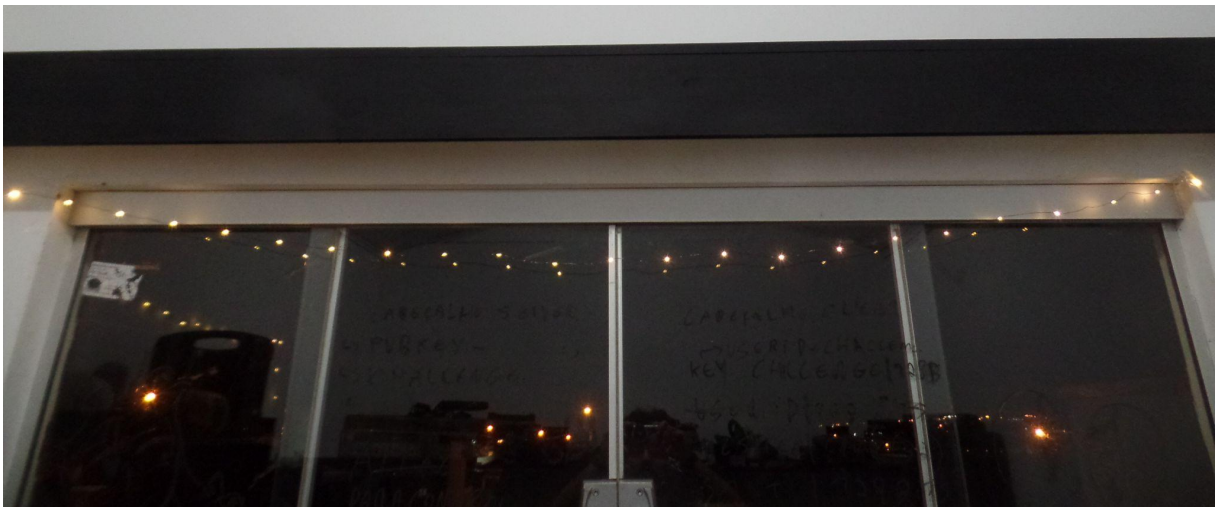


PROJECT — Spartan Smart Curtain

The Spartan Smart Curtain project is a composing component from the SPARTA automation infrastructure, that derivades to a residential automation repartition, with possibilities to evolve to an industrial application project.

The composition of the project at all is composed by three basic components:

1 - Wood Enclosure;



An black box like structure made from wood with openings in the inferior and back faces, with internal fixation lockers in the wall.



The main function of this component is to protect the curtain and the components and circuits.

2 - Curtain, Rod and Motor

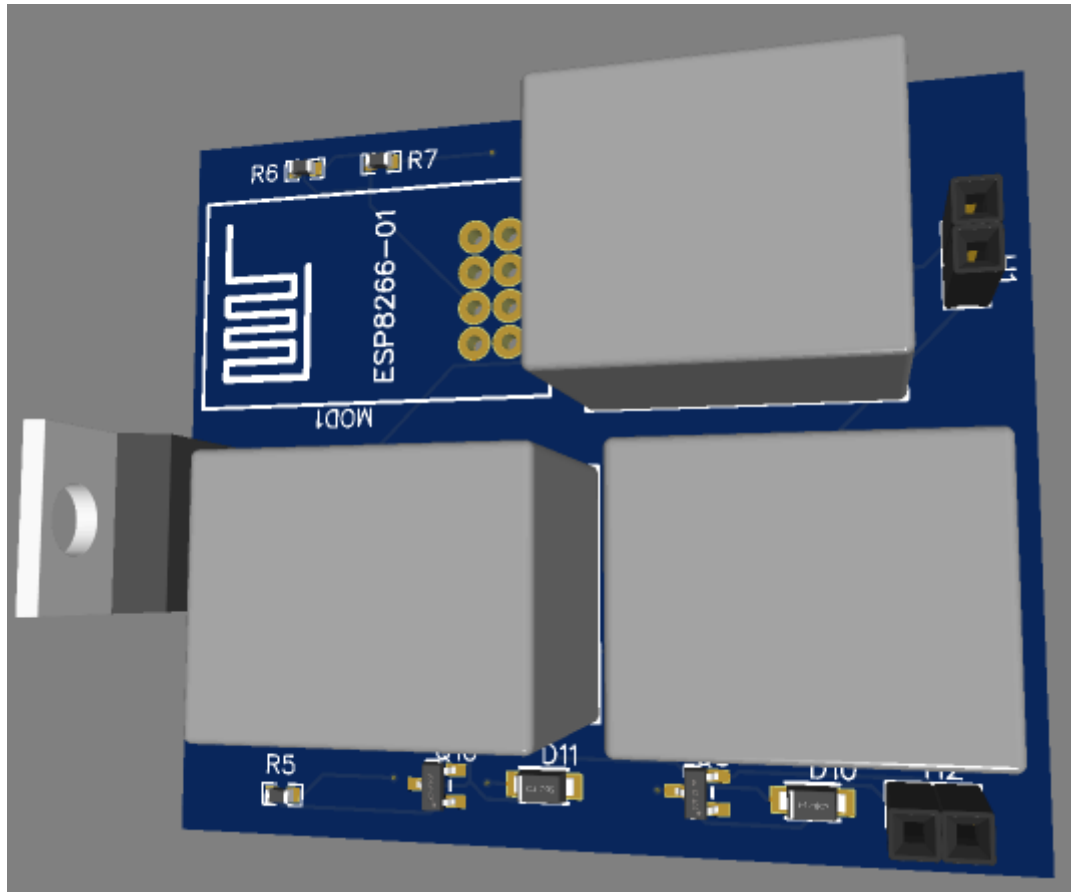


A low speed high torque DC 12V-Motor (the case of the present picture shows an car window motor), fixed to an aluminum hollow rod; The made to measure curtain is fixed to the aluminum rod.

3 - Control Circuit



The diagram shows an ESP8266-01 module connected to a relay module. The ESP8266-01 module has pins labeled TX, GND, CH_PC, GPIO2, RST, GPIO0, Vcc, and RX. The relay module consists of a K10 RelayHT3F-12VDC-SHG, a K8 relay, and a H2 HDR-F-2.54_1x2 header. The circuit includes a 12V power source, a 47k resistor (R5), a 2N2222 transistor (Q10), a 1N4007W diode (D11), and a 1N4007W diode (D10). The output of the relay module is connected to an output motor (H1).



The Microcontroller Firmware is available in the GitHub Repository of the project.