



Power Switch Implementation For CPU Boards - ADL855PC, ADL945PC, ADLS15PC

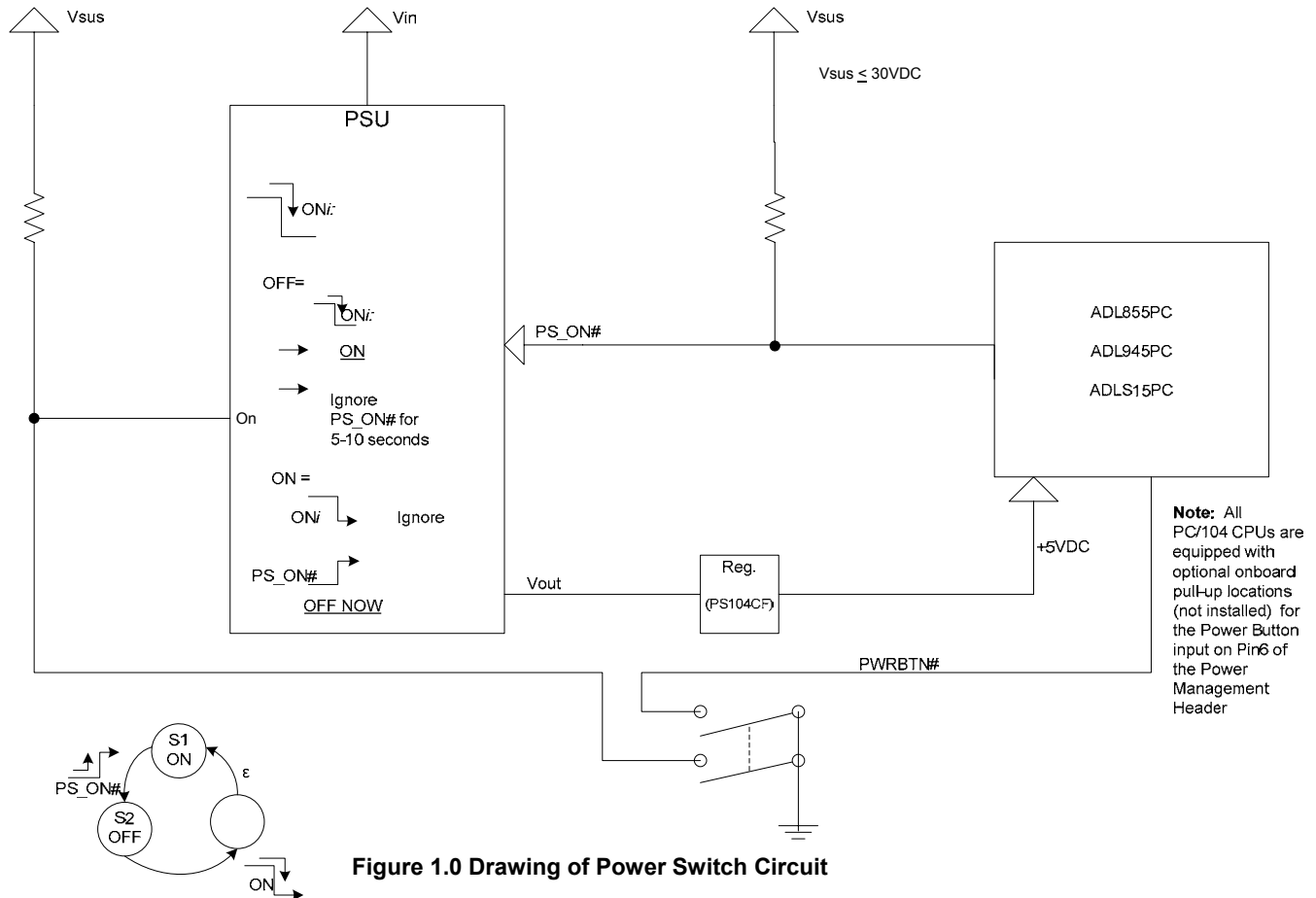


Figure 1.0 Drawing of Power Switch Circuit

NOTE: Figure 1.0 depicts a simple external switch circuit that can be used to allow the user to power up the ADLxxxPC board by way of a single switch. Due to space limitations found in embedded form factors, this small circuit is often omitted from embedded designs.

Currently ADLxxxPC boards can be shut down by way of a power switch, but they cannot be brought up with the same switch. Source power must be removed from the board in order to clear the latched power state generated by the shut-down command issued by way of the power switch. In some instances it is not possible to turn off the source power within an application or platform because the source power is driving additional devices. In order to accomplish this, the simple circuit in Figure 1 can be used in conjunction with a DPST switch to momentarily interrupt the source power, clearing the latched power state thereby allowing the ADLxxxPC board to power up.

The key to the success of this circuit relies on a small PIC that contains a state machine that provides the necessary "ignore" of signal PS_ON# for a period of 5 to 10 seconds, depending on the ON and PS_ON# states. This preserves the source power state and provides added functionality to the configuration by way of a single power switch that is separate from the rest of the platform.

Data subject to change without notice. 12-14-09