





Bit Values	Theoretical DAC Values (V)	Measured DAC Values (V)
0	0	0
1	0.22	.23
2	0.44	.45
3	0.66	.67
4	0.88	.85
5	1.1	1.07
6	1.32	1.27
7	1.54	1.49
8	1.76	1.63
9	1.98	1.85
10	2.2	2.05
11	2.42	2.27
12	2.64	2.45
13	2.86	2.67
14	3.08	2.89
15	3.3	3.11

The resolution is 4-bits, range is 0-3.33V. Precision is .22V, and accuracy is 5.8%.

6. a) When does the interrupt trigger occur?

The interrupt trigger occurs whenever the systick current value reaches zero.

b) In which file is the interrupt vector?

The interrupt vector is in the Startup.s file.

c) List the steps that occur after the trigger occurs and before the processor executes the handler.

1. Current instruction is finished.
2. Eight registers are pushed to stack (including PC).
3. LR is set to 0xFFFFFFFF.
4. IPSR is set to the interrupt number.
5. PC is loaded with the interrupt vector.

d) It looks like **BX LR** instruction simply moves LR into PC, how does this return from interrupt?

The LR is restored to the PC when restoring state of the machine before the interrupt, thus the PC points to the last instruction executed before interrupt.

