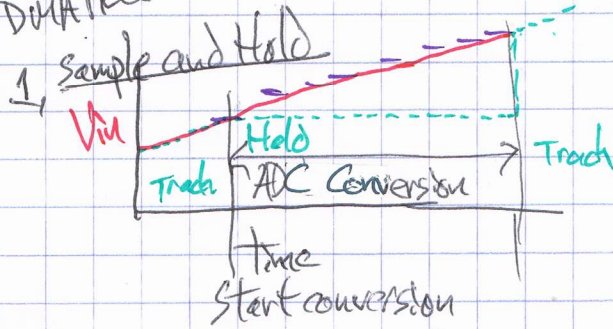
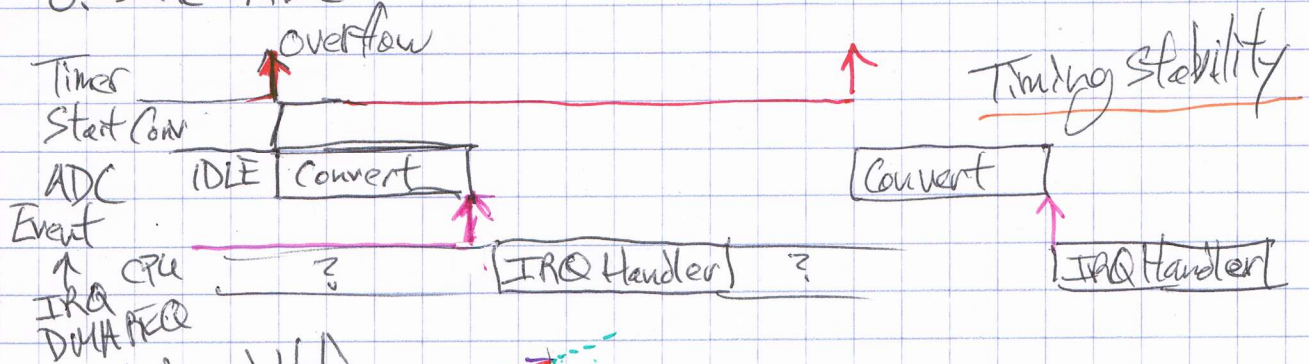
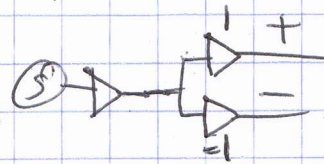


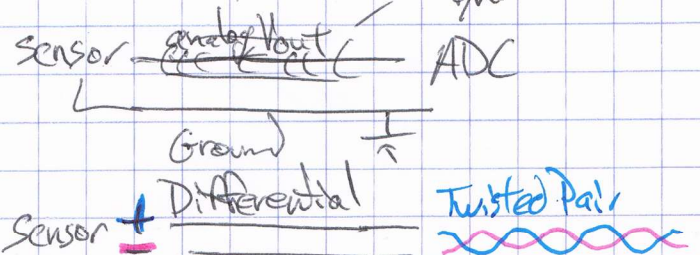
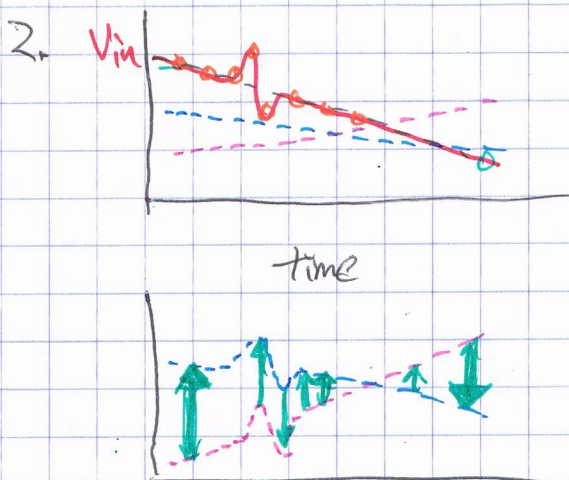
0. Basic ADC



SAR vulnerable to changing V_{in}
Sample (Track) and hold

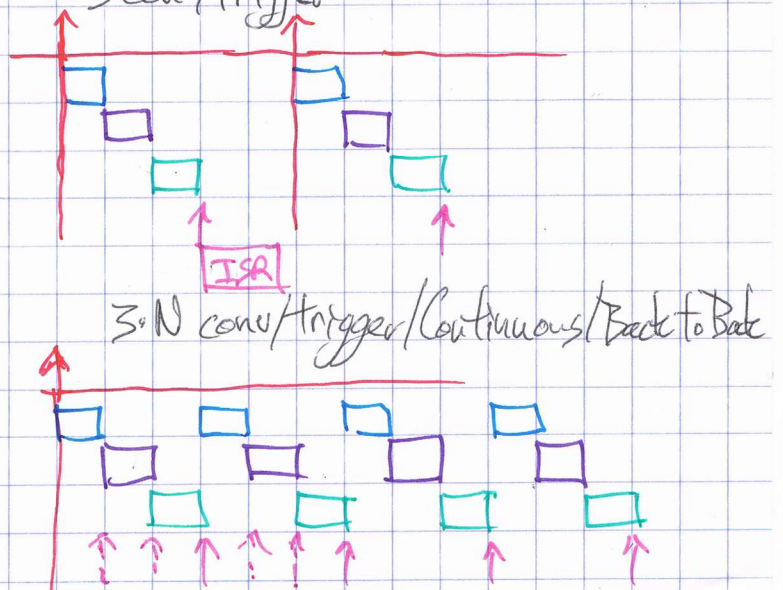
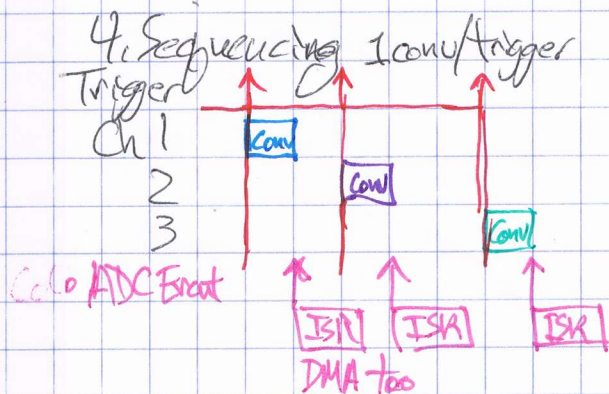


expensive shielding



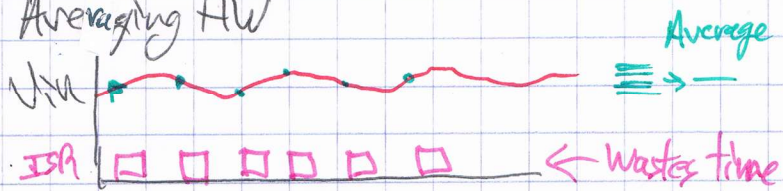
Bit 16 ADC $V_{ref} 3.3V$

Quantization level $\frac{3.3V}{2^{16}} = 50 \mu V$
3 conv/trigger

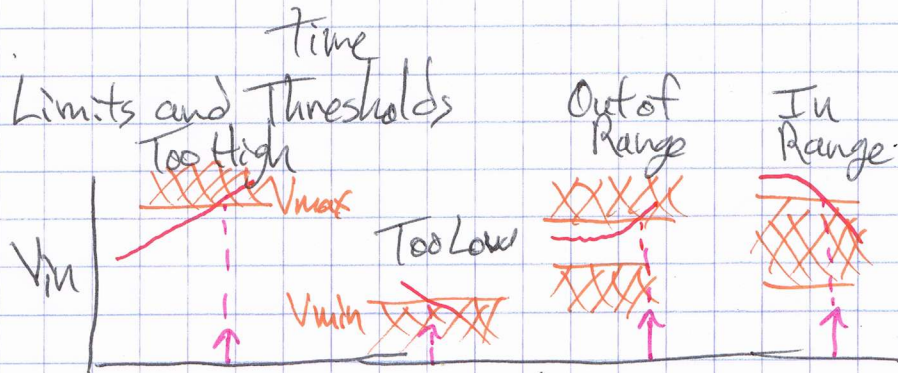


3: N conv/trigger/Continuous/Back to Back

5. Averaging HW

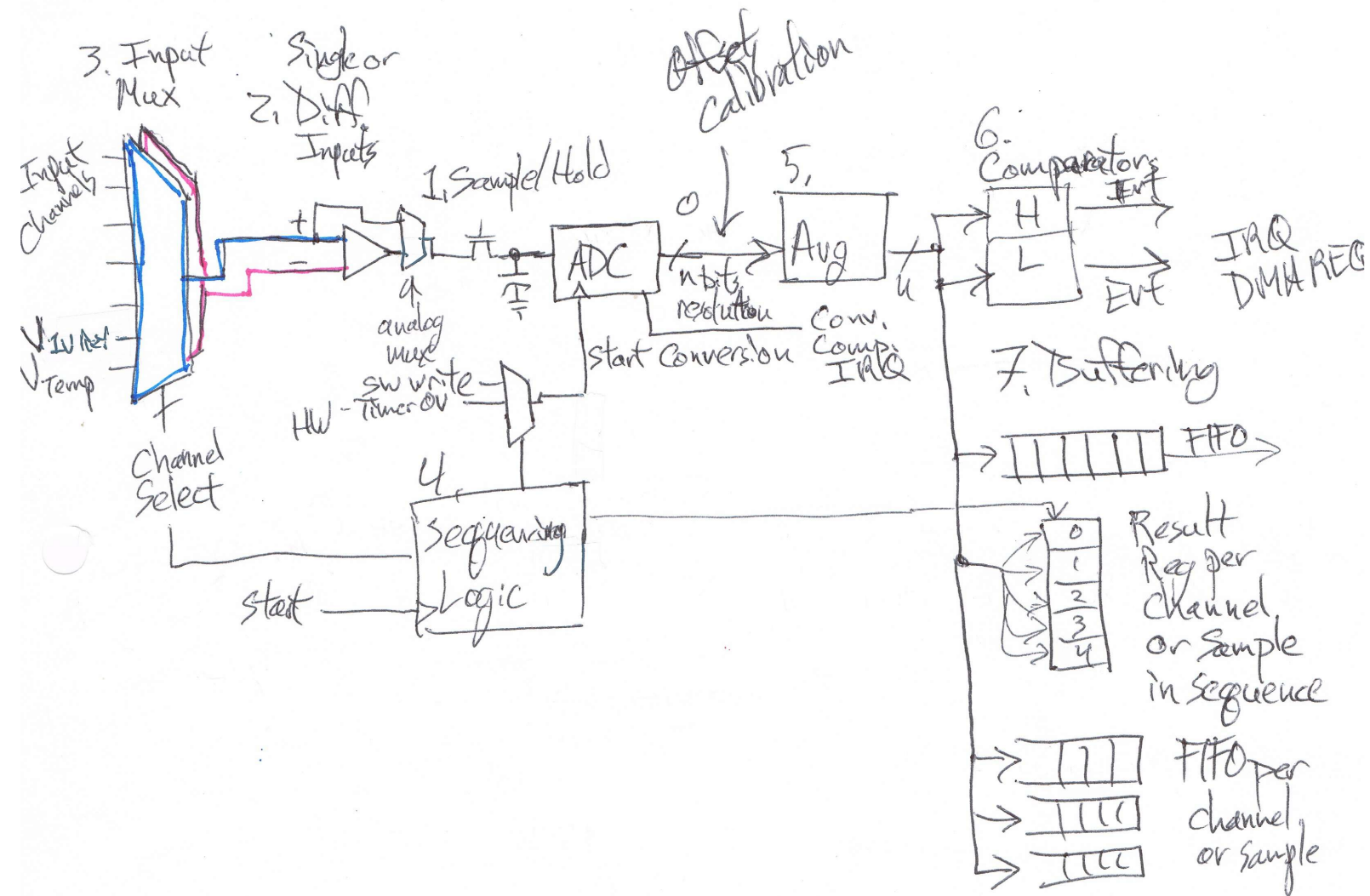


6. Limits and Thresholds



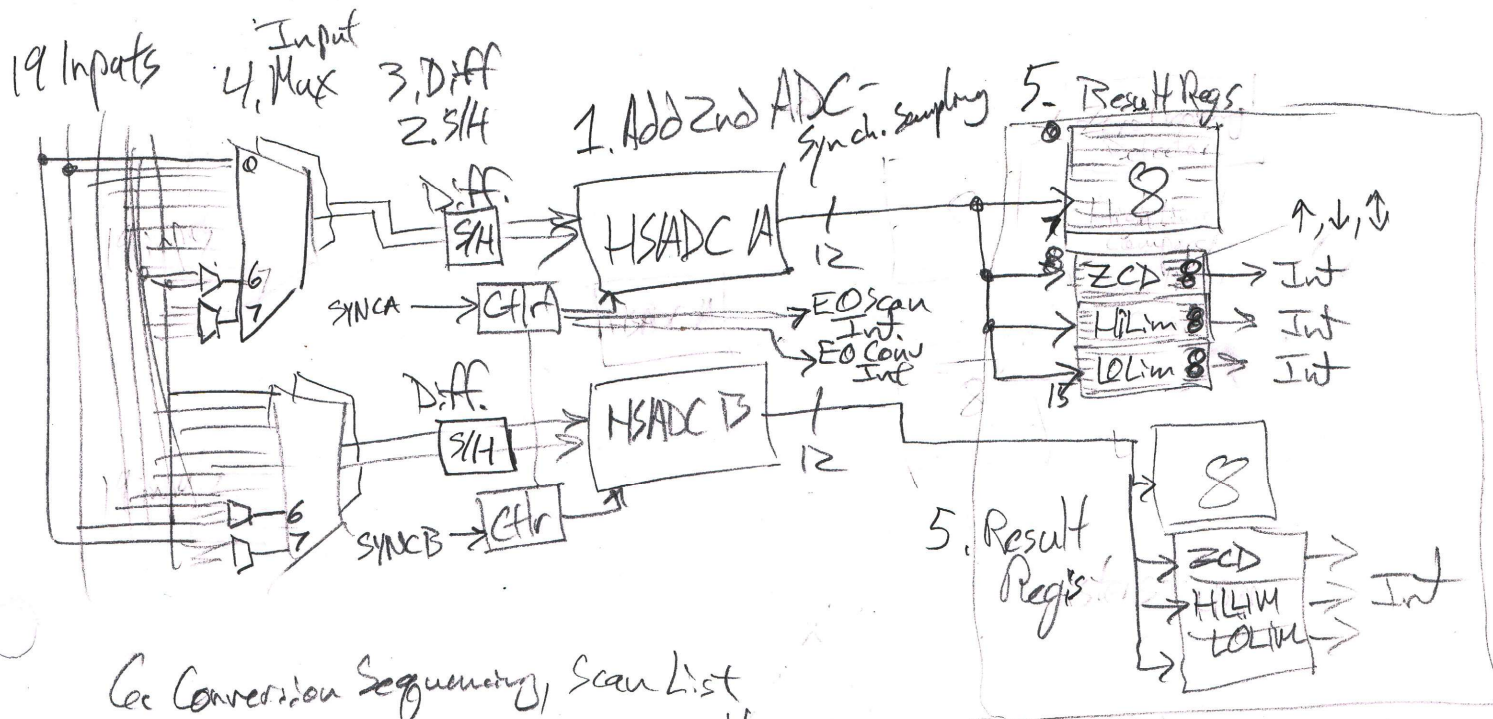
"Super" "Hyper" "Pro" ADC "Elite" "Plus" ~ K225

0. Resolution T_{conv}
16 bit 2-3 μs



KV5X ADC (HS)

Q. Speed	Res 12bit	MSPS 2 x 5	T _{conv} 200 ns	Cycles per comp. pair at 240MHz
	10	2 x 6.66	150 ns	36
	8	2 x 8	125 ns	30
	6	2 x 10	100 ns	24



See Conversion Sequencing, Scan List

Channel Lists (A/B)

Sample 0: ANA0 - ANB7	0
1: " "	0
2: " "	0
6: " "	1
7: " "	1

S Disable

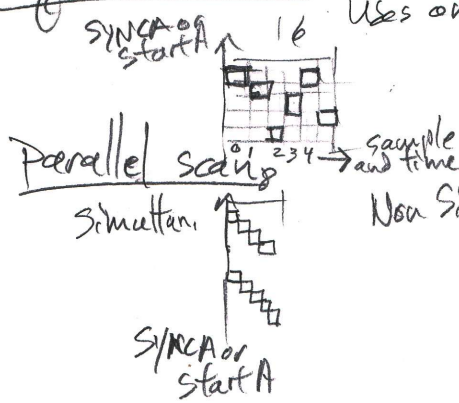
Can have multiple instances of same channel in C. List

Disable conversion

Scan Modes

Sequential scan

Conversion order in CLIST^[0-15] until hitting SDIS=1
Uses one ADC at a time



Parallel scan

Non Simultaneous

Scan Sequencing

Once scan - One-shot, trigger must be re-armed

Triggered scan - Like once, but auto-rearmed

Looping - Back to back