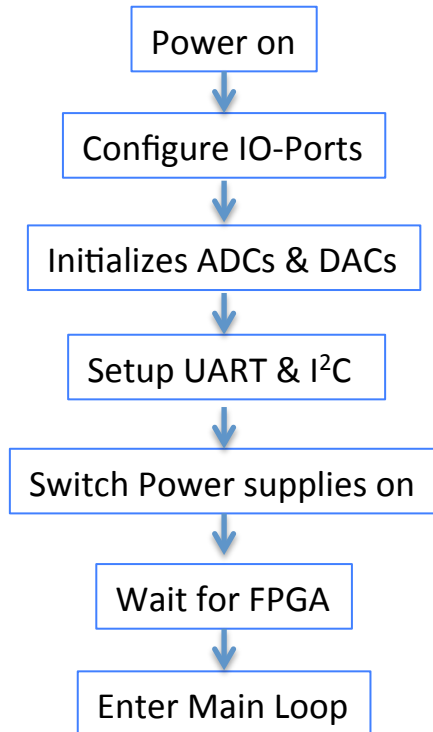


WP4 Slow Control Development

Software setup



IO pins are high Z and active low

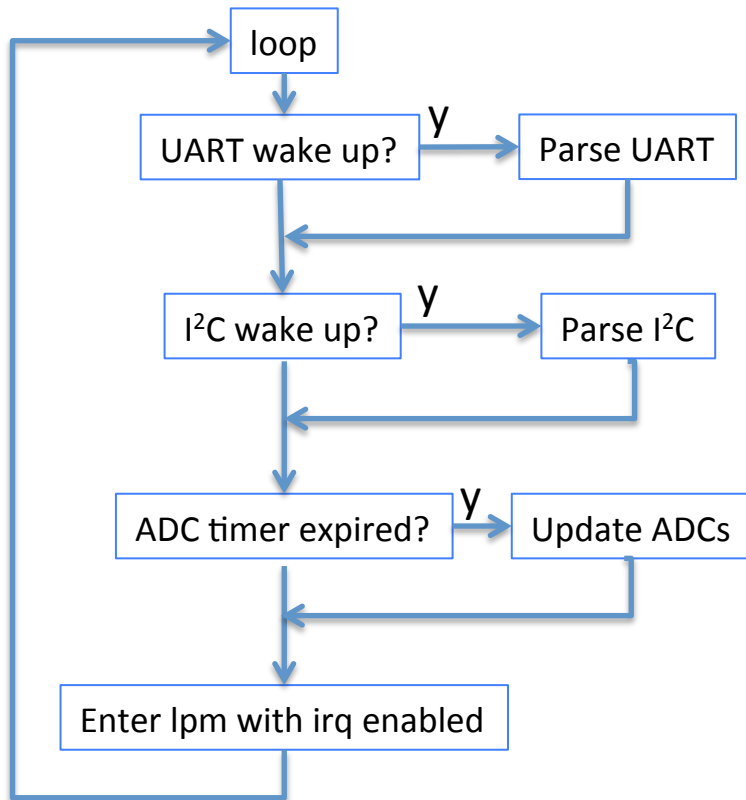
ADC reference voltage set to 1.5 Volt

UART settings: 9600 baud 8N1

Is there any sequence?

FPGA boot sequence needs to be defined

Software main loop

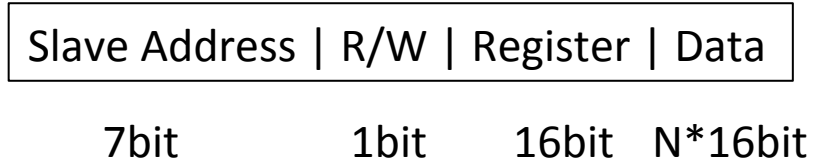


<CR> => UART wake up

I²C stop condition => I²C wake up

ADC timer expired every ms

I²C Message format



To read from SC unit:

- 1) Write register without data
- 2) Read data

Can be repeated start condition

Register definition (proposal)

Register	Name	Size (words)	read	write
0x0001	ID	4	Software ID+48bit SN	no
0x0002	ADC Status	4	64 bit bitmap	no
0x0004	IO Status	1	Status of the IO lines (Power Supplies)	Set IO status
0x0100 – 0x013F	ADC High water	1	Get Highwater value of channel n	Set Highwater value for channel n
0x0200 – 0x023F	ADC Low water	1	Get Lowwater value of channel n	Set Lowwater value for channel n
0x0400 – 0x043F	ADC values	1	Get ADC value of channel n	no
0x0800 – 0x0804	Env	1	Temperatures, Pressure & Waterlevel	no

Next Steps