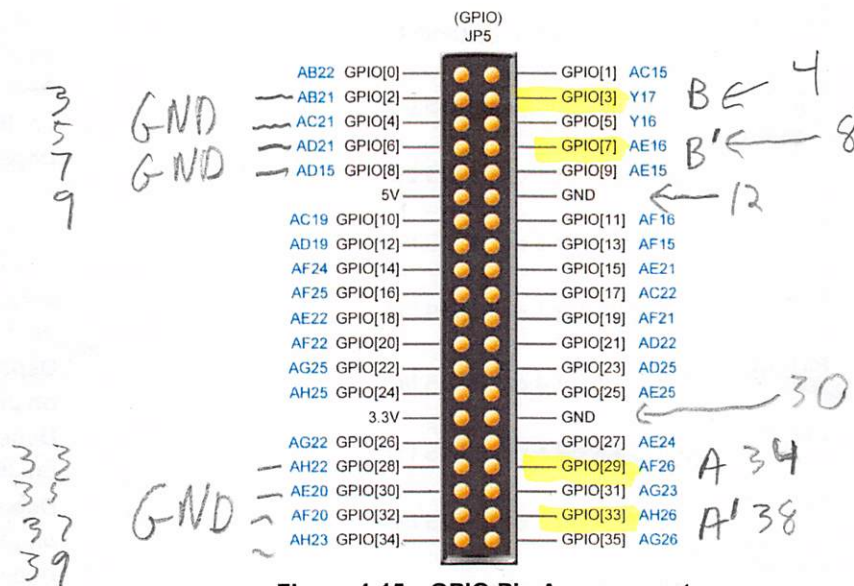


4.8 Using the Expansion Header

The DE2-115 Board provides one 40-pin expansion header. The header connects directly to 36 pins of the Cyclone IV E FPGA, and also provides DC +5V (VCC5), DC +3.3V (VCC3P3), and two GND pins. **Figure 4-15** shows the I/O distribution of the GPIO connector. The maximum power consumption of the daughter card that connects to GPIO port is shown in **Table 4-10**.



Note that the port #'s and the pin #'s on the header are not the same! My hand labeled numbers are the pin #'s.

Figure 4-15 GPIO Pin Arrangement

Table 4-10 Power Supply of the Expansion Header

Supplied Voltage	Max. Current Limit
5V	1A
3.3V	1.5A

Each pin on the expansion headers is connected to two diodes and a resistor that provides protection against high and low voltages. **Figure 4-16** shows the protection circuitry for only one of the pin on the header, but this circuitry is included for all 36 data pins.