

SmartShade Circuit Description

RYSE SmartShades can automate any shade with a beaded chain or looped string cord. It allows customer to control a shade or blends electrically.

BLE-0101 is a BLE5.0 module that is dedicated to implement Blue tooth communicating between the SmartShade and cell phones.

BLE-0101 has a built-in PCB trace antenna. The antenna works in BLE band(2.4~2.48GHz)

BLE-0101 controls a few LEDS. The LEDS tells users how to interact with SmartShade.

BLE-0101 reads a few buttons. The buttons tells SmartShade what to do.

MSP430FR2311 MCU is a stand by MCU that count how much the cord moves(back-drive) manually by a human force. It reads the two signals that are 90 degrees interval in terms of phase generated by the hall effect sensor built-in the motor. It implements a quadrature encoder to tell the direction and counts.

MSP430FR2311 interfaces with BLE-0101 by two interrupt lines and SPI bus.

The regulator regulates 3.3v to the whole system.