

# LCD 四子棋

HARDWARE LAB. FINAL PROJECT DEMO

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# What is 四子棋 (Connect Four) ?



# How to play 四子棋?



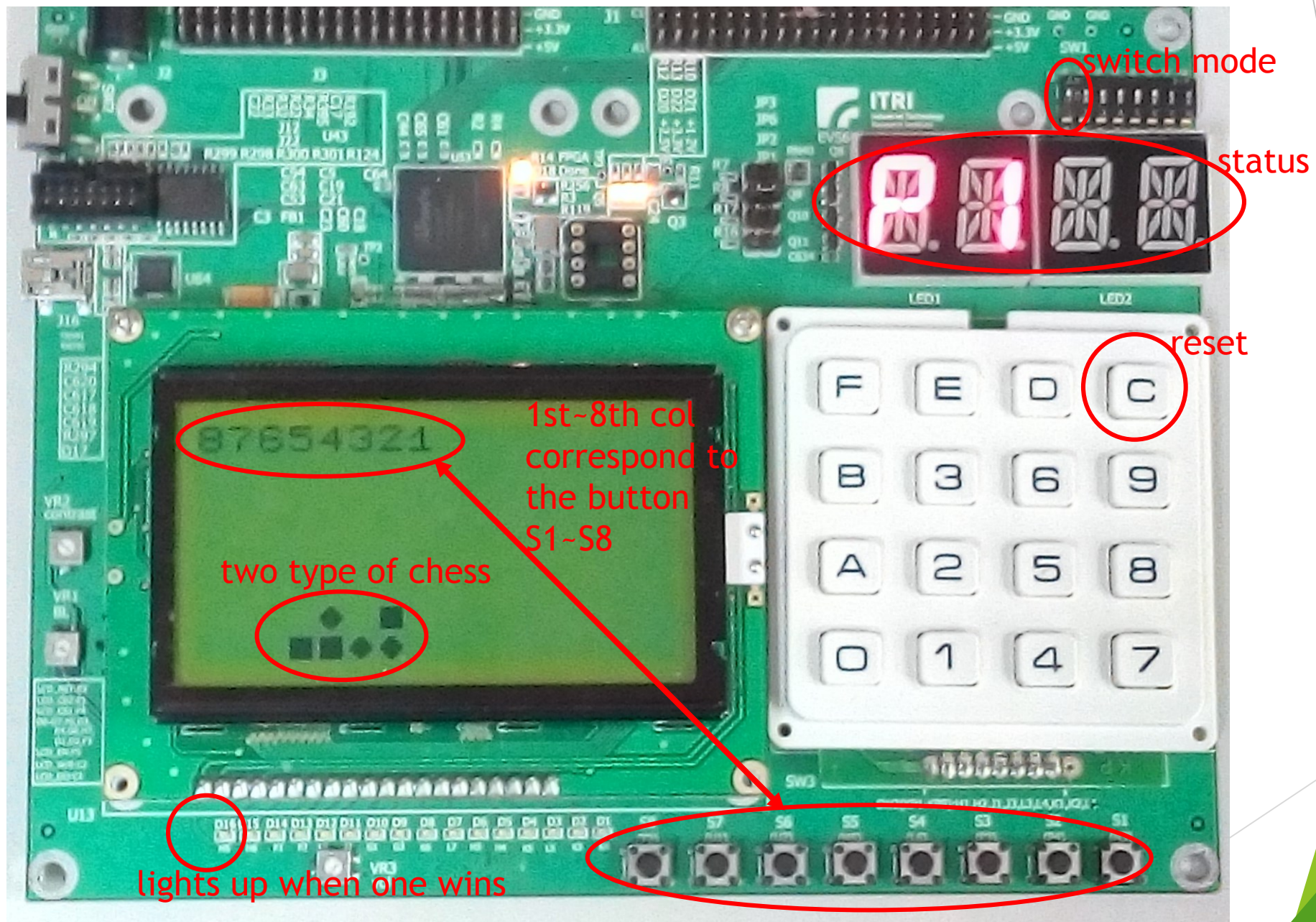
# The rule of 四子棋

- ▶ 共  $6 * 7$  (row \* col) 格
- ▶ 由上方投下
- ▶ 回合制 (turn by turn)
- ▶ 直、橫、或斜誰先連成 4 子誰就贏了

# The features of our FPGA 四子棋

- ▶ **Two modes** (controlled by the switch T1)
  - ▶ **1-player** mode (玩家(P1) vs. 電腦(AI)) (T1 = 0, switch up)
  - ▶ **2-player** mode (玩家(P1) vs. 玩家(P2)) (T1 = 1, switch down)
- ▶ 共 7 \* 8 (row \* col) 格 (on LCD)
- ▶ 14-seg LED displays **whose turn** and the **winning message**.
- ▶ Press the key C on the keypad to **reset** the game any time.
- ▶ Click one of the buttons S1~S8 to **play** (toss) **chess**.
- ▶ **Play sound** as you toss your chess and as you win.
- ▶ LED D16 lights up when one wins.





Let's Demo!!