Interfacing Network Analyzer with ADS Tutorial

First, go to the bottom right corner of the desktop and open the “Agilent IO Control” app.

Once the application is opened, you can see which GPIB bus is connected, you’ll need the GPIB address for the network analyzer and computer. Make sure a green check mark is next to the device you are connecting to.

Without closing the IO control, open up an ADS schematic window. From the schematic window, find Instrument Server in the Tools tab. Click on Instrument Server.
You will see the above screen when the instrument server is clicked open. Go to HP-IB tab to initialize the computer GPIB bus. Use the address you saw on the IO control for the computer, in this case “GPIB1”, fill in the address and click ok. The dialogue window will show initialization successful.

In the HPIB Address [0-30] section, fill in the GPIB address number for the device you are connecting, in this case “GPIB16”. Choose formatted data, all S parameters or just the one you need. Select one of the datasets you want to save to and create a block name for it.

After you have done that, you can click on read instrument. The dialogue box will tell you if it is successful or not.
Go back to the schematic window on ADS and click on “New Data Display Window”, do not click on Simulate because it would wipe out the acquired data.

Once the data display window opens up, you can select rectangular plot, smith chart etc.
Once you place the plot, find the data set where you saved your data, and the traces will be saved under S1_1 for S11 and similar for all other S params.

Please refer to the ADS tutorial on the class web if you have problem with ADS.