabled to compare the image with ABLC disabled. Refer to the datasheet for more information on the X980xx and its configuration options.

Notes

- All registers can be read by pressing the “Read All Registers” button
- Registers 0x01 and 0x02 are read-only
- The HTOTAL value is not latched by the X980xx until the LSB (0x0F) is written (i.e. writes to the MSB only will not change the HTOTAL used by the X980xx).
- The box at the bottom of the display can be used to read or write any register, including some production test registers. These registers are not needed in normal operation and are therefore not documented.

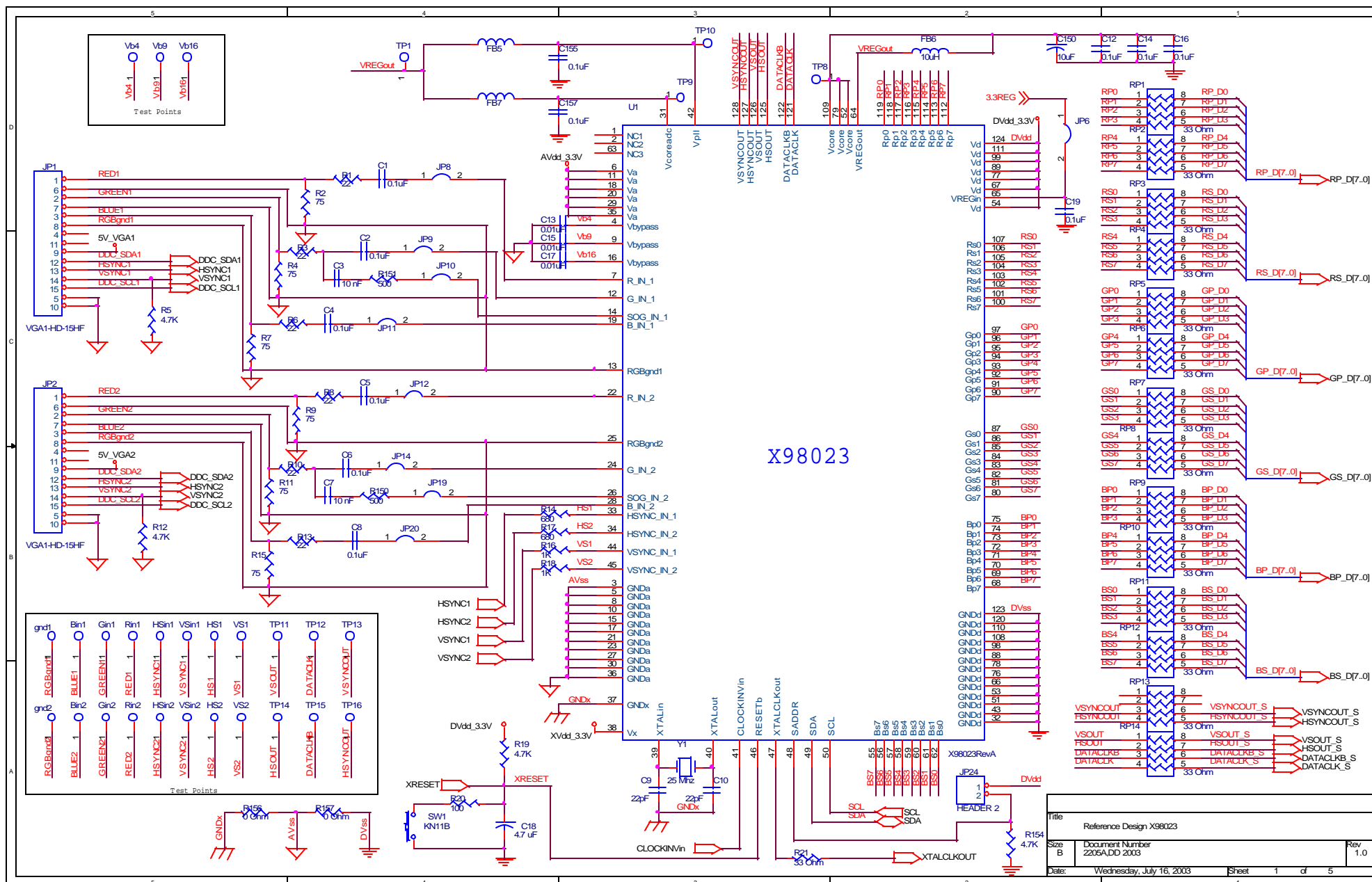
Troubleshooting

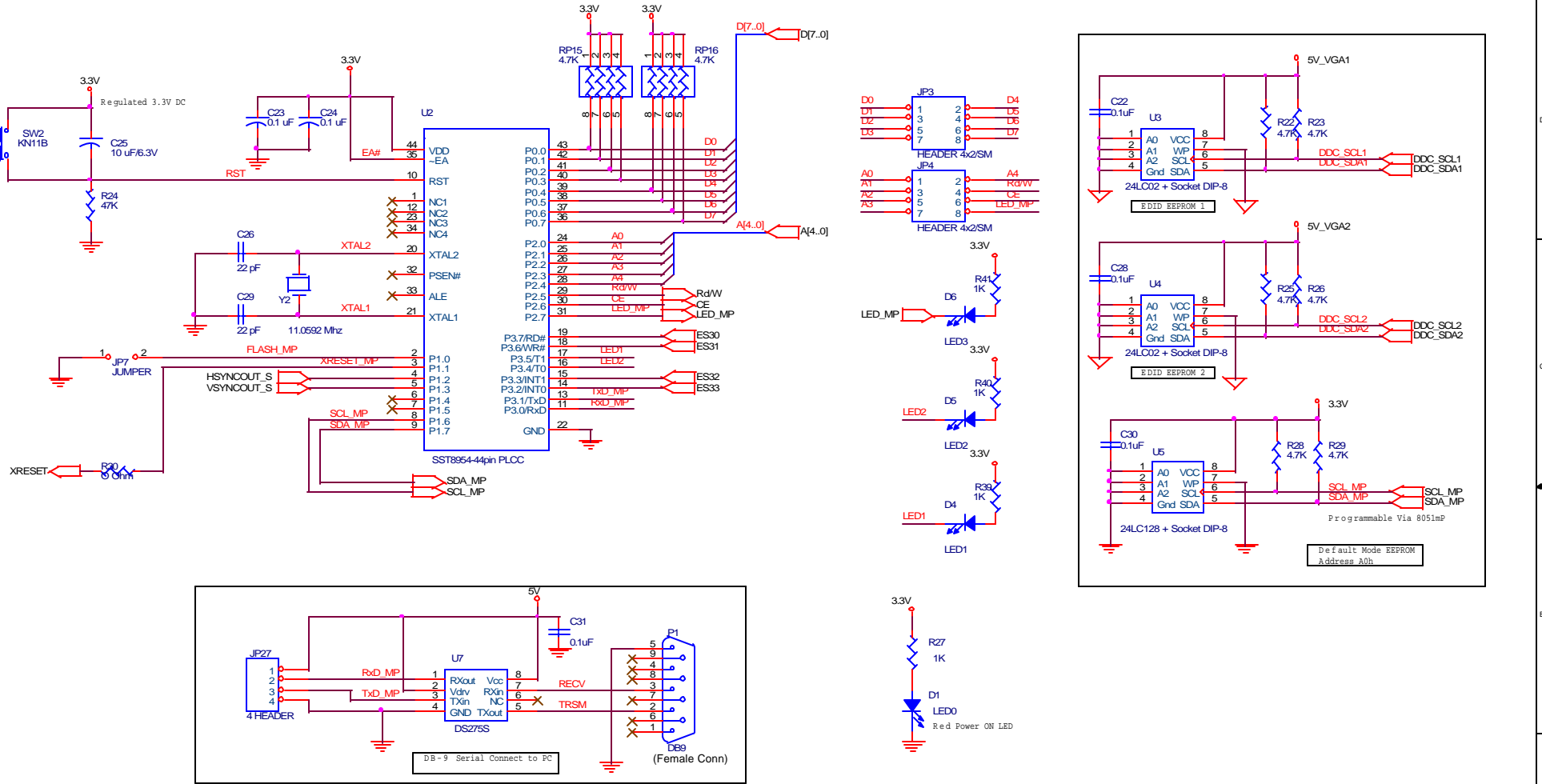
Serial Port

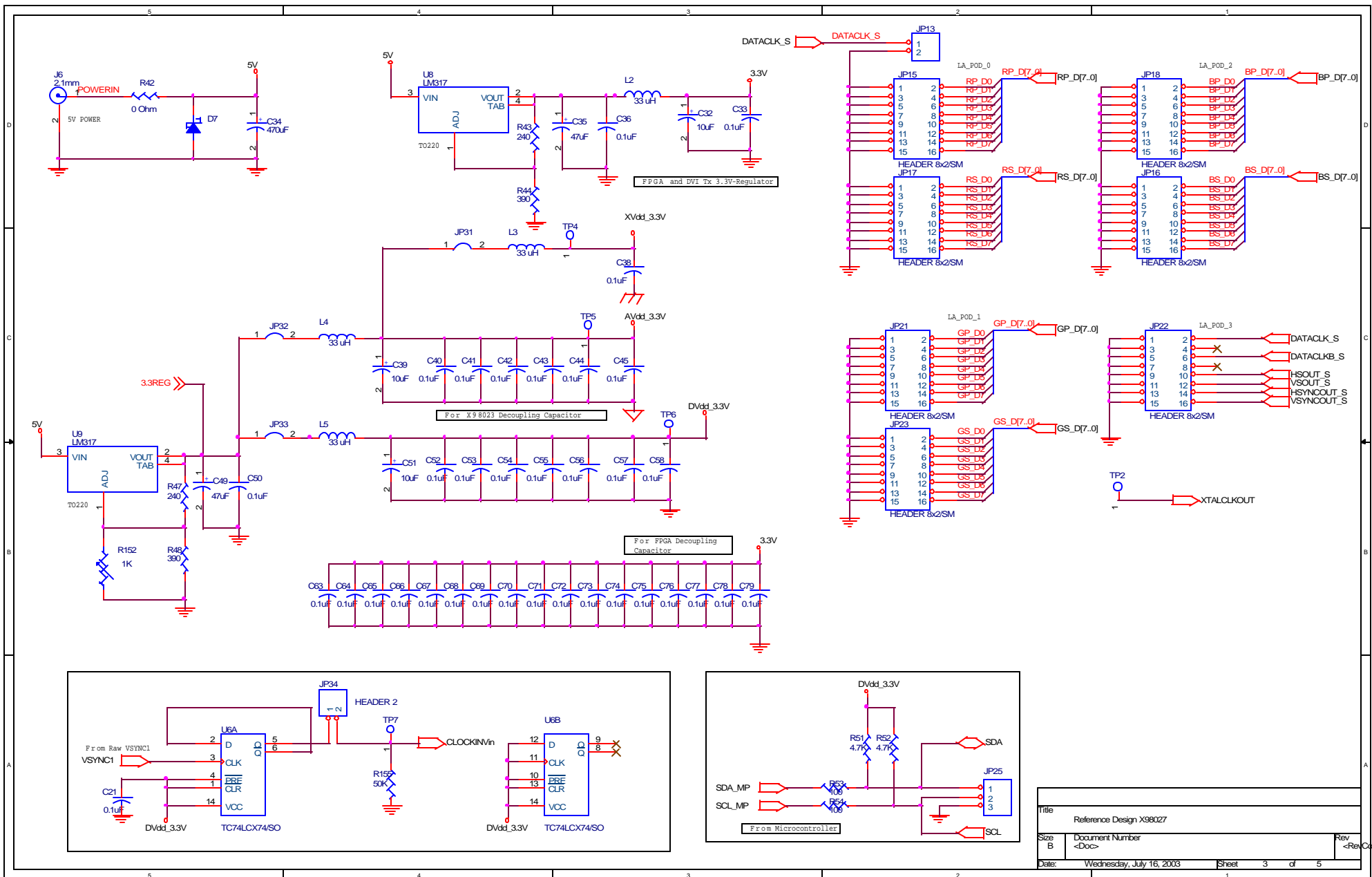
- The software should be able to communicate with the evaluation board as soon as it is launched. If there is a communication problem, close the X980xx software application, reset the microcontroller (see the photo under “Hardware Setup”), and launch the application.

If no image is displayed on the DVI monitor, take the following steps:

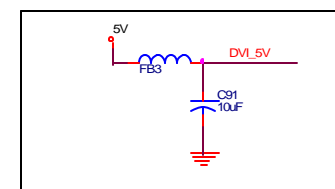
- Make sure the input video mode (resolution, refresh rate) matches the Input Video Mode selection in the software
- Close the software, reset the X980xx, reset the microcontroller, and restart the software.
- Try a different video resolution
- The TFP410 DVI transmitter used in the evaluation system is compatible with most DVI-input monitors. However there are some monitors that have very non-standard DVI receiver implementations that can cause incompatibilities in the DVI link. To rule this out, try a different model monitor.



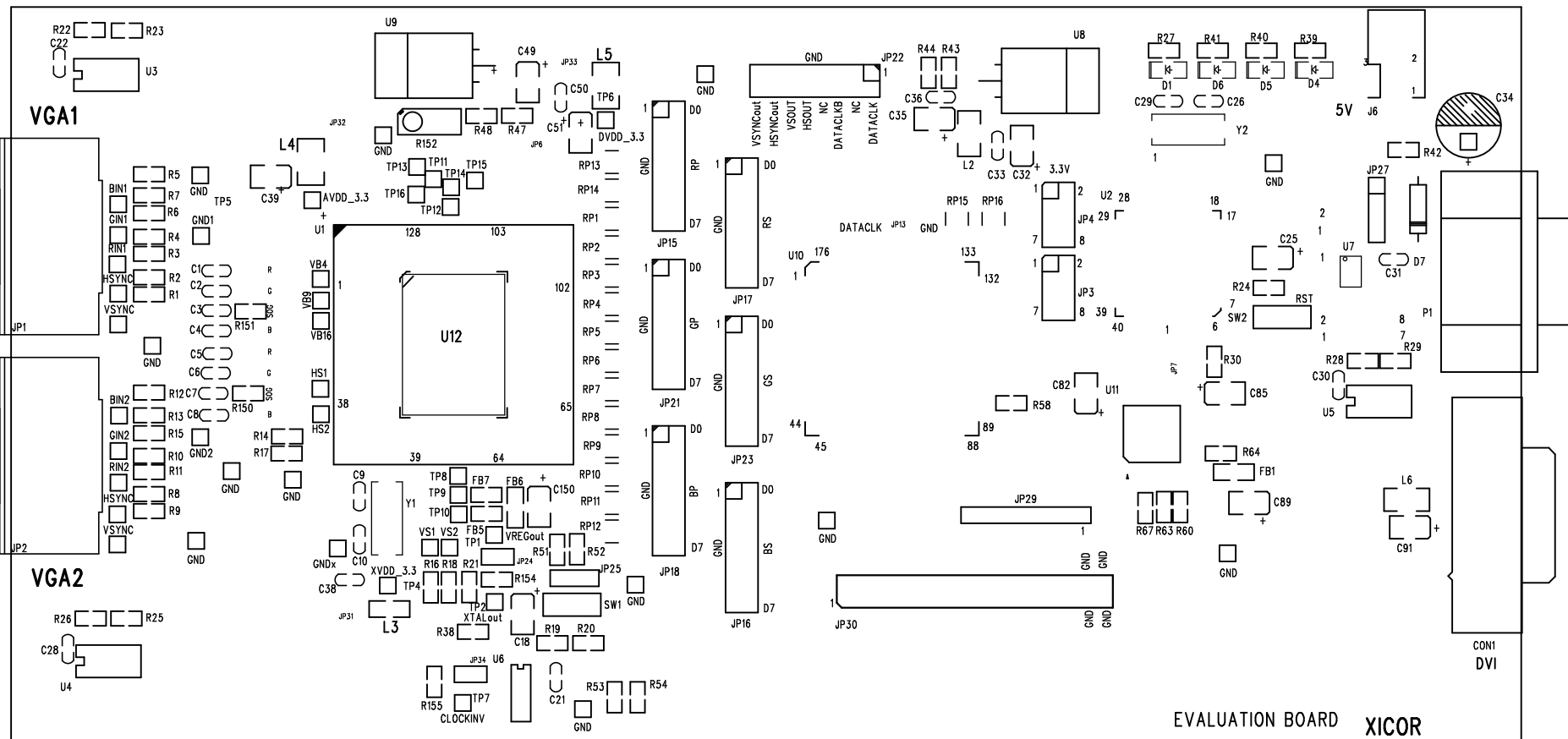




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Date:	Wednesday, July 16, 2003	Sheet	5 of 5



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SILKSCREEN TOP SIDE

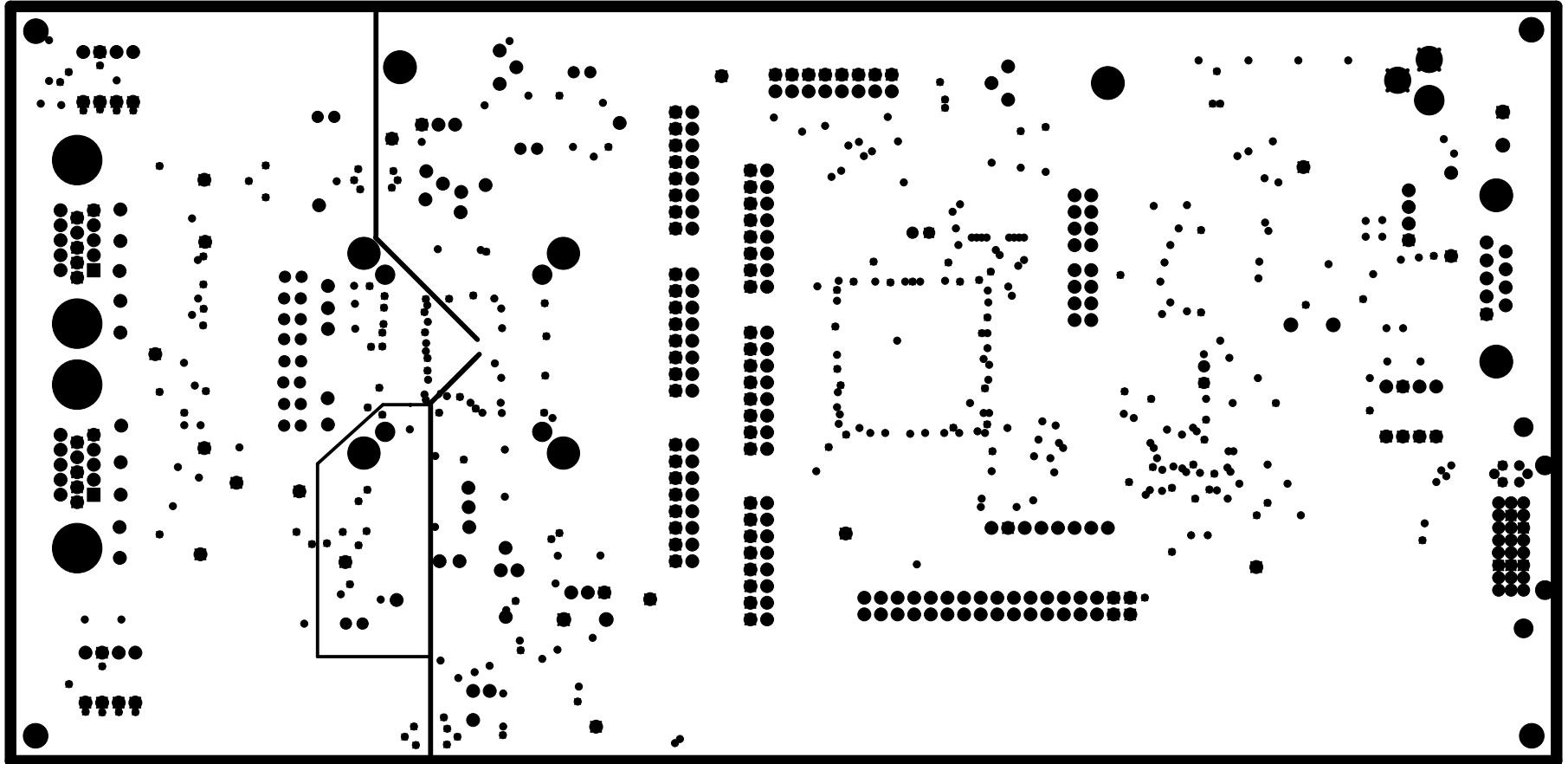
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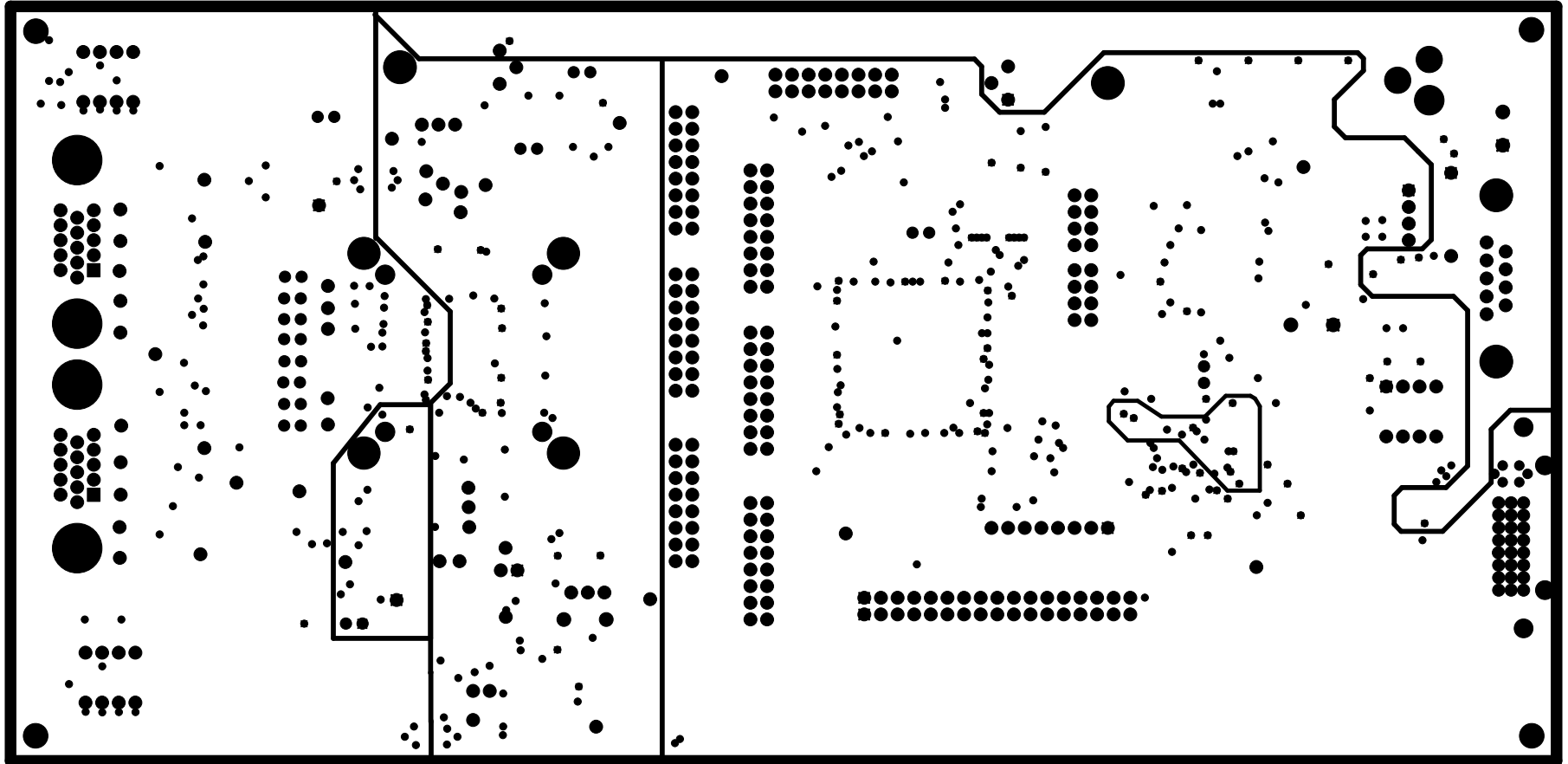
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TOP SIDE LAYER 1



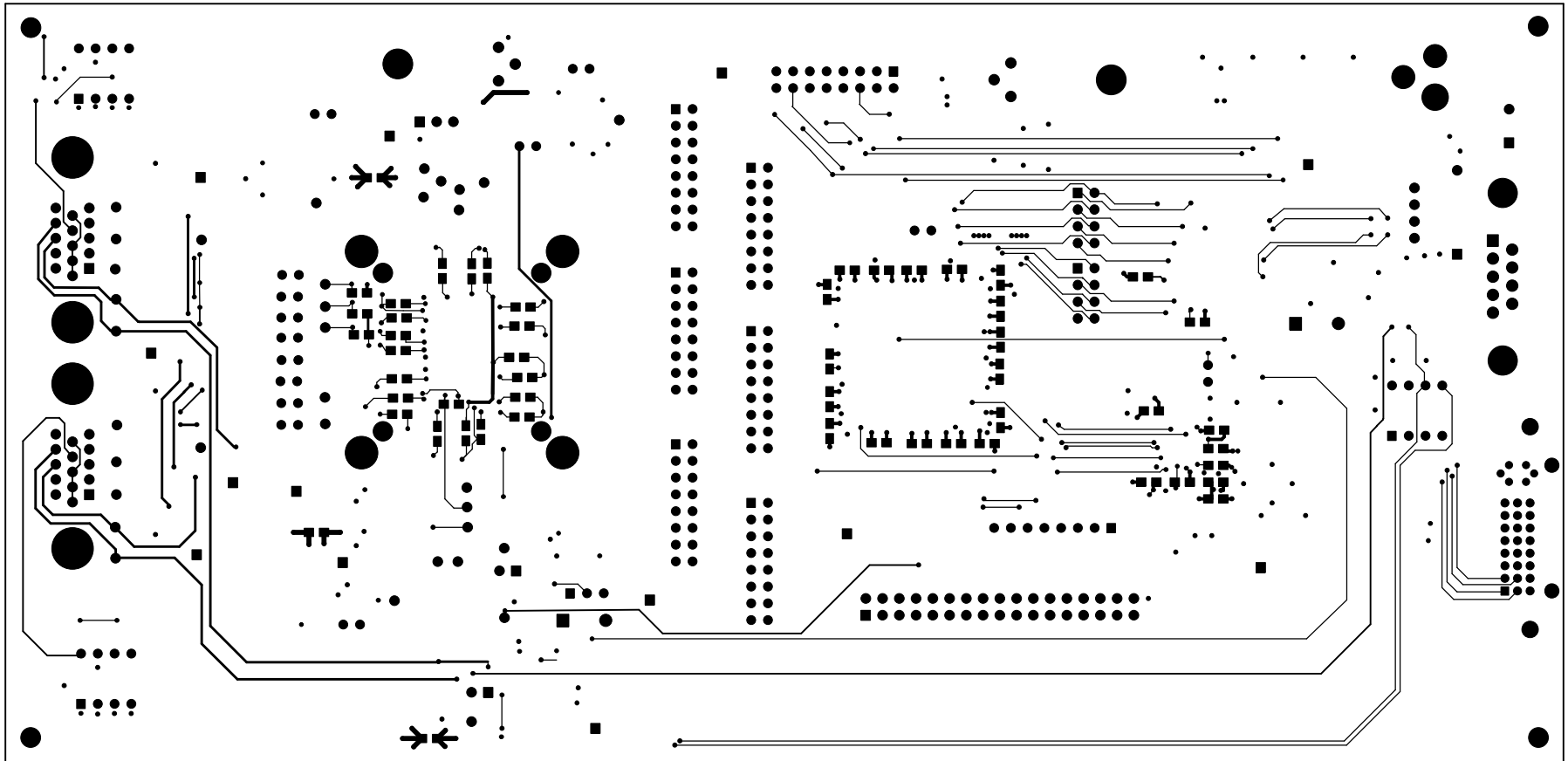
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GROUND PLANE LAYER 2



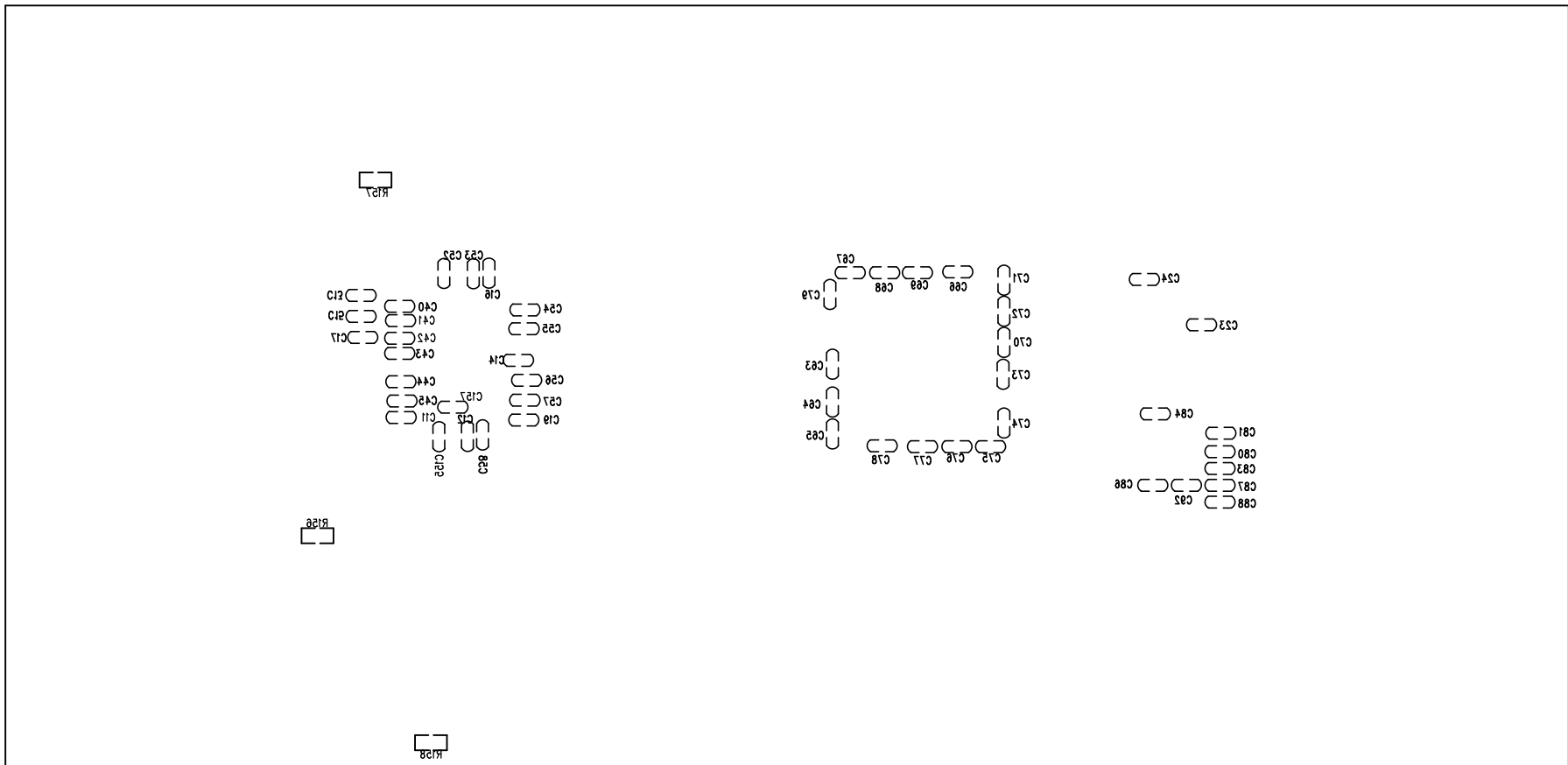
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POWER PLANE LAYER 3



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BOTTOM SIDE LAYER 4



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SILKSCREEN BOTTOM SIDE