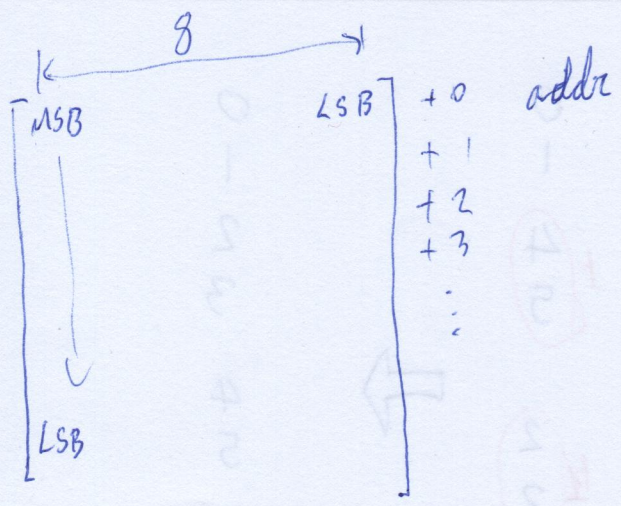


16



1) 2×2 Transposes (2×2 bit movements)

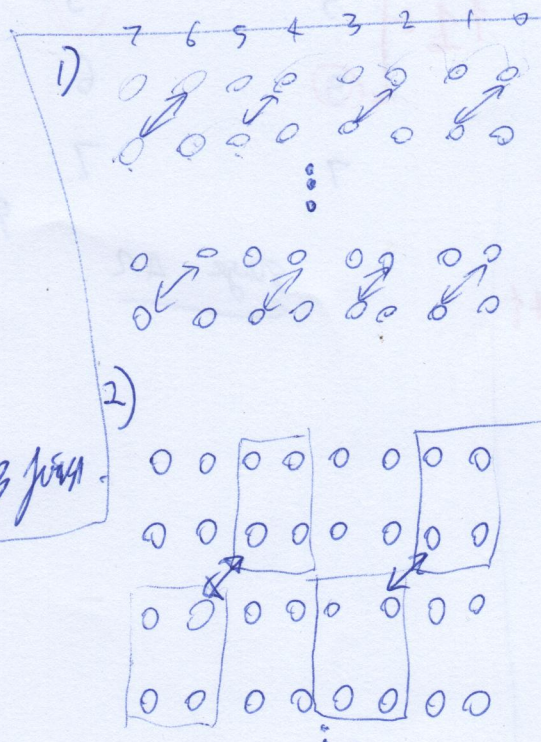
2) $(2 \times 2) \text{ of } (2 \times 2) T$ (4×4 bit movements)

3) $(2 \times 2) \text{ of } (2 \times 2) \text{ of } (2 \times 2) T$ (8×8 bit movements)

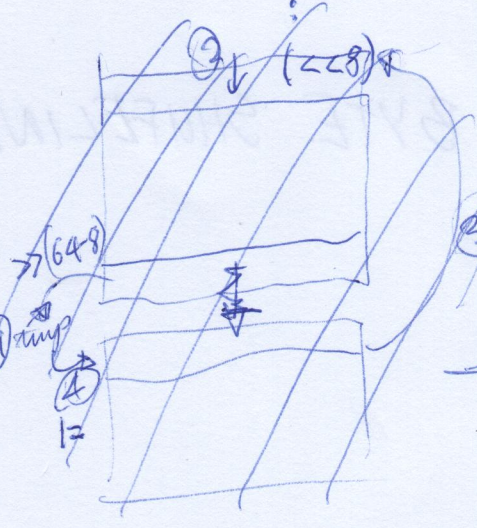
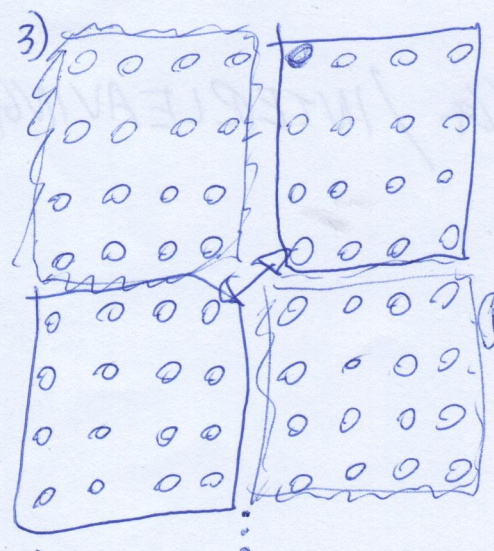
4) $(2 \times 1) \text{ of } (2 \times 2) \text{ of } (2 \times 2) T$ (16×8 bit movements)

endianess this way doesn't matter; corresponds only to channel number

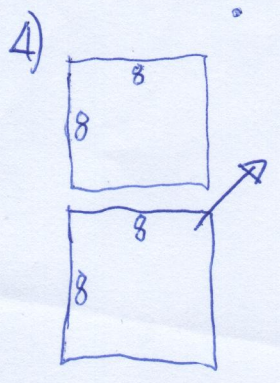
endianess this way does; ADCs look out MSB first



16 bit word:
 ~~$0x55 \ll 8$~~
LSByte in little endian.



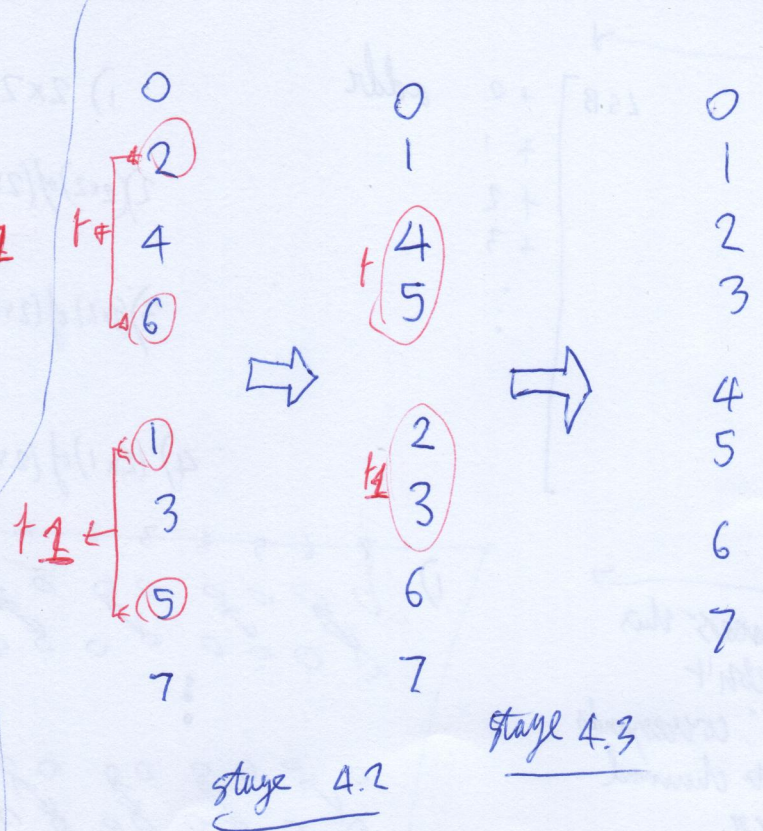
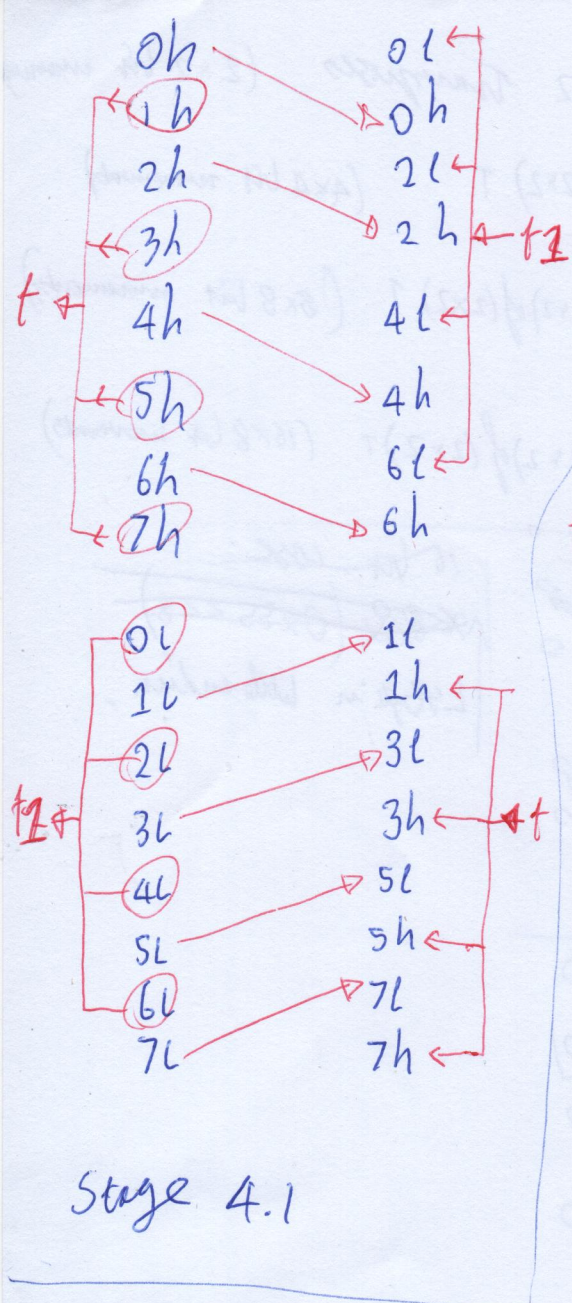
~~$4 \times 8 = 32$ instructions for shuffle~~



No interleave: 768 M bits/s
(2.0s CPU for 96M samples)

342 M bits/s for naive interleave:
4.5s CPU for 96M samples

~~$(x \wedge y) \wedge x = y$~~



BYTE SHUFFLING / INTERLEAVING