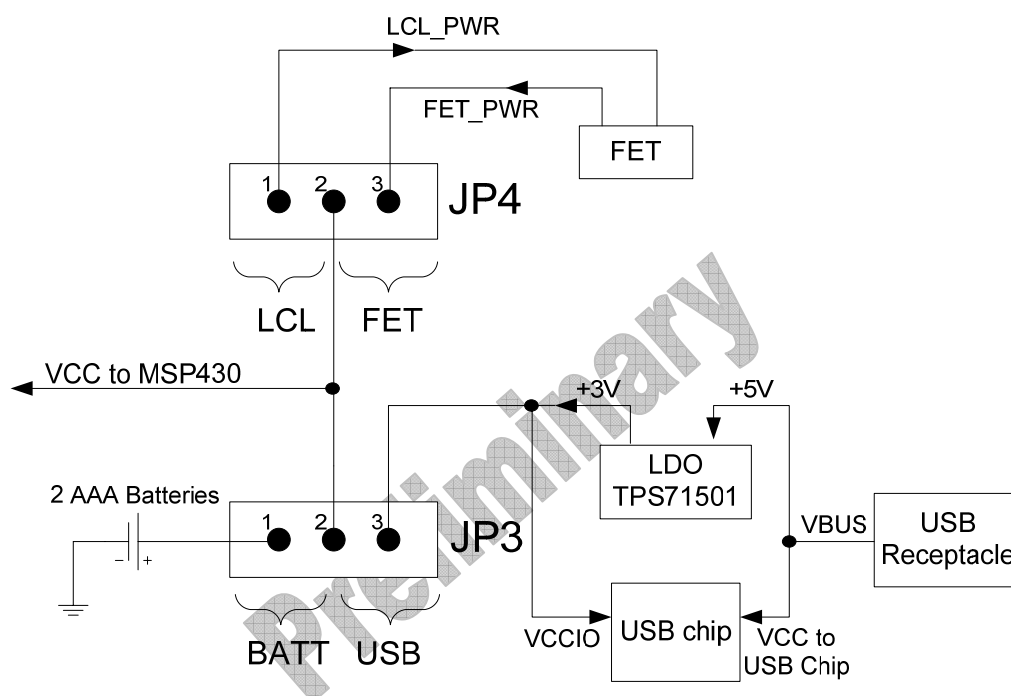


## Pulsoximeter Demo Board - Power Supply Options

Bhargavi Nisarga

MSP430

The power options for the revised pulsoximeter demo board can be broadly classified as FET power and LCL (local) power. The local power options include the Battery and USB power configurations. The power source for the board is selected by configuring the jumpers JP3 and JP4. Both the jumpers are 3-pin headers. Figure 1 shows the jumper hierarchy and power configuration options.



**Figure 1. Jumper Settings for Power Selection**

The power selection jumper JP4 selects power connections between the board and FET interface. A jumper placed on the pins 2 and 3 of JP4 (**FET**) selects the JTAG FET as the power source. A jumper placed on the pins 1 and 2 of JP4 (**LCL**) would enable local power (either from the batteries or USB bus) to be applied to the FET for proper logic threshold level matching during program/debug.

Upon selecting LCL option in JP4, jumper JP3 is used to select between the Battery power and USB bus power. A jumper placed on the pins 1 and 2 of JP3 (**BATT**) selects the on-board batteries to power the system. Similarly a jumper placed on the pins 2 and 3 of JP3 (**USB**) enables USB bus to power the board. The USB section of the board is powered up only if the board is USB bus powered.

**NOTE 1:** Battery or USB bus power options in JP3 can be used to power the board independent of the FET connections in JP4. However, do not place a jumper on the FET option in JP4 and select BATT or USB option in jumper JP3. Jumper should be placed on JP3 only if local power (LCL) option is selected in jumper JP4.

**NOTE 2:** The USB portion of the board is powered up only if the board is USB-bus powered. So, the USB circuitry does not consume any extra power when battery powered.

Preliminary