便携式脑机接口

Walk-EEG

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Walk-EEG Project—Phase 1

- Channel -- 16
- Sample Rate – 8KHz
- Sample bit – 24bit
- Pass band – 0～1KHz
- Use USB wire transfer to PC or laptop

Need to be

- 10uV signal acquision
- As small as possible

Walk-EEG Project—Phase 2

- Channel -- 16
- Sample Rate – 8KHz
- Sample bit – 24bit
- Pass band – 0～1KHz
- FPGA based digital signal processing

-- Open source for HDL code

-- Example IP-core for image motor potential based BCI

-- As small as possible

Walk-EEG Project—Phase 3

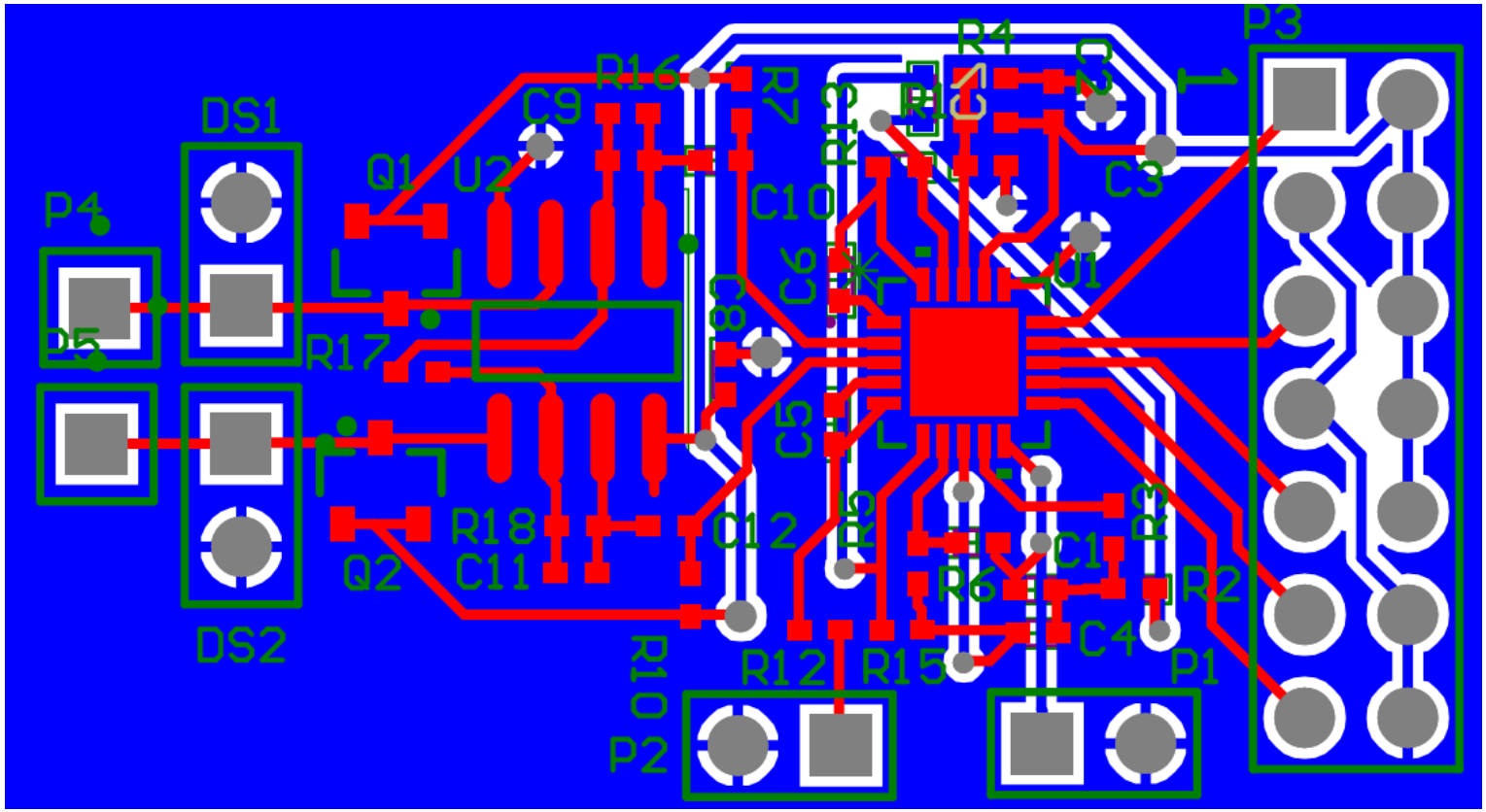
- Channel -- 16
- Sample Rate – 8KHz
- Sample bit – 24bit
- Pass band – 0～1KHz
- FPGA based digital signal processing
- Wireless
- Portable
- Good design & User Experience

August, 2013, We attend

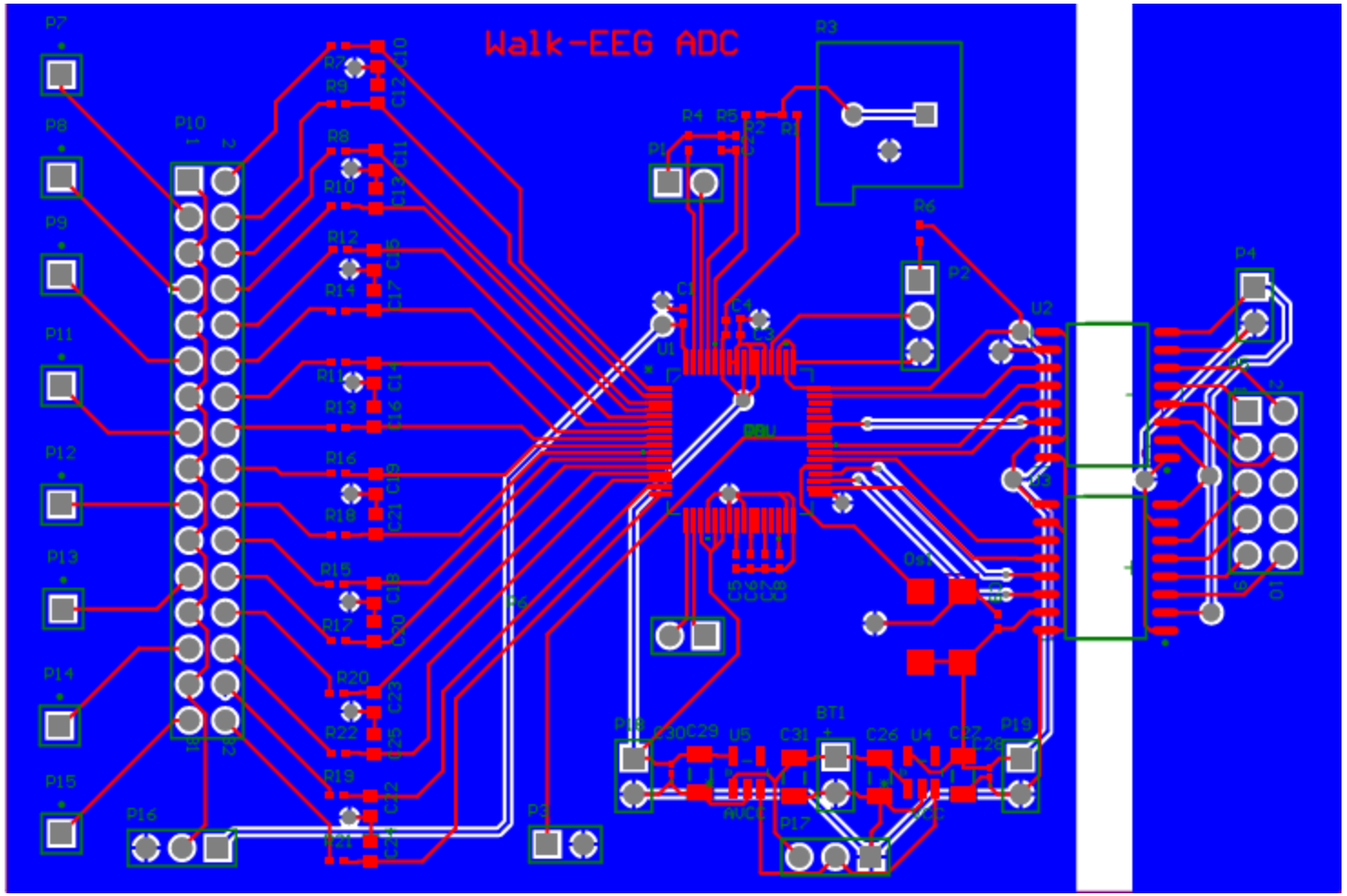
Now we have done

- 1. Pre-amplify design
- 2. Buy develop broad(Altera FPGA + USB2.0)
- 3. Study BCI2000

Pre-amplify


P3
R4
R16
C9
R7
R13
R14
C3
DS1
Q1
U2
C10
P4
C6
U1
C8
C5
D5
R17
R18
C12
C11
R9
R3
C1
R6
R2
Q2
DS2
R10
R12
R15
C4
P1
P2

ADC broad



USB2.0 High Speed Transfer

Now we have to do

- 1. Debug Pre-Amplify
- 2. Develop broad usage
- 3. Open source software base on BCI2000
- 4. Control peripheral.

THE ONES
WHO ARE
CRAZY
ENOUGH TO
THINK THEY
CAN CHANGE
THE WORLD,
ARE THE
ONES THAT
DO

So, Joining us, Enjoy it