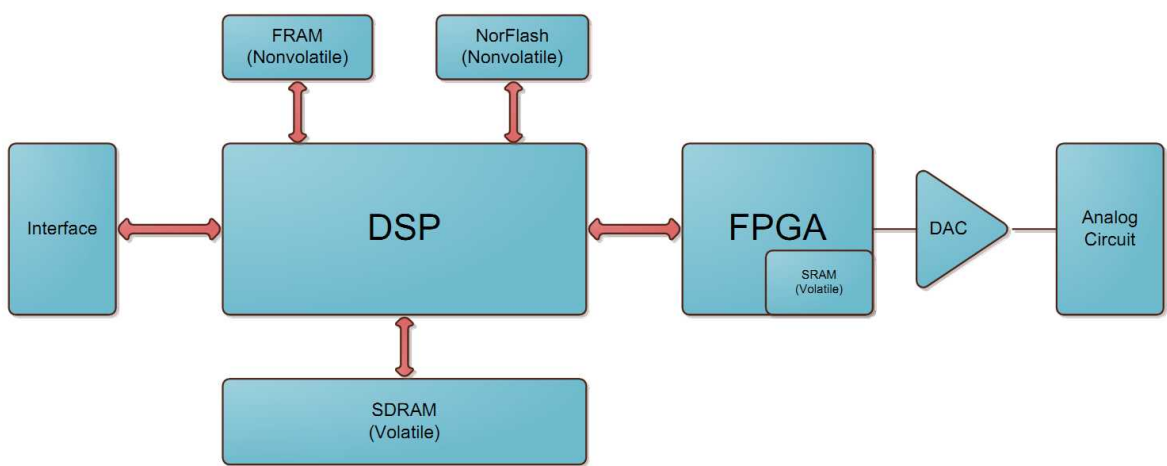## DG4000 Memory Clear Procedure

*Date:*02.27.2012

Solution: The DG4000 series of Arbitrary Waveform Generators store data in four locations.

Here are the descriptions of the various memory locations and the type of data stored:

DG4000 Digital System Block Diagram

1. **SDRAM** : This is a volatile memory. Every time the DG4000 is powered on, software will be downloaded into the SDRAM.

   Memory Size: 64M Bytes

   Clearing procedure: Power Cycle the instrument.

2. **FRAM:** This is a non-volatile memory. All the status settings will be stored in it. If you set "Utility—System—PowerOn"to "Last", every step of instrument operation (wavefunction type, amplitude, frequency, etc...) of the DG4000 will be stored.

   Next time when you power on the instrument, the instrument will keep the last setting when power off.

   Memory Size: 16M Bytes（Each states file takes 1.6KB; Each Arb file takes 32KB）

   Clearing procedure: The FRAM storage can be circumvented by configuring the instrument for "Power On Default" settings.

   Press Utility > System > Set PowerOn to "Default".

   The last user state will be overwritten with the default settings after a power cycle.

3. **NorFlash:** This is Non-volatile memory. Instrument firmware is stored in here. Every time the instrument is powered on, the firmware will be downloaded from NorFlash to SDRAM. Except that, user's data is also stored in the NorFlash.

   In Store menu, you can store 10 State Files and 10 Arb Files, all of which are stored in NorFlash.

   Memory Size: 2KB

Clearing procedure: The NorFlash can be cleared by deleting the stored State or Arb file. Alternately, the file could be overwritten with a file using the same name, but default instrument settings.

- Press Store key > File Type > Set to All files
- Select Browser > File and use scroll wheel to select file of interest
- Press down arrow to reach menu page 2/2: Select Delete

The NorFlash storage can be circumvented by configuring the instrument for "Power On Default" settings.

- Press Utility > System > Set PowerOn to Default. The last user state will be overwritten with the default settings.

4. **SRAM** This is volatile memory inside the FPGA. Waveform Data Of current output is stored here. Every time the instrument will output a waveform, the instrument will create the waveform data and transfer the waveform data from DSP to SRAM. The DDS inside the FPGA will take every waveform point from SRAM and output it to the to DAC.

Memory Size: 32KB

Clearing procedure: Power Cycle the instrument.