Using Altera’s MAX+PLUS II

■ Hamblen 1 — covered before

■ Hamblen 2 — The UP1 CPLD Board
   ◆ Also see following slides

■ Hamblen 4 — Tutorial II: Sequential Design and Hierarchy
   ◆ Using the UP1core hex to 7 segment decoder in a design
   ◆ Using buses
   ◆ Timing analysis for registered performance
   ◆ Testing the design, redesigning to fix the switch contact bounce

■ Hamblen 5 — UP1core Library Functions
   ◆ Hex to 7 Segment Decoder, Pushbutton Debouncer, Pushbutton Single Pulse
Contains one EPM7128S device
- Socket-mounted 84-pin PLCC package
- 128 macrocells = 2,500 gates (AND-OR, EEPROM)

Contains one EPF10K20 device
- 240-pin RQFP package
- 1,152 LEs and 6 EABs = 20,000 gates (LUT, SRAM)
Altera UP 1 Education Board (cont.)

- Resources available for 7128
  - 2 push-button switches (active low)
  - 2 octal dip-switches (active low)
  - 16 LEDs (active low)
  - Two-digit 7-segment display (active low)
  - Expansion port (left side of board)
  - Connect to female headers around chip

- Resources available for 10K20
  - 2 push-button switches (active low)
  - 1 octal dip-switch (active low)
  - Two-digit 7-segment display (active low)
  - VGA port, mouse port
  - 3 expansion port (right side of board)
  - Connect to female headers around chip