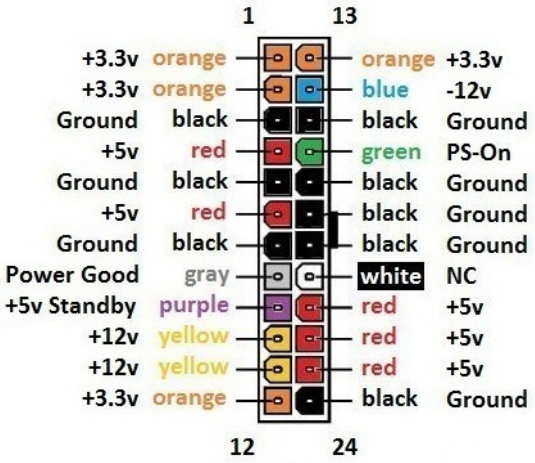
Retro PC ATX PSU latch switch

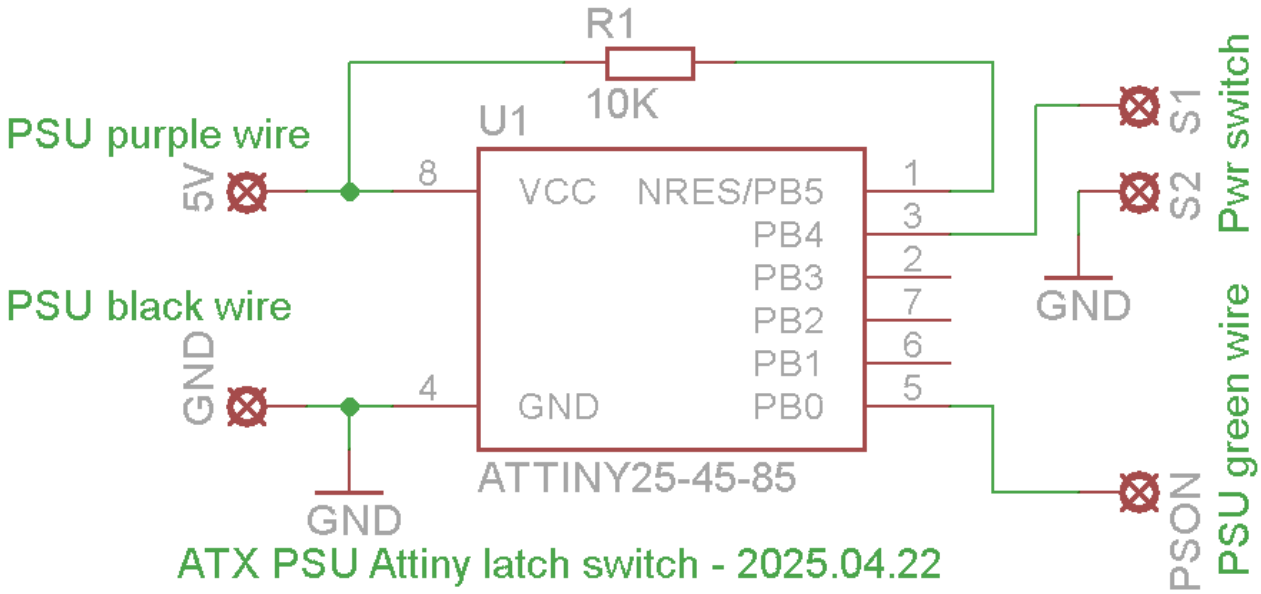
Posted on 23. April 2025

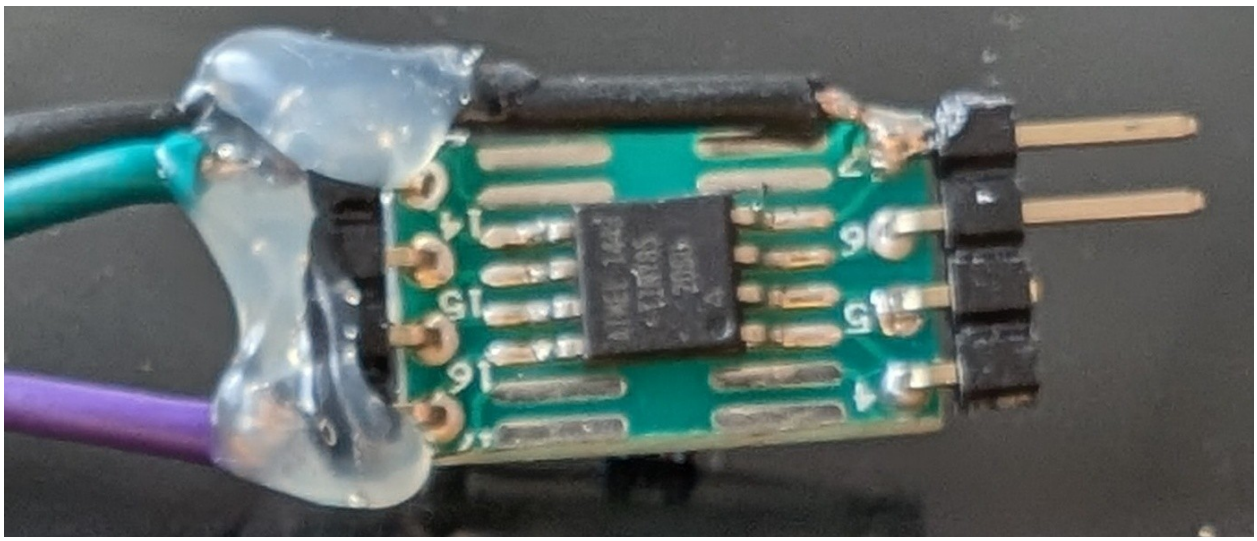
My early 90ties retro PC project includes a flexATX PSU (Power Supply Unit) along with a micro ATX case . The power button on front of the case is a push button without hold, but the flexATX PSU control signal must be active for the PSU to output power. That is, a latching function is needed.



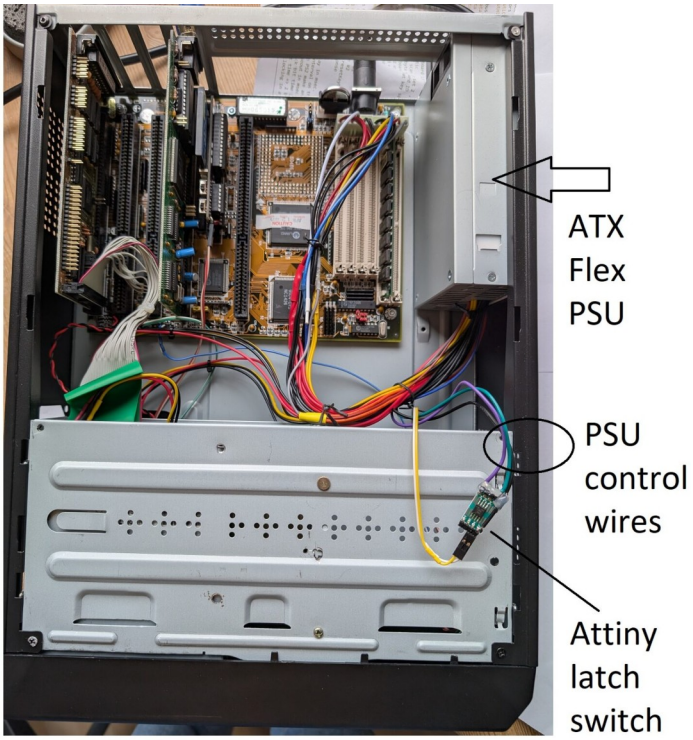
The purple wire provides 5V standby when mains supply is connected. The green wire PS-On is the PSU control signal is an input (5V @ 0.4 mA) that is grounded for the PSU to provide power. The orange wires for 3.3V are not used as the retro PC uses 5V logic.

A simple circuit with a Attiny25/45/85 is used:





KLM-002 case for the retro PC build



The software is made with Atmel Studio 7 and flashing the Attiny25 (or Attiny45 , Attiny85) goes on with an AVRISP mkII programmer.
When the PSU is powered off, a short push on the power button starts the PSU. To turn off the PSU, a long button press of 1.5 second is required.
The software is to be seen here: ATX_Attiny_latch_switch_SW