

1.2V



3.3V



2.5V



50M active crystal

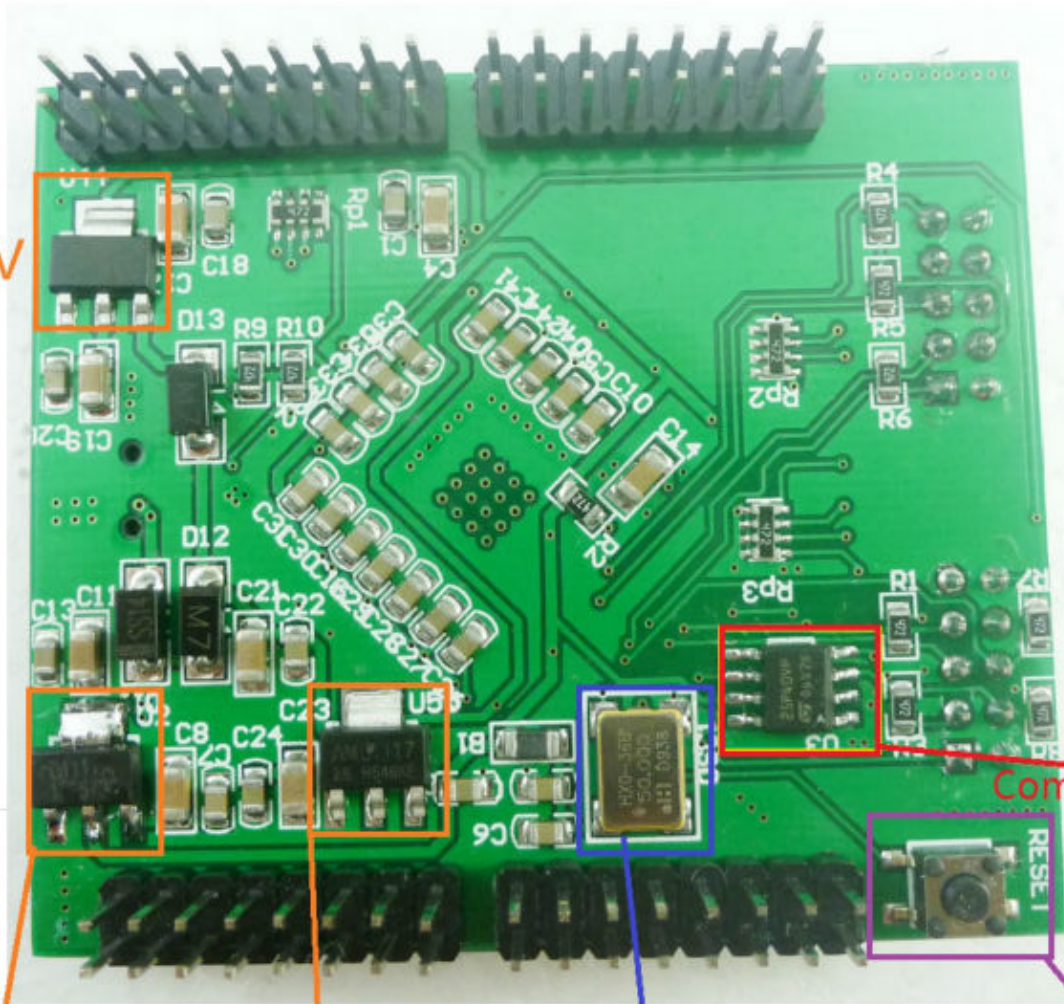
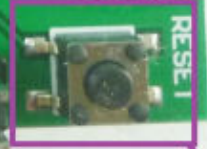


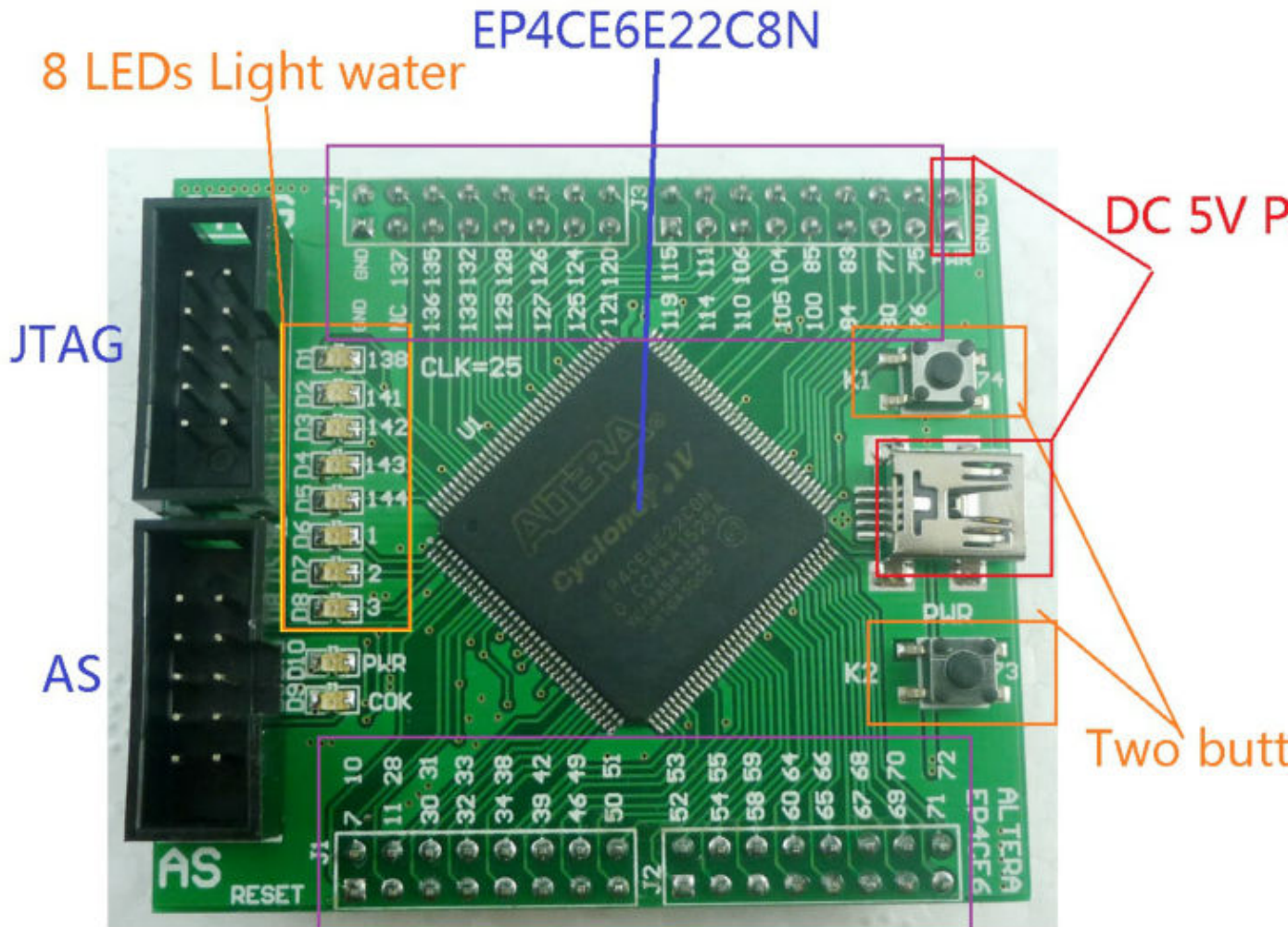
M25P40

Compatible with E



Reset Button





Label all pin number , do not need schematic configuration pins

Altera FPGA board

<http://www.thalin.se/2014/05/example-design-for-tb276-altera-cyclone.html>

EP4CE6

<https://www.altera.com/support/support-resources/download/board-layout-test/bsdl/cyclone-iv-gx.html>

<ftp://ftp.altera.com/outgoing/download/bsdl/EP4CE6E22.bsd>

```

jtag> cable usbblaster
Connected to libftdi driver.
jtag> detect
IR length: 10
Chain length: 1
Device Id: 00000010000011110001000011011101 (0x020F10DD)
  Manufacturer: Altera (0x0DD)
  Unknown part! (0010000011110001) (/usr/local/share/urjtag/altera/PARTS)
jtag>

```

```
jtag> bsd1 test EP4CE6E22.bsd
-N- Reading file 'EP4CE6E22.bsd'
-N- BSDL file 'EP4CE6E22.bsd' passed VHDL stage correctly
warning: -W- warning: Line 145, Multiple opcode patterns are not supported, first pattern will be
warning: -W- warning: Line 145, Multiple opcode patterns are not supported, first pattern will be
-N- Got IDCODE: 00000010000011110001000011011101
-N- BSDL file 'EP4CE6E22.bsd' passed BSDL stage correctly
```

```
dpavlin@nuc:/usr/local/share/urjtag/altera$ echo -e "bsd1 dump EP4CE6E22.bsd" | jtag > EP4CE6E22/
```

f32c

<http://www.nxlab.fer.hr/fpgarduino/tb276.html>

```
dpavlin@klin:/rest/cvs/f32c/f32c/rtl$ grep PIN ./proj/altera/tb276/xram_acram_emu/tb276.board | g
#set_global_assignment -name DEVICE_FILTER_PIN_COUNT 256
set_location_assignment PIN_25 -to clk_25m
set_location_assignment PIN_73 -to btn_right
set_location_assignment PIN_74 -to btn_left
set_location_assignment PIN_3 -to led[7]
set_location_assignment PIN_2 -to led[6]
set_location_assignment PIN_1 -to led[5]
set_location_assignment PIN_144 -to led[4]
set_location_assignment PIN_143 -to led[3]
set_location_assignment PIN_142 -to led[2]
set_location_assignment PIN_141 -to led[1]
set_location_assignment PIN_138 -to led[0]
set_location_assignment PIN_119 -to sw[3]
set_location_assignment PIN_115 -to sw[2]
set_location_assignment PIN_114 -to sw[1]
set_location_assignment PIN_111 -to sw[0]
set_location_assignment PIN_129 -to rs232_txd
set_location_assignment PIN_133 -to rs232_rxd
set_location_assignment PIN_75 -to ant_433M92
```